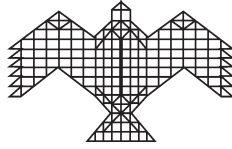




NATIONAL INSTITUTE OF ADVANCED STUDIES
Bengaluru, India

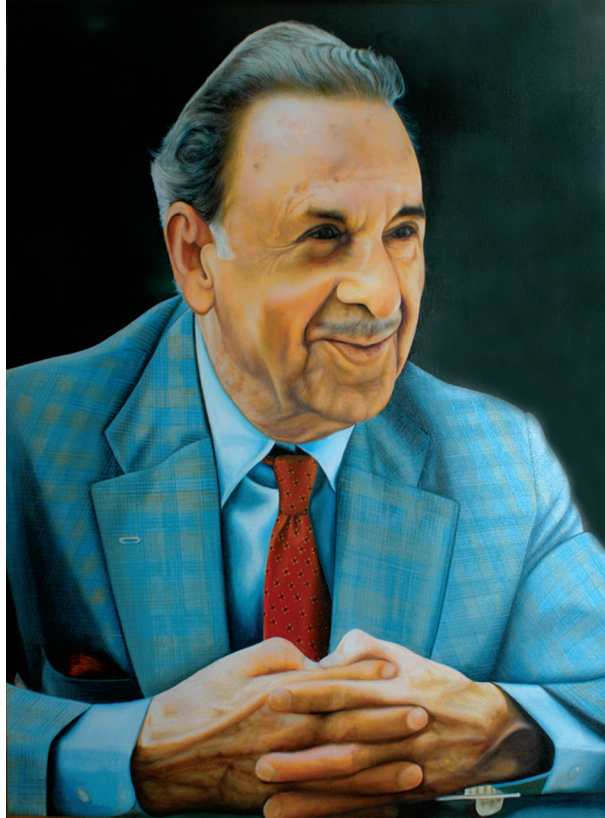
ANNUAL REPORT
2021 – 2022





NATIONAL INSTITUTE OF ADVANCED STUDIES
Bengaluru, India

ANNUAL REPORT
2021 - 2022



JRD Tata
Founding Chairman

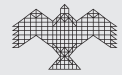
The Vision and Mission of NIAS

To integrate the findings of scholarship in the natural and social sciences with technology and the arts through multi-disciplinary research on the complex issues that face Indian and global society.

To assist in the creation of new leadership with broad horizons in all sectors of society by disseminating the conclusions of such research through appropriate publications and courses as well as dialogues with leaders and the public.

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FROM DIRECTOR'S DESK



The pandemic due to corona virus continued and research activities were hampered during the second wave and the lockdown period. Work from Home had to be reintroduced for few months, but virtual meetings and interactions helped to continue to research efforts and deliver results.

One of the new initiatives was to assess the likely socio-economic impact of large infrastructure projects. A study of the proposed Kalpasar project to understand its impact on people and society has been taken up. An extensive field survey of all villages and towns in the affected two districts has been completed. It is expected that the outcome of this project will have positive implications at the policy level.

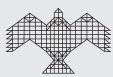
The International Peace Research Initiative, a network of academic institutes in Bengaluru, Chennai, Goa and Puducherry, has provided a platform for interaction between prominent peacemakers, policy makers and young scholars, about regional conflicts and peace processes.

Four new areas – Europe, China, Africa, and Maritime were initiated under the Science, Technology and International Relations Programme. The Pakistan Reader continued to provide inputs on political complications, civil-military relations, ethnic complexities, and economic constraints in Pakistan. The Ukraine situation was analysed, and presented to all concerned via daily briefs. The visit of Dr S Jaishankar, Honourable Minister of External Affairs, provided impetus to these studies. Many periodicals, PR Evening Brief@1600hrs, Europe Monitor, Africa Weekly, The World This Week have published regularly to provide comprehensive understanding of contemporary issues.

Under the International Strategic and Security Studies programme, the analysis of critical weapons technologies, sensors and platforms for national security was successfully completed and inputs were provided to DRDO. A study on Weapon System Cyber Security vulnerabilities was undertaken and is continuing. A study to identify potential areas for infrastructure development in NE India has been initiated with support from Japan. The NIAS-CISAC dialogues continued, and topics related to climate change, hypersonic systems, and space security were discussed between USA and India.

The Consciousness Studies addressed humanistic and health aspects of consciousness with a critical approach to theorization of the self. The study on Kashmir Shaivism analysed causal structures of thought, experiences, and entities. A documentation of the indigenous healing and wellness traditions of Kerala was completed. The causal discovery algorithm was tested using real data of SARS-Cov-2. A 50-minutes documentary titled 'Kenji' focusing on food culture of Mullukuruman tribal community of Kerala won many international awards.

Under Heritage, Science and Society, a study related to archaeometallurgical insights from ancient Tamil sites analysed ferrous metal finds from recently excavated sites. The history of architecture and building material and technology was studied in rock-cut temples at Thal in Kumaon Himalaya and in megaliths of Tamil Nadu and a



database on megaliths is under preparation. As a part of a study on historic water systems in the Maalprabha River Valley, an aqueduct was discovered using remote sensing data through GIS.

Under Animal Behaviour and Cognition, an impact assessment study concerning the nocturnal primate the slender loris was completed to understand impact of widening of highway running through the Dindigul Forest and results were submitted to NHAI. Behavioural adaptations in Deccan Mahaseer juveniles were studied, and studies related to a range of wild, feral, and cultivated species in Delhi and Guwahati focused on the impact of urbanisation on these animals.

A mathematical model was constructed to explain the dynamical mechanisms that translate changes in the physical environment into the changes manifested in living systems under the Complex Systems program. Such changes can occur due to anthropogenic activities and climate change.

Under Energy, Environment and Climate Change Programme, a transition plan towards optimal energy mix has been completed and is under consideration of the Govt. of India. Identification of potential sites for nuclear power plants has been taken up. A status report on the Rare Earth Industry was prepared for IREL. Impact of air pollutants on human health was studied and a geospatial model was developed for Bengaluru and Hyderabad.

The risk communication about cyclones, before, during and after the event, was analysed to see how well the risk has been communicated. A study to test the feasibility of developing 'Ojapalli' a traditional folk theatre of Assam, as a medium of communicating the science of climate change and coping strategies is being examined.

Under the Education Programme, the voices of youth of two tribal districts in Maharashtra (Palghar) and Karnataka (Mysuru) was documented to understand problems faced by female students. A study to showcase how vocational skill can help to mitigate dropout challenges and promote livelihood opportunities has been undertaken in 200 schools in selected districts of Orissa (Koraput, Gajapati and Rayagada districts) and Assam Berpeta and (Gopalupara districts).

The issues related to inequality in the experience of technology, autonomous adaptation to climate change, challenges of migration, discrimination experienced by women during different stages of life are being studied. The larger discourse on inequality is also being addressed.

Under Urban and Mobility Studies Programme, the pathways and modalities of circular labour migration in the construction industry in Bengaluru and Jakarta has provided inputs on changes in land use, property relations, livelihoods and urban ecologies in the context of rapid growth. A study on climate-change induced migration in the Sunderbans has been undertaken.

The Maths Heritage Initiative has initiated a study on epistemology of Indic science and its relevance to modern computer science, AI and Information Science. A study on Nottusvara, a genre of compositions in South Indian Classical Music – wherein devotional words in Sanskrit or Telugu were set in popular tunes played by European bands - has been initiated.

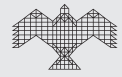
Four training programmes supported by DST on Science, Technology and Innovation Policy, Social Responsibility of Scientists, Science and Sustainability, and Policy for Science and Science for Policies were organised.

This year 14 students were admitted in the Doctoral programme, out of which nine students have their own fellowships. Four students were awarded PhD degrees. Sixty-eight students are pursuing their doctoral degrees.

The K Subrahmanyam Memorial Lecture and 16th Raja Ramanna Memorial Lecture were delivered by Prof SD Muni, Jawaharlal Nehru University, New Delhi and Prof Deepak Pental, Delhi University, respectively. The faculty of the institute produced 15 books, 108 journal publications and 37 book chapters.

The financial situation continues to be of concern due to impacts of Covid. Efforts are underway to increase the institutional and project funding support. Overall, the progress has been excellent and compliment the entire team of IAS.

Shailesh Nayak
Director, IAS



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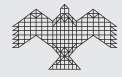
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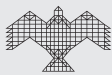
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ACKNOWLEDGEMENTS

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Government of India Ministries & Organisations

Department of Science and Technology,
Government of India
Department of Space, Government of India
Department of Atomic Energy, Government of India
Defence Research and Development Organisation,
Government of India
Ministry of Earth Sciences, Government of India
The Ministry of Environment, Forest and Climate
Change, Government of India
Office of the Principal Scientific Advisor to the
Government of India
Reserve Bank of India, Mumbai
Science and Engineering Research Board, New Delhi
Indian Council of Social Science Research, New
Delhi
Indian Council of World Affairs, New Delhi
Indian National Academy of Engineering, New Delhi
The Indian Council of Historical Research, India
Rajiv Gandhi National Institute of Youth
Development

Government of Karnataka

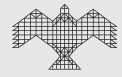
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Sundaram Finance Limited, Chennai
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International Institutes & Organisations

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NIAS looks forward to receiving continued support from our well-wishers, funding agencies and all others towards actualising our research and academic mandate.



EXECUTIVE SUMMARY

The activities of NIAS are organised under four schools: Conflict and Security Studies, Humanities, Natural Sciences and Engineering, and Social Sciences. The following is a summary of the major outcomes and achievements of the various programmes and initiatives of the four schools at NIAS.

1. CONFLICT RESOLUTION AND PEACE RESEARCH

On Conflict Resolution, the Programme attempted to pursue evidence-based research on individual conflicts and also aimed at a larger conceptualization of conflict. An edited volume titled “Gandhi in the Twenty First Century” was brought out in 2022. Published by Springer Singapore, this book employs a multidisciplinary framework and through thirteen distinct, yet interrelated, themes offers solutions to societal challenges through the prism of the Gandhian thought process. On Peace Research, the Programme aimed to study “peace” as a political process, with an objective to provide policy inputs to the State and the society. Supported by the KAS, the International Peace Research Initiative (IPRI) continues to publish NIAS-KAS Conflict Weekly, an academic endeavour to track, interpret and analyse conflicts and peace processes across the world, from the Americas to Africa and the Pacific. Conflict Weekly brings to the research community every Wednesday a weekly alert of events, updates, and analyses on potential and ongoing peace processes and conflicts in the world.

2. SCIENCE, TECHNOLOGY AND INTERNATIONAL RELATIONS

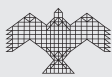
The Science Diplomacy Programme was rechristened in September 2021 as the Science, Technology and International Relations Programme to reflect the broadened goals of the programme. The STIR programme publishes a fortnightly on Science, Technology and International Relations, and also a weekly ‘The World This Week’ every Sunday. The programme also started three new area studies looking at China, Europe and Africa. The programme launched a network – International Studies Network Bangalore (ISNB) – with seven academic institutions from Chennai, Pondicherry, Bengaluru and Goa. The long-term objective of the ISNB is to create a “Bangalore School of IR”. The Programme organized a workshop on ‘The State of Global Politics in 2021’ in Pondicherry University.

3. INTERNATIONAL STRATEGIC AND SECURITY STUDIES

The International Strategic and Security Studies Programme (ISSSP) specializes in studying issues of national importance from a science and technology perspective. The ISSSP undertook research studies for Defence Research and Development Organization, and produced comprehensive recommendations addressing short term and medium-term requirements for the industry, academia and R&D institutes through rigorously reviewed projects in the area of strategic applications such as futuristic battle tanks, hypersonic missiles, deck-based combat aircraft, and unmanned combat aircraft. A detailed study of cyber security vulnerabilities of Indian weapon system was undertaken and mitigation measures were recommended. Software tools were developed for improving space situational awareness and to provide the defence establishment user with visibility information for selected locations to enemy reconnaissance satellites. A volume was published on India’s underwater domain awareness. The use of remote sensing applications for the study and analysis of India’s neighbourhood for their military infrastructure development activities and maritime preparedness was also published as a report.

4. CONSCIOUSNESS STUDIES

The goal of the Consciousness Studies Programme is to connect knowledge, wellbeing and “the beyond” to seek both the manifest and subliminal meanings and experiences of consciousness. “The beyond” is identified as the unknown space that invokes complex questions and challenges, and that are explored using principles of causality, AI, indigenous healing, metaphysics, ethnography, literature and the arts. This academic year, Programme research studies strived to engage with the importance of an interconnected, humanistic yet transpersonal, and grounded nature of consciousness, its reality and experiences.



5. HERITAGE, SCIENCE AND SOCIETY

The Heritage, Science and Society Programme was engaged in the following research studies: 'Lamp making traditional crafts of Tamil Nadu and Kerala'; 'Exploring ferrous metal finds from Keeladi and Kodumanal'; 'History of stone-working and construction techniques in monumental architecture'; 'Early monumental architecture'; 'Geoarchaeology of Gangetic Delta'; and 'Policy research on regulatory boundaries for protection of cultural heritage sites'. The programme also organised a five-day workshop on '3D Landscapes' aimed at Masters/PhD students, researchers and practitioners in the fields of archaeology, history, art-history and conservation architecture.

6. ANIMAL BEHAVIOUR AND COGNITION

The major focus of Animal Behaviour and Cognition Programme was to investigate the drivers of Kysanur Forest disease transmission in India, impacts of mining on human-primate conflict, object recognition and tool manufacture on wild bonnet macaques and behavioural adaptations in Deccan mahseer juveniles. Other studies on the urban ecologies of wild and feral species in Delhi and Guwahati, interactions between Asian elephants and human communities in north-eastern India, behavioural modifications in a blind subterranean eel, nonhuman representation in Vijayanagara monumental sculpture, visual recognition of food objects by bonnet macaques, cultural exchanges in Indian and European classical and popular music during 18th to 20th century, and the costs of human food choices in India were also carried out.

7. COMPLEX SYSTEMS

The Complex Systems Programme does frontier, interdisciplinary research based on principles of nonlinear dynamics. The studies related to (i) The dynamics of a flexible beam pendulum having beam mass comparable with the pendulum mass, and (ii) A simple mechanical model for sloshing dynamics in a half empty reservoir. Another study dealt on modelling anthropogenic effects on the environment and interacting species, the dynamics of environmental effects on living systems, and modelling of interactions between species in fragmented landscapes.

8. ENERGY, ENVIRONMENT AND CLIMATE CHANGE

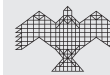
The EECPC has focused on research-based policy advocacy in order to contribute to policy formulation and implementation at the National level. The Programme developed a Transition Plan for Thermal Power Plants (TPPs) based on integrated approach to energy security and climate change. Another policy recommendation to examine the suitability of sites currently occupied by retiring TPPs for Small & Modular Reactors (Generation IV technology) was accepted by the Board of Research in Nuclear Studies. The recommendations of a study on the role and economic viability of nuclear power was accepted by NPCIL and the broader atomic energy community. Several research-based policy recommendations submitted to the Karnataka Electricity Regulatory Commission to reform the power distribution sector find place in the subsequent reports submitted by Government authorities and the Forum of Regulators.

9. SCIENCE COMMUNICATION

The Science Communication Programme studies change happening in the dynamics of the science communication ecosystem in India and develops communication strategies for conventional and social media to promote bidirectional communication between scientists and the public. Risk communication is one of the focal themes pursued by the Programme and a research project exploring determinants of nuclear risk perception in India is progressing. A study of the oscillation in public and media attention during different phases of cyclones that hit the Indian coast during 2017-2021 and an investigation to test the feasibility of developing '*Ojapali*', a traditional folk theatre of Assam into a medium for climate change communication was completed. 'Multi-Stakeholder Dialogues' and 'Student-Scientist Interaction' to strengthen the science-society relationship in India have been initiated.

10. EDUCATION

The Education Programme faculty continued to focus and expand on research areas related to changing patterns of work-life balance of women in STEM; social exclusion and migration; interlinkages of vocational education, school dropout and livelihood; employability among adolescent youth, education for sustainability, identity, and teaching of history.



11. INEQUALITY AND HUMAN DEVELOPMENT

The Inequality and Human Development Programme seeks to develop policy options based on transdisciplinary and empirically consistent conceptualizations of inequality, and to contribute towards public discourse to enable more informed policy choices. The programme has addressed five such areas: the inequalities of climate change and autonomous adaptation, technology and inequality among the subaltern, socio-economic transformation and those left behind from migration and other processes, age and the experience of gender inequality of the Indian woman, and the inequality between the local and the national. The projects are designed to improve the understanding of inequalities in transformations, technology, climate change, ageing, and the relationship between the local and the national. The resultant insights are expected to lead to more effective interventions in socio-economic processes in India.

12. URBAN AND MOBILITY STUDIES

The Urban and Mobility Studies Programme is developing a new research agenda that aims to contribute to new thinking and knowledge and policy debates on the changing interfaces between labour, migration and urbanisation as well as transformations in the social and cultural fabric of Indian cities. A new project on the labour contracting system in the construction industry was initiated. A survey of women workers in the garments sector of Karnataka as part of a multi-country research programme on gender and labour in global supply chains has been initiated. New fields of research on queer health and the city have been introduced.

TRAINING PROGRAMMES

An online training programme on Emerging Fields in Defence Technologies and Challenges organised for BEL Academy of Excellence, and NIAS-DST online training programmes on: 'Science, Technology and Innovation Policy' for Scientists and Technologists; 'Social Responsibility of Scientists: Pathways and Outcomes' for Women Scientists; 'Science and Sustainability in India' for Women Scientists; 'Policy for Science and Science for Policies' for Directors/Divisional Heads/Chief Scientists/Senior Scientists, were conducted.

DOCTORAL PROGRAMME

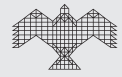
NIAS is recognised as a centre for research by Manipal Academy of Higher Education (MAHE), Mysore University and the University of Trans-disciplinary Health Sciences and Technology (TDU) from which students get their PhD degrees. At present there are sixty-eight students pursuing interdisciplinary research in natural and engineering sciences, social sciences, humanities and arts. A total of four students were awarded PhD degrees last year.

NIAS has initiated various means of outreach for extending news and updates of the academic achievements of faculty members. The lectures delivered by NIAS faculty and the public programmes organised by NIAS were conducted using the online/offline mode.

SCHOOL OF CONFLICT AND SECURITY STUDIES

Programmes

- Conflict Resolution and Peace Research
- Science, Technology and International Relations
- International Strategic and Security Studies

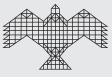


SCHOOL OF CONFLICT AND SECURITY STUDIES

The School of Conflict and Security Studies, has three programmes – Conflict Resolution and Peace Research (CRPR) Programme, International Strategic and Security Studies Programme (ISSSP), and the Science, Technology and International Relations (STIR) Programme. The three programmes of the School complement each other in terms of research focus and activities. While ISSSP looks at larger security issues, CRPR looks at conflict resolution and peace research, and STIR adds value by merging S&T with diplomacy and global politics. The School works closely with various departments of the government, from Defence Research and Development Organisation (DRDO) to Department of Science and Technology (DST). The School also maintains links with several international institutions and scholars.

Programmes

- **Conflict Resolution and Peace Research**
- **Science, Technology and International Relations**
- **International Strategic and Security Studies**



CONFLICT RESOLUTION AND PEACE RESEARCH PROGRAMME

Introduction

The Conflict Resolution and Peace Research Programme (CRPR) has two primary pillars – Conflict Resolution and Peace Research.

On Conflict Resolution, the programme attempts to pursue evidence-based research on individual conflicts and also aims at a larger conceptualization of conflict. It studies individual conflicts in depth with the twin purpose of identifying elements that can be used to resolve them in achieving peace, as well as to further develop the overall understanding of conflicts and their resolution. The process of engagement with conflicts takes a conceptual route to identify the issues and contenders of the conflict which otherwise remain inadequately addressed in most other platforms.

On Peace Research, the programme aims at studying “peace” as a political process, with an objective to provide policy inputs to the state and the society. In particular, the programme focuses on “peace processes” across the world – their successes and failures in order to understand why these processes do not always achieve peace. In particular, it aims to study and find answers to the last mile problem in peace processes.

In terms of regions in studying conflicts and peace, the programme has a special focus on the following: India’s Northeast, Left-wing affected areas, Jammu and Kashmir, Sri Lanka, Myanmar, Pakistan and Afghanistan. The programme believes in capacity building and dissemination of knowledge and practice about conflicts and peace processes with a larger objective of influencing both popular perceptions and policies aimed at conflict resolution and achieving peace. It has a strong doctoral programme as a part of its capacity building programme. The programme aims at disseminating its research findings through a series of publications and publishes backgrounders, policy papers, issue briefs and short commentaries. In particular, a series of research backgrounders ranging from conflicts in Northeast to the Maoist conflicts in India have been published offering substantial and critical knowledge on each of these conflicts. The programme thus seeks to intervene in the knowledge about conflict and peace research in three major ways: research, teaching, and policy interventions.

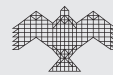
Research Activities

Social Impact Assessment: Funded by the National Centre for Coastal Research (NCCR), Ministry of Earth Sciences, Government of India, the programme is pursuing a study on ‘Preparation of Social Impact Assessment (SIA) for the proposed Dam’ in Gujarat. This research study aims to assess the socio-economic impact of development projects on the people and the society. Based on an extensive field survey of households in two districts of Gujarat, the study would offer a credible impact assessment report which would have positive implications at the policy level.

Formal and Informal Decentralisation in Manipur and Mizoram: Funded by the Indian Council for Social Science Research (ICSSR), New Delhi, the programme has been conducting a research study on ‘Formal and Informal Decentralisation: A study of Manipur and Mizoram.’ This study aims to investigate the issues and the linkages between the formal and informal institutions that decide and influence the decentralisation processes in two North-eastern states of Manipur and Mizoram. At this point, the study is at its initial stage.

Conflict Weekly: The Conflict Weekly is a joint initiative of the NIAS-IPRI and Konrad-Adenauer-Stiftung (KAS) – India Office, to track, interpret and analyse conflicts and peace processes across the world. The Conflict Weekly brings to the research community a weekly alert of events, updates, and analyses of potential and ongoing peace processes and conflicts in the world.

Peace and Conflict Annual Study: In 2021, the programme launched an annual study, looking at peace and conflict issues through a regional prism. In December 2021, scholars from different parts of the country came



Participants and Resource Persons of the Young Scholars Workshop on Global Protest Movements, at Kristu Jayanti College, Bengaluru, November 2021.

together to share their findings on regional conflicts and peace processes. The findings were published as issue briefs.

Outreach

IPRI Network: The International Peace Research Initiative (IPRI) within the programme has created a network of academic institutions from Puducherry, Chennai, Bengaluru and Goa. Supported by the KAS-India Office, the IPRI meets once a year, to organise joint workshops and works to build a literature pool on issues relating to peace and conflict.

Global Protest Movements: In 2021, protest movements played an important role in shaping Peace and Conflict situation across the world. NIAS-IPRI conducted a two-day workshop for young scholars at Kristu Jayanti College, Bengaluru in November 2021. The workshop aimed to produce essays from young scholars, focussing on the origin, course, outcomes and future of global protest movements, on the following themes: anti-State protests, gender protests, climate protests, and COVID-related protests.

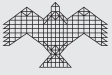
State of Peace and Conflict 2021: NIAS-IPRI conducted a workshop in December 2021, inviting experts to map the annual developments of Peace and Conflict from different regions across the world. The workshop was attended by mid-career field experts and young scholars and provided a platform to discuss and debate Peace



Dr Gudrun Wacker Delivering the IPRI-KAS Peace Lecture on The US, China and International Order at the Taj West End, Bengaluru, November 2021.



Participants and Discussants at the Annual Workshop on the State of Peace and Conflict 2021 at NIAS, December 2021.



and Conflict in 2021. The workshop produced a compilation of essays covering the following regions: China, East Asia, Southeast Asia, South Asia, Central Asia, Middle East, Africa, Latin America and North America.

IPRI Peace Lectures: The IPRI Peace lectures is designed to be a platform of interaction between prominent peacemakers and policy-makers with the next generation of thinkers and leaders. In November 2021, the programme organised the IPRI-KAS Peace Lecture on “The US, China and International Order” delivered by Dr Gudrun Wacker, Senior Fellow, SWP, Berlin.

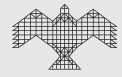
D Suba Chandran, *Professor & Head*

Anshuman Behera, *Associate Professor*

Amit Mukherjee, *Assistant Professor*

Doctoral Students: Aparupa Bhattacharjee, Hrudaya Chandana, David Jangminlien, Zarnain Manzoor

Research Associates: Abigail Miriam Fernandez, Apoorva Sudhakar



SCIENCE, TECHNOLOGY, AND INTERNATIONAL RELATIONS PROGRAMME

Introduction

Science, Technology, and International Relations (STIR) is the youngest Programme within the School of Conflict and Security Studies. The primary objective of STIR is to study science and technology from an international relations perspective, and to study IR from a S&T perspective. The programme successfully established four new area studies – Europe, China, Africa and Maritime.

Research Activities

NIAS Pakistan Reader: Pakistan Reader (PR) aims to study contemporary Pakistan with a comprehensive and regular focus, build a team of young scholars within India, and create a network of global scholars across the world through regular discussions (online and offline) on Pakistan and interact with a larger group of Pakistan scholars. The initiative has five verticals; society, economy, politics, energy and ethnicity. PR looks at the political complications within Pakistan at national and provincial levels, civil-military relations, ethnic complexities, economic constraints and energy calculus.

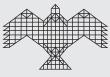
PR has undertaken the following publications and initiatives. 'PR Evening Brief @ 1600hrs' is an initiative taken up to update the readers on current developments within Pakistan, on a regular basis through an e-alert every evening. 'PR Comments' are short commentaries covering a brief analysis of contemporary developments in Pakistan. 'PR Friday In-House Discussions' are weekly discussions by the PR course scholar on contemporary issues relating to Pakistan.

NIAS Europe Studies: The Europe Studies is a part of the Institute's endeavour to build area studies within NIAS. The focus includes Europe's internal politics, democratic dividends, protest movements, trans-Atlantic alliances, regional integration, and the role of external actors such as China are a few niche areas of critical focus.

As a part of its research output, in collaboration with the India office of the Konrad Adenauer Stiftung, NIAS Europe Studies publishes a monthly dispatch, the Europe Monitor. This monthly is an integral part of NIAS Europe Studies and comprises focused commentaries on Europe, short notes, and daily updates on contemporary Europe. EM Daily Brief is published every evening by the NIAS Europe Monitor team on the day-to-day contemporary developments. During 2022, NIAS Europe studies started publishing a daily alert on Ukraine War.

NIAS Africa Studies: NIAS Africa Studies was launched in March 2022. It aims to understand the developments and issues of Africa, from an African perspective. Currently, NIAS Africa Studies focuses on the Horn of Africa, North Africa and the Sahel. The research focus includes civil-military relations, external interventions and investments, resource politics, the spread of radical Islamic groups and non-traditional security issues like climate change, hunger, and migration in Africa. NIAS Africa Studies also aims to build a network of Indian scholars studying Africa, preferably those who focus exclusively on the continent's issues and potential and include universities and scholars from Africa to create a platform to exchange ideas and strengthen research. NIAS Africa Studies launched "Africa Weekly" in March 2022. The weekly brings a comprehensive understanding of contemporary issues within Africa, from an African prism.

NIAS Maritime Studies: Maritime Studies is an academic initiative within the programme on science, technology and international relations in the maritime domain. The initiative was launched in December 2021 in collaboration with Pondicherry University. The studies aim to expand into five aspects. First, political aspect, looking into strategies on maritime. Second, science and technology aspect. Third, academic aspect, where it will focus on current issues, theoretical framework and state behaviour. Four, capacity building, where young scholars across India working on maritime will come together as a network of maritime scholars. Five, larger network, which targets scholars from India and abroad on building an NIAS international maritime network.



The Indo-German S&T Dialogue held with Konrad Adenauer Stiftung at NIAS.

The World This Week: The World This Week is published as a part of the research activities of the NIAS Global Politics course. The alert, published every Sunday, aims to provide its readers with a ready reckoner of major developments during the week under three heads - what happened, what is the background, and what does it mean. The Alert also provides an opportunity for the young scholars at NIAS and its partner institutions to follow and comment on contemporary global developments.



Release of the 'State of Global Politics in 2021' by the Vice Chancellor of Pondicherry University Gurmeet Singh at Pondicherry University, Puducherry.

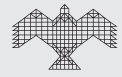
Global Politics Young Voices: Global Politics, Young Voices (GPYV) is a capacity-building exercise. As a part of its research activities, the STIR Programme runs courses, discussions and workshops, particularly for young scholars. The programme also aims to build a network/dialogue of scholars working on International Relations, Conflicts and Peace Processes.

The GPYV Monday Discussions are a part of the above initiative; it aims to provide a platform for young researchers across multiple institutions in India to present/debate their thoughts amongst their peers. The GPYV discussions, after review, are published on our Course portal - www.globalpolitics.in.

D Suba Chandran, *Professor & Head*

Doctoral Students: Harini Madhusudan, Rashmi Ramesh, Akriti Sharma, Lokendra Sharma, Ankit Singh

Research Associates: Padmashree Anandan, Avishka Ashok, Rishma Banerjee, Ashwin Dhanabalan



INTERNATIONAL STRATEGIC AND SECURITY STUDIES PROGRAMME

Introduction

The primary objective of International Strategic and Security Studies Programme (ISSSP) is to study the political, military, technological, economic and security developments in India's immediate and extended neighbourhood, and the world in general. This in turn involves examining prospects and the policy challenges, study the impact of technology on security, and provide policy inputs on relevant issues through research, discussion meetings, workshops and conferences. Research proposals on these lines are generated after gauging the interest of likely sponsors. Studies have been mainly sponsored by the defence and security agencies in the country. In addition, members of the programme have taken up research in their own areas of interest and domain expertise.

Research Activities

The Programme has initiated research studies on some key topics, like deployment of drones in national air space, to advocate policy and regulatory mechanisms. Another key feature of the Programme is development and application of software and analysis tools for independent assessment of issues. Application of Geographic Information System (GIS) in Space, maritime domain and defence is another area of interest in the Programme. Considering the emerging situations in the space environment, where the congested and contested space can lead to potential conflicts, the programme has initiated studies to capture the country's space situational awareness requirements.

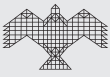
A study project titled Critical Weapon System Technologies, Sensors and Platforms for National Security, funded by DRDO was one of the main activities under the programme during the past year. The findings of the study were reviewed by domain-specific expert committees. In order to widen the base for inputs for the study, three webinars, titled 'Emerging Trends in Underwater Platforms, Weapons and Sensors', 'Technology Challenges in the Design of Unmanned Underwater Vehicles' and 'Challenges in the Development of Future Indian Air Combat Systems', were conducted by the study teams.

The studies on 'Battle Tanks, Hypersonic Weapon Systems, Underwater Systems (Platforms, Sensors and Weapons)' and 'Radars' were completed in 2021, and the final reports were submitted to DRDO. The studies on Unmanned Combat Aircraft (UCAV), Deck-based Combat Aircraft (DBCA) and Electronic Warfare (EW) will be completed by June 2022.

Another ongoing study project for DRDO on 'Study of Weapon System Cyber Security Vulnerabilities' critically analyses the vulnerability of Avionics Systems with respect to Cyber Security concerns of weapons systems. Two interim reports were submitted and a review of the study was also conducted. A one-day Webinar on the topic enabled the team to widen the base for inputs to the study.

The two software packages – *Quo Vadis* and *Veni Vedi Vici* – are now mature products. They have been thoroughly tested not only by users in ISSSP but also by outside parties like INTEG, Indian Navy. The validation by INTEG has been particularly reassuring since it has been used in regular operations of the Navy. Efforts to popularise the use of the two packages continued. Several presentations were made to potential users and the coverage and capabilities of the software packages is being enhanced. Discussions have been initiated with M/s Bellatrix Aerospace to see whether the developed packages can be moved away from the FORTRAN base to a C++ or some other modern language.

A book titled 'Underwater Domain Awareness – Case for India', co-authored by Dr Prakash Panneerselvam, Prof Rajaram Nagappa, Vice Admiral RN Ganesh (Retd) was published by Routledge. This book presents a comprehensive analysis of the emerging underwater challenges facing India in the Indian Ocean region. With major economic powers like China, the United States, and Russia modernising their submarine fleets and



building advanced unmanned underwater vessels to enhance surveillance capabilities, the competition in the Indo-Pacific underwater domain has intensified.

A project on 'Infrastructure and Industrial Development in North East India: Exploring the Potential Role of Japan', funded by Japan Foundation examines the potential areas related to the infrastructure developments (roads, canals, power plants and distribution, urban and rural growth) in Northeast India where Japan can focus in future as part of its ODA. One month field trip was conducted in the Northeast region and an online seminar was conducted to get experts view on the Japan's role and development activities in the region.

Four editions of NIAS-CISAC Virtual Dialogues during the year on 'India-US Cooperation on Global Security – Strategic Security Threats of 21st Century', covered Climate Change, Natural Disasters, and International Security, Hypersonic Systems – Potential and Security Challenges, Space Security Challenges and Nuclear Risks. Eminent experts from India and USA participated in the dialogues.

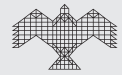
The studies on Hypersonic Weapon Systems focused on Hypersonic Glide Vehicles (HGV) and Hypersonic Cruise Missiles (HCM), threats emerging from such weapons and the need for India to develop appropriate weapon system capability as well as defences. Critical and enabling technologies were examined in depth, including existing technology maturity levels. Hypersonic glide vehicles operate over a range of hypersonic Mach Numbers and the aerodynamic design and managing the equilibrium glide including cross range/downrange manoeuvres are major issues. For hypersonic cruise missiles, scramjet propulsion, thermal management and materials and airframe-engine integration are principal issues.

Research studies have been continued in the areas of Directed Energy Weapons; Next generation Avionics Systems; Weapon System Cyber Security Vulnerabilities; Security of Space Assets; Defence Applications of Artificial Intelligence; Cognitive Electronic Warfare Systems; Chinese Defence Technology Assessment, particularly with reference to Electronics, AI, SW, Robotics, etc; Study of Lethal Autonomous Weapon Systems – Legal, Ethical issues; Vetrronics systems for Battle Tanks; and Advances in Radar systems.

Research on Indo-Pacific region, India's Neighbourhood and North East India Borderland and Non-Traditional Challenges have been under progress. Lead research related to Asia (primarily South Asia, South East Asia and East Asia), Indian Ocean/Indo-Pacific Maritime Domain, Foreign Policies of India, China, the US, Japan and Australia, National and International Security, Non-Traditional Security (such as Refugees/Migration, Climate Change, Terrorism, etc), and Borderland Security and Development in the context of India's Northeast, have also been undertaken. Research in GIS and Remote Sensing, covering topics like Geo-computation modeling



NIAS-CISAC Virtual Dialogue on Hypersonic Systems.



and simulation methods in strategic studies were undertaken. A comprehensive study of Pakistan's Shaheen-III Missile Programme was conducted.

Outreach

Many invited talks, discussion meetings and lectures by specialists were organised. An ISSSP Lectures series on 'International Security' was initiated and the topics of lectures included 'India's Strategic Landscape', '9/11 and the Afghanistan Fiasco', 'Cyber and International Security', 'Iran and Regional Security', 'Technologies used during Low-Intensity Conflicts', 'China and International Security: Beijing's Strategies and Global Responses', 'Europe and International Security: Issues, Challenges and Options', 'Security Paradigms in a Polarized World'.



NIAS and MRC Signed MoU in March 2022 for cooperation in Underwater Domain Awareness.

Srikumar Pullat, *Visiting Professor & Head*

D Suba Chandran, *Professor*

S Chandrashekar, *JRD Tata Chair Visiting Professor*

Rajaram Nagappa, *Honorary Visiting Professor*

PM Soundar Rajan, *Visiting Professor*

N Ramani, *Visiting Professor*

Lalitha Sundaresan, *Visiting Professor (till 13 May 2021)*

M Mayilvaganan, *Associate Professor*

Amit Mukherjee, *Assistant Professor*

Prakash Panneerselvam, *Assistant Professor*

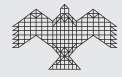
Doctoral Students: Hema Karnam, Varun Mohan

Project Associates: Akhil Chandran, Chithra Priya Srinivasan, Nikhita Matti, Surya Swaminathan

SCHOOL OF HUMANITIES

Programmes

- Consciousness Studies
- Heritage, Science and Society

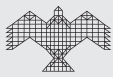


SCHOOL OF HUMANITIES

The School of Humanities is engaged in research in the broad areas of philosophy, psychology, literature, archaeology, history, mathematical modelling, fine arts, and culture. The Programmes of the School currently focus on philosophical foundations of sciences; cognitive sciences; scientific and philosophical studies of consciousness; indigenous healing traditions; integrated information theory; history and philosophy of biology; archaeometallurgy and analysis of ancient metals; and translations of literary classics in Kannada into English.

Programmes

- **Consciousness Studies**
- **Heritage, Science and Society**



CONSCIOUSNESS STUDIES PROGRAMME

Introduction

The Consciousness Studies Programme (CSP) focuses on the humanistic and health aspects of consciousness along with a critical approach to the theorization of the self. The overall goal is to bring to the public and interested students and scholars the importance of health, aesthetic pleasure, and knowledge as a triune reality deeply interconnected with consciousness.

Research Activities

The following projects were undertaken:

1. 'Causal Structures, *Vimarsa* and the *Pratyabhijña*: A Comparative Research Study on Kashmir Saivism and Information Theory' funded by the Tata Education Trust. The major intent and goal of the project is to focus on the fundamental discussions pertaining to philosophical and psychological questions raised by the thinkers of Kashmir Saivism and attempt the contextualising of Information theory, consciousness studies and artificial intelligence, from the view point of analysing causal structures of thought, experiences and entities. The study is the first comparative attempt to juxtapose emotions, aesthetic process, memory, cognitive structures and the self in the context of understanding consciousness in Indian philosophy in the light of contemporary interdisciplinary discussions on consciousness, cognition and the self. The following focused studies were carried out.

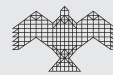
1. Parāsamvit and Pratyabhijñā: An Onto-Epistemic Enquiry in Kashmir Shaivism.
2. Investigations into Learning Algorithms in Intelligent Machines.
3. A Theoretical Study of Two Ethnic Performances – Tirayattam and Sarpamthullal: Interpretations using Dhvani Theory.
4. The Interface of Pratyabhijñā Philosophy, Rasa Aesthetics, and Kashmir Kāvya Literature.

2. 'Documentation and Study of Alternate and Indigenous Psychiatric and Psychological Practises of Healing and Wellness' (With a Pilot Project of Model Building Focusing on Kerala State) funded by the Tata Education Trust. The major intent and goal of the project is to document the indigenous healing and wellness traditions of Kerala, and, understand the psychological and psychiatric implications with the help of examining antiquity, tribal medicine and native landscapes, ritual healing, and indigenous living. The focused studies within the project are:

1. The Secret of the Word and the Theatrics of Faith-Healing; Tracing the Language- Consciousness Nexus through Mantravada Narratives from Kerala.
2. Situating the Correlates of Wellbeing through an Āyurvedic Approach to the Concepts of Consciousness, Self and Life-purpose.
3. An Anthropological Study on Health, Ethnomedicine and Indigenous Knowledge Systems among the Adiyar and Mavilan Tribal Communities of Kerala.
4. Indigenous Knowledge of Healing among the Tribes of Nilambur Valley: A Study of Cross-Cultural Landscape across Ethnic Boundaries.

3. 'A Study of Consciousness Measures and Synchrony between Brain and Cardiovascular Dynamics in Yoga Experience' funded by DST-SATYAM (Department of Science and Technology – Science and Technology of Yoga and Meditation) in collaboration with the Indian Institute of Science, and National Institute of Mental Health and Neurosciences.

ECG and EEG analysis of acquisitions of yoga/meditation practitioners is underway. For ECG analysis, after appropriate pre-processing steps, RR tachogram is extracted and complexity analysis is performed. Similarly,



for EEG analysis, filtering and artifact removal is performed and currently network causal analysis (to identify quantitative levels of consciousness) is being performed. A Yogic Proficiency Scale (YPS) – a self-assessment measure for yogic proficiency of an individual based on Patanjali Yoga Sutras is being developed. A first version of the scale was deployed for 204 participants.

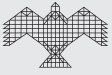
4. Causality Testing in Cognitive Neuroscience with Applications to Measures of Consciousness' funded by DST-CSRI. The recently proposed causal discovery algorithm that employs context-free grammars inferred through lossless compressors has been rigorously tested. The causal discovery algorithm makes no assumptions on the input data and can be carried out for sequences with varying lengths such as genomes. Rigorous testing and analysis of the method on real-data (SARS-CoV-2 genome sequences) was performed and findings published.
5. NAVARANG: The Colours, Moods, and Voices of the Marginal and Indigenous Communities – Documentaries and Research Narratives Focusing on Tribal Healers, Ritual Arts, Food Culture, And Local Ecologies of India (2021-2023) funded by the Sheela Kanoria Foundation, New Delhi. The two major outcomes are summarised below:

1. A 50 minutes documentary titled "Keni" focusing on the indigenous food culture of Mullukuruman Tribal community. The visual documentation focused on the diversity and significance of the ethnic food culture of the Mullukuruman tribal community of Wayanad, including the study of their livelihood. Traditional food culture is influenced by lifestyles, habitats, beliefs, traditions, and values and the Mullukuruman's foods are inextricably linked to their culture. The changing ethnic food culture has impacted their health to some extent. In spite of the changes in the Mullukuruman's traditional food consumption over the years, they still adhere to their own traditional food during rituals and other important occasions. This documentary was selected by the international jury for the "The Best Documentary Film" and "Best Cinematography" Awards in the International World film festival INDIE.



2. A Photo-story titled 'Mughathezhuth: Enlightenment in the Dark' through 25 Paintings focusing on elaborate ornamentation such as decorative accessories and mughathezhuth (facial art) of Tirayattam, a ritual art performance from Kerala. Teyyam, Tirayattam, and Patayani are some among the numerous performances that enliven this cultural heritage of Kerala. Traditional forms of painting practices such as mughathezhuth (facial art) and melezhuth (body art) enhance the artistic quality of such performances. Tirayattam is distinguished by its elaborately colourful mughathezhuth with well-defined proportions. Due to the lack of natural dyes and complexities involved in the process, many of these living traditions are likely to be forgotten or abandoned. Some of them gradually evolved and adapted to the new environment. The photo story with 25 paintings documented the elaborate ornamentation such as decorative accessories and mughathezhuth (facial art) of Tirayattam, a ritual art performance from Kerala. Stories of Bhagavati, Ghanthakaranan, Karivilli,





Karumakan, Kariyāttan, Bhairavan, Guḷikan, Kuṭṭiccāttan, Mūrtti, and Nāgakāḷi were weaved through twenty-five paintings. Acrylic, Watercolour, and Pencil colour were used for this painting series. Artists involved in this project are part of Hive- Fine arts society of Lady Shri Ram College for Women.

Courses

Online course on Research Writing and Communication, February to May 2021. The Course focused on different forms of research writing including research thesis, research proposals, and research papers that include literature review and methodology. The concluding module of the Course brought in intersections of different approaches to reading and writing from four different perspectives, with the goal of experiencing both these in totality.

Online course on Philosophy, Self, and Consciousness: Exploring the Context of Experience, February to June 2021. This course focused on interdisciplinary engagements on the conceptual frameworks needed for a student to study the constitution of human experience, and the place of self and consciousness. The course was structured around six broad themes such as: Self and Experience in Philosophy; Self and Experience in Indian Indigenous systems of health care; Self and Experience in Aesthetics; Self and Experience in Social Sciences; Self and Experience in Psychology/Psychiatry; and Self and Experience in Literature.

Sangeetha Menon, *Professor & Head*

Sisir Roy, *Honorary Visiting Professor*

Nithin Nagaraj, *Associate Professor*

Post-Doctoral Associates: Shankar Rajaraman, Saurabh Todariya

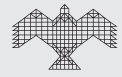
Doctoral Students: Pushya Gautama, Meera Kumar Menon, Siddharth S, Niharika Sharma

Research Associates: Amrutha MK, Harikrishnan NB, Rakesh Kumar, Sukanya G

Junior Research Fellows: Nikita Agarwal, Pranay, Priyanka S

Research Assistant: Abhishek Shrivastava

Project Assistant: Ashwini G



HERITAGE, SCIENCE AND SOCIETY PROGRAMME

Introduction

The Heritage, Science and Society Programme aims to explore the linkages of science and technology with culture, society and civilisation seen through the lens of the issues of the documentation, study and preservation of heritage. It is concerned with study, documentation and analysis of archaeological artefacts of various scales, such as art objects, archaeological monuments, sites, layouts and landscape, not only from traditional historical approaches but also from innovative perspectives that aim to explore the technological dimensions, (encompassing heritage sciences). The areas particularly covered include archaeometallurgy, archaeomaterials, architecture, landscape archaeology with application of scientific techniques ranging from materials characterisation, remote sensing, geospatial analysis and digital approaches in the study art objects, artefacts, buildings to archaeological sites and landscapes; the historical study of south Indian languages, classics, inscriptions and epigraphy and related art historical aspects; the study of best practices in heritage and antiquities management and monuments and site conservation. The ramifications for preservation of tangible and intangible heritage including crafts traditions and theatre and performance traditions and issues of sustainability and the management of heritage and heritage policies are explored.

Research Activities

The various research projects being conducted fall into the following categories:

Archaeomaterial: Crafts and Artefacts

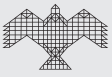
- Vilakku: Lamp Making Traditional Crafts, supported by Dallapiccola Foundation on the traditions of making lamps in Tamil Nadu and Kerala towards an audio-visual film and research documentation, in under progress.
- Archaeometallurgical Insights on Ancient Tamil Sites', under the NIAS-TCS Heritage Initiative is an exploration of ferrous metal finds from recently excavated sites such as Keeladi and Kodumanal.

History of Architecture and Building Material and Technology

- Rock-cut temples at Thal, in Kumaon Himalaya
- Ancient Artisans – In Myth and History: The trajectories of mythical artisans like Jakanachari of Karnataka and Perumtaccan of Kerala, as well as historical artisans like Narasobban and Mallitamma of Karnataka, among many others, by studying monuments attributed to them.
- Temple Architecture – Transition from Dravida to Vesara: This transition is being studied by documenting less-known temple sites near Aihole and the Vesara monuments of the Tungabhadra Valley, and Hoysala temples.
- Megaliths of India: Research and documentation of megalithic sites Mallasandram and Ettarapalli, in Krishnagiri District of Tamil Nadu with the aim of preparing an elaborate database of these monuments.

Landscapes, Site and Settlements: 'Geoarchaeology' a project funded by SAC Ahmedabad. Four geomorphologically significant area - Ganga delta, Krishna-Godavari delta, Gulf of Kambhat and Ghaghar plains - have been chosen for the study. Literature review on geographical context and historical significance, listing of archaeological sites from various sources, identifying locations of each site on geoportals like Google Earth and Bhuvan, analysing remote sensing data such as multirate optical multispectral images and historical images from Corona satellite series, analysing the geomorphology of the larger area using old maps for the Ganga and Krishna-Godavari deltas have been undertaken.

Exploring India's Medieval Coastline using Geospatial Analysis and Historical Records, funded by the Ministry of Earth Sciences: Analysis of the geomorphology of Mumbai region, covering the Portuguese settlement of Vasai in the north to the southern end of Colaba, was carried out.



Historical Water Systems in the Extended Landscape of Malaprabha River Valley: Supported by IHSD, DST, the research involves documenting various historical water systems (ponds, streams, lakes, tanks, wells and aqueducts) that are in the context of built heritage. Towards this, a list of sites was made using old reports, gazetteers, ASI and State protected sites. Using geospatial technology and remote sensing, the sites' topographical and hydrological context were studied. In this project hydrological tools in GIS were used for the first time to study heritage sites. Study investigations discovered an aqueduct and a network of man-made water features that brought water to the Agastya Thirtha tank at Badami, identified a 7th century temple plan (non-agamic), and several sacred groves.

Cultural Landscape Research: Characterising and Managing Built Heritage Sites, funded by Indian Space Research Organisation: Out of the 25 sites, the landscape characterization and geospatial database creation was completed for 9 sites and is in progress at various stages for 13 other sites.

Outreach

A workshop on “3D Landscapes” was held from March 21 to 25, 2022 at NIAS. This workshop had lectures, demos and hands-on sessions by experts. The topics covered were remote sensing and GIS for archaeology, space stereoscopy, photogrammetry, 3D modelling of landscapes and architectural structures. The resource persons for the workshop were from NIAS faculty as well as a few guest speakers from IIRS, Dehradun, IIT Gandhinagar and School of Planning and Architecture.

Sharada Srinivasan, *Professor & Head*
S Ranganathan, *Honorary Visiting Professor*
Srikumar M Menon, *Associate Professor*
MB Rajani, *Associate Professor*
Smriti Haricharan, *Assistant Professor (till October 25, 2021)*
Post-Doctoral Associates: Asmita Mohanty (*till March 20, 2022*), S Udayakumar
Doctoral Students: Ekta Gupta, Kuili Suganya, Meera Viswanath



Field Visit to the Megalithic Site at Mallasandram.



Moole Sankarashwara Temple, Turuvekere.

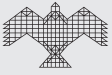


Portuguese Fort at Vasai, North of Mumbai.

SCHOOL OF NATURAL SCIENCES AND ENGINEERING

Programmes

- Animal Behaviour and Cognition
- Complex Systems
- Energy and Environment
- Science Communication



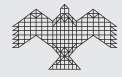
SCHOOL OF NATURAL SCIENCES AND ENGINEERING

The School carries out original research and policy advocacy in diverse fields. The faculty are grouped into four programmes of which the Science Communication Programme was established only in 2019-20. The School trains a large number of PhD students as well as several young research fellows and project assistants due to the success of its faculty in securing long-term research funding from multiple sources. The faculty are also well-recognised for their policy advocacy and outreach that extends NIAS's standing with the Government and amongst academia.

During the year 2021-22, the project on "Interdisciplinary Forays into Human-Environment Interactions", a 4-year intra-school integrated research initiative was completed and the report submitted to the Science and Engineering Research Board, Government of India.

Programmes

- **Animal Behaviour and Cognition**
- **Complex Systems**
- **Energy and Environment**
- **Science Communication**



ANIMAL BEHAVIOUR AND COGNITION PROGRAMME

Introduction

The primary goals of the Animal Behaviour and Cognition Programme are to understand the evolution of social behaviour and communication, the cognitive foundations of behaviour and to study intraspecific variation in the ecology and behaviour of animals. These core areas of research are complemented by other research interests of faculty members in the areas of environmental decision-making, animal personality, human-wildlife conflict, human-animal studies, environmental education and natural resource conservation. Over the past year, programme members were involved in several different studies that underscore the interdisciplinary nature of work carried out in the programme. These include projects on the behavioural ecology and management of primates and elephants in peninsular India, urban ecologies of nonhuman species in Delhi and Guwahati, nonhuman representation in Vijayanagara monumental sculpture, human-primate interactions as drivers for disease transmission, affordance learning and object use in wild macaques, behavioural flexibility and environmental coping strategies in fish species, traditional performances in theatre, music or the fine arts as representative of the increasing marginalisation of human and nonhuman societies, cross-cultural musical exchanges in colonial India, the costs of food choices in India, and the challenges inherent in science communication. All projects by programme members were funded by national (SERB-DST) and international (ERC, Leakey, Rufford, HSI-India) organisations.

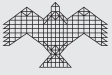
Research Activities

Work continued on the following research projects:

Primate Studies: The projects include a study on primate cognitive behaviour, the linkages between human-primate interactions and disease transmission, and a primate EIA study conducted for the Forest Department and NHAI. The first project on Food Object Recognition in Primates (CSRI-DST grant) studies what characteristics of food drive food choice in monkeys. The findings of the study thus have important implications for the management of conflict between humans and primates related to food procurement. Two phases of experimental data collection have been completed for this project. The desk study arose from an invited submission for the *Journal of Biological Anthropology* and used the lens of biocultural anthropology to understand how Kysanur Forest Disease, an endemic zoonotic disease in India has systematically spread across the Western Ghats. Field observation data collection nearly complete for this project. An impact assessment study concerning the nocturnal primate the slender loris was conducted to understand the impact of widening a highway that runs through the Chinnayampatti Reserve Forest in Dindigul, Tamil Nadu. The study was conducted in collaboration with the Dindigul Forest Department and the results of the study showed that the forest area harbours a high density of slender lorises and that loss of forest area would impact the species both through loss of habitat and associated anthropogenic disturbances. The study report was submitted to NHAI and to the Forest Department.

Fish Studies: Experiments and fieldwork related to three studies on fishes were undertaken during the past year. While the first two studies related to a project on the Deccan Mahseer, supported by SERB-DST, the third project looked at behavioural modifications in a blind subterranean eel *Rakthamichthys digressus*. A review was completed on various behavioural adaptations in Deccan mahseer juveniles, while experiments were conducted to understand the linkages between personality traits and social decision making in Deccan Mahseer adult individuals.

Costs of Human Food Choices: Supported by Humane Society International-India, and conducted in collaboration with Azim Premji University, Bengaluru, this study is nearing completion. The final draft of a report on costs of food choices in India was completed. The study focussed on two main aspects: the comparative costs of vegetarian and non-vegetarian diets in India and the sustainability of universal dietary recommendations for the country. As part of the deliverables for the study, an illustrated summary of the main findings of the study was also prepared.



Urban Ecologies: Governing Nonhuman Life in Global Cities. This four-year project conducted along with Cambridge University and funded by a Horizon 2020 grant from the European Research Council, Brussels focuses on a range of wild, feral and cultivated species in the Indian cities of Delhi and Guwahati and provides insights into what urbanisation might entail for these other than-humans. Much of the data collection for the study has been completed, and team members were engaged in analysing and writing up the main findings of the project for publication.

Additionally, fieldwork was also undertaken for a study on elephant-human relations in North-eastern India. This study is supported by grants from Rufford Foundation, India Inlaks Foundation and Idea Wild.

Outreach

A total of 13 lectures was delivered in various online seminars/workshops, and five international conferences. A workshop was conducted on Bridging Animal Cognition with Conservation Biology in the Student Conference on Conservation Sciences in September 2021. Additionally, courses on Animal Behaviour and Cognition and Behavioural Ecology for PhD and master's degree students in NIAS and NCBS were taught, and programme members acted as resource persons for two workshops of the international Long-Tailed Macaque Project.

Sindhu Radhakrishna, *Professor & Head*

Anindya Sinha, *Professor*

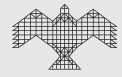
VV Binoy, *Associate Professor*

Post-Doctoral Associates: Shaurabh Anand, Arijit Pal, Vishwanath Varma

Doctoral Students: Nitesh S Anchan, Athira Balakrishnan, Sayan Banerjee, Anmol Chowdhury,

Ashni Kumar Dhawale, Sneha Gutgutia, Shruti Ragavan, Shubhangi Srivastava, Vignesh S,

Sreedhar Vijayakrishnan



COMPLEX SYSTEMS PROGRAMME

Introduction

In nature, various systems show diverse nonlinearities in interactions between their constituting elements. These produce very complex behaviour that manifest themselves as an enormous variety of everyday phenomena in nature and in daily life. The Complex Systems Programme's aim is to make useful predictions of how diverse systems behave and thereby determine how some control over their behaviour can be achieved. This is done by applying varied mathematical techniques and physical concepts as appropriate.

Research Activities

The research activities of the Programme were related to the following projects supported by the Science and Engineering Research Board (SERB), Department of Science and Technology, Government of India.

1. Dynamics of Complex Systems: Effect of the Environment on Living Systems (SERB-POWER Grant). This project aims to construct appropriate mathematical models and thereby explain the dynamical mechanisms which translate changes in the physical environment into the changes manifested in living systems. Changes in the physical environment could arise due to climate change as well as anthropogenic activities. One of the contributions was the construction of a model to study interactions between species in fragmented landscapes. The populations of species living in different patches were shown to exhibit a variety of dynamics including synchrony in their time evolution, even when in the chaotic regime.
2. Complex Dynamics of Simple Nonlinear Mechanical Systems and Their Applications (SERB-MATRICES Scheme). The objectives of this project include theoretical studies of simple mechanical systems under different types of forcing and elucidation of the dynamical mechanisms underlying the diverse kinds of nonlinear oscillations observed therein. These studies are expected to potentially help in giving better insights into the dynamics underlying certain physical and biological systems such as models of neurons. As part of this project, a flexible beam pendulum having spring mass comparable with pendulum mass was studied, and the oscillation frequencies associated with the deformed beam pendulum calculated.

Another problem investigated was the sloshing dynamics of a fluid in a half-empty reservoir. A mechanical model of the system was formulated which was tested against experimental results known from the literature. Other work done included studies of synchronization of chaotic oscillations in coupled discrete neuron models and studies of a 2:1 resonantly forced noisy Hopf oscillator. The response to an externally applied periodic driving force of a generic Hopf oscillator having a regulatory feedback mechanism through its control parameter was investigated when the system is subject to weak noise. The feedback mechanism keeps the operating point of the system tuned close to the Hopf bifurcation point. The control parameter is assumed to have a dependence upon the system variables.

Janaki Balakrishnan, *Professor & Head*
Junior Research Fellow: Abhishek Dodda
Project Associate: Eros M Sunny



ENERGY AND ENVIRONMENT PROGRAMME

Introduction

The Energy, Environment, and Climate Change Programme (EECP) conducts research, outreach, and policy advocacy on critical problems – ranging from air pollution, climate change and equity, energy security, electricity sector transition, environmental governance of coal mines, nuclear power, power distribution sector reforms, integrated water resource management, and socio-economic impacts of specific Government-run developmental programmes.

Research Activities

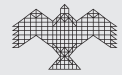
During the past year, the following research projects were successfully completed (i) Integrated Approach to Development and Environment in the Power Sector, a DST-funded research project, (ii) NPCIL-funded study on the Role and Viability of Nuclear Power in India, and (iii) a IREL-funded study on a Status Report on Indian Rare Earth Industry, and the following projects are in progress (i) MOES-funded study To Understand the Interaction between Components of Earth and Human Systems at Various Spatial and Temporal Scales, (ii) BRNS-funded study on Identification of Potential Sites for Nuclear Power Plants to Transition Towards a Clean and Sustainable Energy Mix for India, (iii) MOEFCC-funded project to Write the Chapter on Climate Change Mitigation for India's Third National Communication to the UNFCCC. Programme faculty have also submitted research proposals to the Ministry of New and Renewable Energy and the Ministry of Earth Sciences.

Integrated Approach to Development and Environment in the Power Sector: The key findings of this project is the NIAS Transition Plan towards an optimal electricity mix by 2030. The implementation of the NIAS Transition Plan in a time-bound manner by FY 2029-30 will avoid tariff hikes and stranded thermal power plant assets when the under-construction HELE TPPs are commissioned. Implementation of the Transition plan will also reduce the average energy charges in the TPP tariffs by 6% compared to the base case thereby facilitating the realisation of SDG 7.1. The NIAS Transition Plan is under the consideration of the Government (NITI Aayog) after a separate presentation was made to the Energy Vertical on July 30, 2021 on this subject.

Role and Viability of Nuclear Power in India: The key findings of this study are that: (i) Decarbonization of India's power sector is best achieved by having a diverse portfolio of technologies to ensure supply security, resilience, and hedging against price fluctuations. Nuclear Power Plants (NPPs) can supply 24x7 zero-carbon power without relying on batteries based on imported raw materials. (ii) The multiplier effect of NPPs on the local communities by providing school/health infrastructure and skill development leading to spinoffs for the economy creates immeasurable benefits for Indians. These societal benefits are not available with solar and wind power projects. (iii) Since India has included nuclear power as a fossil-fuel-free power in its NDCs, the Government of India must lobby with OECD countries to provide concessional finance from the Green Climate Fund (GCF) for NPPs.

Status Report on Indian Rare Earth Industry (IREL): The mandate of this project was to prepare a status report that would lead to a Rare Earth (RE) Policy Framework for the Government of India to act on. Based on the consensus between IREL and NIAS, seven industrial segments were chosen for the detailed study with a view to estimating the RE demand embedded in the end-products. The RE demand projection was done for the period 2021-30. During the study, permanent magnets were identified as the main driver for the RE demand in India, as RE permanent magnets are key to the Green Energy Aspirations of the country. Looking at the projected RE demand, and the current level of raw material availability in the country, suitable strategies for the augmentation of the supply side were also suggested. The final report of the project has been submitted to the CMD of IREL. awaited.

To Understand the Interaction between Components of Earth and Human Systems at Various Spatial and Temporal Scales: This research project funds six PhD fellowships in the following areas:

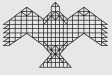


Galaxy of Participants in the Workshop organized by EECP to discuss Transition Plan for the Southern Region.

- (i) Power Distribution Sector Reforms. EECP research on DISCOM reforms has enabled us to identify some of the less-known causes contributing to the poor financial status of the DISCOMs and propose actionable policy recommendations to the Karnataka Electricity Regulatory Commission (KERC) which have been formally documented by KERC in their published tariff orders.
- (ii) Assessment of the Impact of PM_{2.5} Pollution on Public Health in Bengaluru: As a key milestone of this project, the first-of-its-kind geospatial model for particulate matter pollution in the megacities of Bengaluru and Hyderabad was developed.
- (iii) Socio-economic Impacts of Agrometeorological and Marine Fishery Advisories: Extensive field studies were conducted to assess the impact of agrometeorological and fisheries advisories on farmers and fishers to enable the relevant Government scientific institutions (IMD and INCOIS in the Ministry of Earth Sciences) to enhance the content and dissemination of these advisories in the interest of the weaker sections of these communities.
- (iv) Integrated Water Resource Management: As part of this study, an alternative configuration of the proposed Almatti-Pennar Interlinking of Rivers Project which shaves off 200 km from the length of the link canal and also eliminates one balancing reservoir by optimising the use of existing reservoirs and canals was developed.
- (v) Sustainable Urban Transportation: An extensive survey of 1350 households in Bengaluru was conducted to understand preferences for city transportation for various purposes.

Identification of Potential Sites for Nuclear Power Plants to Transition Towards a Clean and Sustainable Energy Mix for India: Since availability of suitable sites for NPPs is one of the key enablers for NPP expansion in India, this study proposes to identify potential greenfield and brownfield sites for nuclear power plants which may form a vital input to the Department of Atomic Energy's site selection committee.

MOEFCC Funded Project to Write the Chapter on Climate Change Mitigation for India's Third National Communication to the UNFCCC: The objective of this research project is to prepare the draft Chapter on Climate Change Mitigation for India's Third National Communication to the UNFCCC. The Chapter will highlight the following: i) the scale and scope of the extensive steps that India has taken to enhance its contribution to climate change mitigation, ii) the challenges before India in meeting its twin goals of development and



environmental sustainability and iii) the scale of India's mitigation efforts in the context of its responsibility, capability, fair share, and comparison to the efforts of other parties to the UNFCCC.

Outreach

Stakeholder consultation workshops were conducted to obtain independent reviews of their research findings from practitioners in Government, industry, and civil society. These workshops are attended by sector experts, government officials, and other key stakeholders who also contribute their valuable comments & suggestions for our research.

R Srikanth, *Professor & Head*

Gufran Beig, *Sir Ashutosh Mukherjee Chair Professor*

AV Krishnan, *Visiting Professor*

Sudha Mahalingam, *Raja Ramanna Chair Professor*

DK Srivastava, *Homi Bhabha Chair Professor*

Tejal Kanitkar, *Associate Professor*

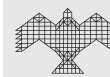
Rudrodip Majumdar, *Assistant Professor*

Harini Santhanam, *Assistant Professor*

Post-Doctoral Associates: Abhishek Banerjee (*till February 24, 2022*), Abhilash Maryada

Doctoral Students: Aariz Ahmed, Soumya Deep Das, Tanmay Ghosh, Joan Shilpa Kiran,

Sudip Kundu, Lavanyaa VP, Rakesh, Ankita Ranjan, Kumar Saurabh, Sarvajeet Sinha



SCIENCE COMMUNICATION PROGRAMME

Introduction

Communicating science with society and promoting bidirectional communication between researchers and the non-expert public is vital for ensuring a healthy science-society relationship. The interdisciplinary research focuses on the dynamics of the science communication ecosystem in India, with an aim to develop communication strategies to promote scientific thinking and scientific temper in multicultural and multi-stakeholder societies using conventional and social media.

Risk Communication: This project explores how people make sense of the scientific information broadcasted on different media at the time of a cyclone and utilize it for making protective action decisions. Analysis of the oscillation happening in the public and media attention during the preparatory, landfall, and aftermath phases of various cyclones that affected the Indian coast during the time period of 2017-2021 was analysis and the result was presented in the Fall-2021 meeting of the American Geophysical Union.

Nuclear Risk Perception: This BRNS funded study explores the determinants of nuclear risk perception in India. Nuclear technology had been a victim of many misconceptions and attempts to install nuclear powerplants ignited science-society conflict in different parts of the globe including our nation. Hence the findings of this study will provide knowledge of the cognitive and non-cognitive factors influencing people's perception of science and risks from technologies and help develop effective risk communication programmes.

Folk Arts and Science Communication: Reaching scientific information undistorted to people from rural and marginalized areas, especially to those without formal education, in a format acceptable to them is a need of the hour considering the vulnerability of this section of the population to climate change. A preliminary study to know the feasibility of developing 'Ojapali', a traditional folk theatre of Assam as a medium for communicating the science of climate change and coping strategies with the non-expert public was completed.

Conservation Communication: Conservation of animals living in human-dominated ecosystems is not possible without making people aware of the importance of such species. By following an approach integrating methodologies of ecology, conservation culturomics and social decision making, this project studies knowledge, attitude and behaviour of the people towards different mahseers (megafishes) and subterranean fishes. A meta-analysis of academic publications and a study of the emotional content of social media communication focusing on different mahseer species in the Indian subcontinent was completed. This information will provide insights into the mindset of different stakeholders involved in the exploitation and conservation of these large fishes and help design communication programs promoting a sustainable human-fish relationship.

Outreach

Science Communication Programme regularly hosts a unique citizen science initiative named 'student-scientist' which works to build a network of schools and colleges across the country and promote bidirectional communication between students and professional researchers. A course was conducted on Connecting Cognition with Science Communication. Online lectures were delivered on risk communication in various conferences and alongside participation in a discussion on Science Communication: creating public trust in science organised by DWIH New Delhi, German Academic Exchange Service (DAAD) on the Indo-German Research Day.

VV Binoy, Associate Professor & Programme in Charge
M Sai Baba, Honorary Visiting Professor

Doctoral Students: Sreshtha Mondal, Anjali Bharati

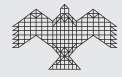


*Ojapali Performance on Climate Change at Barpeta, Assam
(Photo Credit: Dr Borah).*

SCHOOL OF SOCIAL SCIENCES

Programmes

- Education
- Inequality and Human Development
- Urban and Mobility Studies

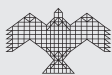


SCHOOL OF SOCIAL SCIENCES

The School of Social Sciences takes a transdisciplinary approach to understanding the Indian reality. It has over the years used this approach to gain insights into a variety of concerns about the nature and functioning of social, economic and political processes in India. The school is home to three programmes: the Education Programme, the Urban and Mobility Studies Programme, and the Inequality and Human Development Programme. The programmes share an interest in exploring differences in a variety of domains in India, but they each have their distinct character and focus. The Education Programme is built around concerns for equity and excellence at all levels of education. The Urban and Mobility Studies Programme explores processes and changing patterns of urbanisation, migration and labour in India's cities, towns and villages. The Inequality and Human Development Programme seeks to develop policy options based on transdisciplinary and empirically consistent conceptualizations of inequality in India.

Programmes

- **Education**
- **Inequality and Human Development**
- **Urban and Mobility Studies**



EDUCATION PROGRAMME

Introduction

The Education Programme is conceived as an interdisciplinary programme drawing on the broad disciplines, of Sociology, Psychology and History among others. The research work of the faculty of the programme is built around the concerns for equity, quality and excellence at all levels of education. The challenges are multiple: how to provide equal and quality education to all? What models and practices of education are suitable for a diverse population? How can local and national priorities be matched with the pressures of global regimes? What linkages must education institutions have with the social, political and economic worlds of the people? Attempting to address these challenges, the focus is on connecting research with teaching, advocacy and policy.

The research interests are being expanded to urban transformation and education, learning analytics, livelihoods and socially just pedagogies and theoretical understanding of collective memory. The possibilities of developing a self-sustaining model to expand the education of the gifted and talented is being discussed with stakeholders and made some headway with Army schools in India. In addition, contributions were made to the implementation of the NEP-2020 at the state and national level.

Research Activities

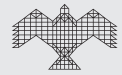
Voices from Margins: Education and Aspirations among Youth from two Tribal Districts in Maharashtra and Karnataka: The voices of the youth of the Adivasi communities in two districts- Palghar, Maharashtra and Mysuru, Karnataka have been documented. The New Education Policy 2020 has laid an emphasis on higher education particularly on the vocational education segment with a focus on responding to the aspirations of youth and the marginalised communities. The responses of youth in the tribal communities show some common but several specific problems in relation to girls. In this study, female respondents frequently reported the issues of access and safety (distance of the educational institute and eve teasing on the way and within the institution), marriage, poverty and social beliefs (that girl's education is not economically productive, as later her earnings go to husband's family) as prime reasons for not continuing their education. These factors are further accentuated in case of SC/SC communities, leading to a vicious cycle impeding the development of community. The geographical isolation faced by the tribals in remote villages increases the inequality and enhances the disadvantages of the youth who belong to these communities.

Education and the Urban: The inter-institutional research collaboration on education and the urban has been completed. The three year-long engagement involved research, teach-ins and organising of conferences around questions of urban politics, governance, history especially the ways in which they relate to education.

Learning, Livelihoods and Possibilities of Socially Just Pedagogy: This research aimed to understand the lives of students through work and schools. In particular, the work asks these broad questions: What does it mean to be educated in a small, transitioning town? How do students from marginalised backgrounds occupy the worlds of schools and jobs? In what ways can the experiences of education or skill enhancement be connected to socially just pedagogy? The first leg of field work has been completed in Sangli, Maharashtra and the field data is currently being transcribed.

Identification and Mentoring the Gifted and Talented: A school-based model to provide online training for the school management and teachers of the Army schools to identify gifted children in the age group of 10-16 years has been developed. NIAS will assist in establishing the Advanced Learning Centre within the school. During the first three months, through 12 sessions, foundational knowledge and train the facilitators of this centre will be provided. The Army school has agreed to roll out this programme in 12 schools across India. The Don Bosco school has agreed to roll out the programme for the gifted and talented in their schools for the year 2022-23. It is planned to invite more schools from across India to participate in this programme.

Measuring Progress of Education in Karnataka: A chapter on comparison of the educational status of Karnataka at the school and higher education level across different states in India is being written for the Karnataka



Human Development Report. The chapter attempts to analyse the macro and micro data collected by the Education department in Karnataka. The educational status among the southern states is compared to help identify the areas that Karnataka needs to focus on for improving its overall status in education. Interesting insights with regard to important policy interventions have been pointed out as a part of recommendations to strengthen the school quality and quality of higher education in Karnataka state based on the National Education Policy 2020.



10th Grade Students of Government UG High School Mukundapur, Rayagada, Odisha.

Education for Sustainability and Teaching of History: This study is now in the second phase, wherein notions and behaviour about sustainability, are being addressed through education. As an outcome of this work, it is proposed to focus on developing perspectives of teachers and students regarding sustainability. The ongoing study on education of history and social sciences has developed a model with some structural changes in the way discipline of history is taught at schools. Findings from the study will be published as recommendations on history teaching in schools.



Students of Kayakuchi Kuniha Senior Madrasa School, Berpeta District.

Vocational Skill Policy, Dropout Reduction and Employability among Adolescent Youth: A Study in Odisha and Assam: The present study envisages that substantial convergence of vocational skill interventions with school education will help in mitigating dropout challenges and promote sustainable livelihood opportunities for disadvantaged adolescent youth and become productive members of society. The study is primarily an empirical study covering 200 secondary schools located in rural areas of tribal belts of Koraput, Gajapati and Rayagada districts, Odisha and Muslim dominated rural areas of Berpeta and Goalpara districts, Assam. The project team has completed survey-interviews with over 2000 participants comprising of teachers and students, representing 195 schools and focus group discussion with 560 parental community across project locations in Assam and Odisha.

Anitha Kurup, Professor & Head

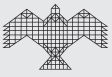
Shivali Tukdeo, Associate Professor

Shalini Dixit, Assistant Professor

Jeebanlata Salam, Assistant Professor

Malavika Kapur, Visiting Professor

Doctoral Students: Aishwarya T, Shaima Amatullah, Chestha Arora, Ashirwad GW, Tirthankar Chakravorty, Subroto Das, Navaindu Joshi, Surachita Lal, Souri Majumder, Megha Poonia, Sabna ES, Shruti Shankar, Shashank SR, Varun Sudhakaran.



INEQUALITY AND HUMAN DEVELOPMENT PROGRAMME

Introduction

The Inequality and Human Development Programme was set up to develop policy options based on transdisciplinary and empirically consistent conceptualizations of inequality and to contribute towards public discourse to enable more informed policy choices. The completion of the first phase of project provided the base for the development a set of ideas on inequality which has been released as a book, *Dynamics of difference: Inequality and transformation in rural India*. While it has always been important to understand the nature of inequality – what inequality is – the story would not be complete without recognizing the consequences of inequality – what inequality does. The empirical evidence generated and its conceptualization pointed to the instrumental role played by inequality in several critical issues of social development. The current focus is on five areas: the inequalities of climate change and autonomous adaptation, technology and inequality among the subaltern, socio-economic transformation and those left behind from migration and other processes, age and the experience of gender inequality by the Indian woman, and the inequality between the local and the national. These projects are financially supported by Tata Consultancy Services. The programme is also actively involved in the larger discourse on inequality. It does so both by subjecting its work to external review as well as outreach.

Research Activities

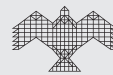
The five projects have made considerable progress in the process of conceptualization and empirical evaluation. The process of identifying existing processes on the basis of secondary data and existing research has been completed in each of the five projects, and the collection of further empirical data through fieldwork has begun in several of them.

The Left Behind: The project on the left behind has recognized several processes that could lead to this outcome. The substantial and growing literature on labour migration suggests a focus on those left behind in this process. The challenge of being left behind in rural areas, however, extends beyond migration for paid work. Preliminary analysis of secondary data indicates that numbers of those who migrate for marriage are greater than work-related migrants. This leads to a variety of issues including those of the elderly left behind as the next generation migrates for marriage, as well as that of those who do not get married. These questions will be addressed through an evaluation of data collected in earlier work as well as the survey that is now being conducted. The project is expected to provide insights into interventions targeted at those who have not benefited from rural transformation.

Inequality in the Experience of Technology: The prominent role played by migration – one of the major findings of earlier work in the Inequality and Human Development Programme – has influenced the focus of the second project. The project on technology has a primary focus on the two technologies that were seen to play a major role in the processes of migration: communication and mobility technologies. To capture the technological situation at the place of origin of short-term migration, fieldwork was carried out in a village in Jharkhand. This will be followed by fieldwork in the worksites of short-term workers in Bengaluru. The project is expected to provide insights into interventions in the inequalities of technology.



Fishing in Kozhikode District of Kerala is One of the Points of Focus of the Study on Autonomous Adaptation to Climate Change (Photo Credit: Dr Nisar Kananangara).



Autonomous Adaptation to Climate Change: The recognition of the relationship between technology and nature leads us to the third project on climate change. As scientists and governments determine the most appropriate mitigation and adaptation strategies, there are parts of the world that are already feeling the consequences of climate change. This project seeks to explore how local populations respond to an exposure to climate change and the role of inequality in that process. A review of the literature on climate change and an empirical evaluation of exposure to climate change, led to the identification of Kozhikode district in Kerala as one of the two districts most exposed to climate change in India. Hence a multi-sited ethnographic study of autonomous adaptation to climate change has now begun in Kozhikode district. The three sites identified for this study are in the coastal areas, the paddy-cultivating plains, and in the hill regions, of the district.



Educational Consultancies Play a Critical Role in the Interlinked Migrations in Pathanamthitta District in Kerala (Photo Credit: Mr Paul Thomas).

Ageing and Gender: In continuation of the effort to capture the view from the ground, the project on ageing and gender seeks to explore the discrimination experienced by the Indian woman at different stages of her life. Study findings have attempted to identify the turning points in the sex ratios to define specific stages of patriarchy, and explain the nature of patriarchy in each stage. This research is expected to contribute to more focused age-related interventions in countering gender discrimination.



Some Subaltern Innovations and Adaptations to Socio-economic and Technological Inequality (Photo Credit: Mr Ajit Kumar Babu).

Inequality Between the Local and the National: The final project looks at inequalities in the relationship between the local and the national. India consists of a large number of local realities. There have been competing narratives that seek to build an idea of the national that can cover this diversity. This project explores the ethically unacceptable differences between the national and the local that have emerged in these sets of rules and practices. The project on the inequalities between the local and the national is also exploring why some districts remain backward despite state intervention. This is being conceptualized in terms of the working of the core periphery thesis within the country, particularly what determines the formation of new cores.

Outreach

Members of the programme team have actively contributed to the development of popular discourse, through lectures, media articles and interviews.

Narendar Pani, *Professor & Head*

Debosree Banerjee, *Assistant Professor*

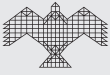
Chetan Choitani, *Assistant Professor*

Anant Kamath, *Assistant Professor*

Post-Doctoral Associates: Kshipra Jain (*till March 2, 2022*), Nisar Kannangara, Swati Narayan (*till January 31, 2022*)

Doctoral Students: Meera Sudhakar, Ajit Kumar Babu, Chandana Rajsekharan Bindu

Project Associates: Malavika Belavangala (*till August 31, 2021*), Pallavi Krishnappa, Ishita Patil, Kalaiarasi Ka Sa, Kritika Singh, Paul Thomas



URBAN AND MOBILITY STUDIES PROGRAMME

Introduction

The Urban and Mobility Studies Programme explores processes and changing patterns of urbanisation, migration and labour in India's cities, towns and villages. The current focus is on generating knowledge and policy debates on the changing interfaces between labour, migration and urbanisation through interdisciplinary research, drawing on sociology and social anthropology, urban studies, geography, gender studies, and migration and transnational studies. The core methodological strength is in ethnography and qualitative methods.

The international collaborative project 'Speculative Urbanism: Land, Livelihoods, and Finance Capital', funded by the National Science Foundation (USA) and carried out in collaboration with the University of Minnesota and UCLA (USA), addressed comparative study of changes in land use, property relations, livelihoods and urban ecologies in the context of rapid urban growth and the circulation of finance capital in the real estate sector in Bengaluru and Jakarta.

New and planned research projects explore labour supply chains in the construction industry, climate change-induced migration in the Sundarbans, and the informal rental housing market in Bengaluru.

Research Activities

A new project, entitled 'Labour Supply Chains in the Construction Industry: Circular Migrants, Contracting, and Covid' was funded by the Research Grants Programme of Azim Premji University. The goal of this project is to trace the pathways and modalities of circular labour migration in the construction industry, with a particular focus on contracting chains.

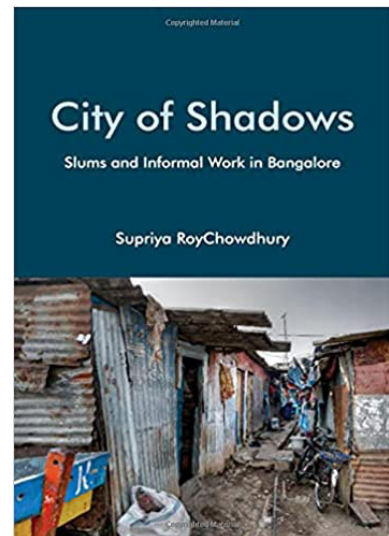
A survey of women workers in the garments sector of Karnataka, funded by STICH (a Dutch agency), as part of a multi-country research programme on gender and labour in global supply chains, is being initiated. A project on climate change-induced migration in the Sundarbans with a pilot study of two villages has been undertaken.

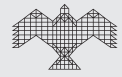
New fields of research on queer health and the city have been introduced. A project on 'Influence of minority and COVID-19 stressors on HIV risk and access to services among MSM and transgender women: A longitudinal observational cohort (S3-Plus) study in Chennai' was awarded by ICMR and International AIDS Vaccine Initiative (IAVI).

Outreach

An online workshop on 'Surviving the Informal City' was organized.

Carol Upadhy, *Honorary Visiting Professor & Head*
Supriya RoyChowdhury, *Honorary Visiting Professor*
Aleena Sebastian, *Assistant Professor*
Doctoral Students: Keya Bardalai, Snehashish Mitra





MATH HERITAGE INITIATIVE

The Mathematics Heritage Initiative was launched in July 2021, with a view to develop research, communication and outreach activities focusing on India's mathematical and computational heritage. It seeks to take forward the legacy of Prof Roddam Narasimha in articulating the nature of the scientific endeavour in the Indic tradition.

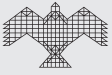
The current areas of research focus for the Initiative in Mathematics, Artificial Intelligence (AI) and Information Science has received two sets of project funding from DST and AICTE.

Key Highlights

1. SERB Karyashala: A workshop on the topic "Computational and Algorithmic Thinking in the Indic Tradition" was organized for undergraduate and graduate students selected from colleges all over India. 35 students were shortlisted and 30 were invited to participate, from among more than 80 applications received. Twelve eminent scholars drawn from different institutions like IISc Bangalore, IIT Roorkee, IIT Gandhinagar, Bangalore University conducted the sessions.
2. SERB Vrittika: Under this programme, two internships were offered to graduate students on the topics "Magic Squares with Special Properties" (Advik Swamy, Azim Premji University) and "A Survey of Computational Methods in Kolam" (V Akhilesh Kumar, IIIT Bangalore). The internship project of Akhilesh Kumar was awarded the first prize by the eminent jury of experts at the Young Scholars International Conference on Indian Knowledge Systems at the IIT, Gandhinagar.
3. IKS Internships: Under the Indian Knowledge Systems programme of AICTE, NIAS faculty mentored 4 students for the 2-month IKS internships. The topics offered were: "Magic Squares in Ancient India", "Wordle in Indian languages" and "Indian Algebra and the Work of Citrabhanu on Cubic Equations". Students read important scholarly papers and submitted brief write-ups.
4. IKS Research Project: A prestigious IKS Research Project on the epistemology of Indic science has been awarded and will examine the relevance of the Indic approach to modern computer science, AI and information science.

On the NIAS Logo: The NIAS Logo is an artistic depiction of the geometrical structure of the vedic *yenaciti*, one of the specified forms of the platform for vedic sacrifice, which is in the shape of a falcon. The specification of the form of the vedic sacrificial platforms in the *ulvas tras* encapsulates the advanced knowledge of Number and Geometry in the vedic period. In particular, a precise rational approximation for $\sqrt{2}$ as well as the Pythagorean theorem are clearly specified in the *Baudh yana ulvas tra* and these are the earliest documented statements on these topics anywhere in the world.

In addition to the above, various lectures and workshops have been held. The history of games of chance in the Indic tradition has been taken up via student projects.



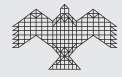
INTERSCHOOL PROJECT

Early Fusion Music: Cross-cultural Musical Exchanges in Colonial India from the late 18th to the Early 20th Century

This project spans across programmes and schools of NIAS, involving collaborators from the Animal Behaviour and Cognition Programme, the Consciousness Studies Programme and the

Heritage, Science and Society Programme. This project has three distinct components: 1) Examining instances of cross-cultural musicological exchanges during the said period in South India 2) In Bengal 3) To examine the phylogeny of tunes through computational analysis of acoustic signals. during the period are being studied. A literature review and archival study was undertaken on Noṭṭusvara, a genre of compositions in south Indian classical music—wherein devotional words in Indian languages (mainly Sanskrit or Telugu) were set to popular tunes and played by European bands. Two conference papers and a paper have been submitted on the topic ‘Nottu Svara: A Pedagogical Tool’.

Prof Anindya Sinha, *Principal Investigator*
Dr MB Rajani
Dr Nithin Nagaraj
Doctoral Student: Preeth Khona



POLICY BRIEFS

Foregrounding Equity in Climate Action

Tejal Kanikar

NIAS Policy Brief No. NIAS/NSE/EEC/U/PB/15/2022

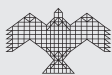
The world has already warmed by about 1.07 deg. C (0.8–1.3 deg. C) as compared to the pre-industrial period (IPCC, 2021) and the carbon budget for limiting warming to below 2 deg. C or 1.5 deg. C is rapidly shrinking. Developed countries, with about 18% of the global population, are responsible for over 60% of global historical emissions (~2516 GtCO_{2eq}) between 1850 and 2019, while India alone is home to about a similar proportion of the global population but is responsible for only 4.5% of the global cumulative emissions between 1850 and 2019. India's developmental challenges are significant and in the era of climate change need to be overcome even more urgently. India must strongly lobby for cumulative emissions and the total global carbon budget to be the basis for determining the adequacy and ambition of climate action as this is based on the best available science. The actual use of this carbon space is contingent on how the energy landscape develops in the future and the extent to which other countries act to mitigate climate change as the latter will determine India's adaptation needs as well. This policy brief discusses data that supports the recommendations for developing a science-based and equity-driven climate policy for India.

Air Quality, National Standards and Human Health in India

Gufran Beig, R Srikanth and Shailesh Nayak

NIAS Policy Brief No. NIAS/NSE/EEC/U/PB/25/2021

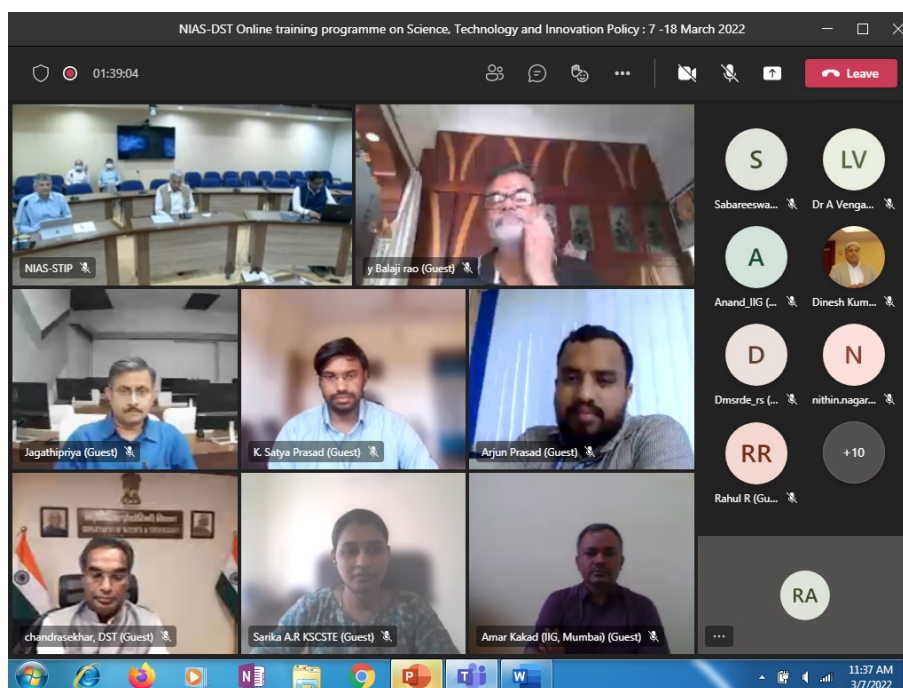
A clean air environment is prudent to healthy living. Studies related to the impact of ambient air pollution on public health are limited in India. Studies conducted by researchers at NIAS indicate that the natural baseline levels for Particulate Matter pollution in 10 megacities (with different climatological conditions) are significantly higher than the WHO's Air Quality Guidelines levels. The exposure-response function cannot be universal due to the adaptive power of human beings. Therefore, coordinated national effort between MoES, MOEFCC, and ICMR is required to conduct scientific studies to determine the "exposure-response function" for Indians.



TRAINING PROGRAMMES

NIAS has been conducting training programmes in order to develop leadership to address various societal issues through multidisciplinary approaches. The Department of Science and Technology supported four training programmes including two for women scientists.

NIAS-DST Online Training Programme on Science, Technology and Innovation Policy – March 7 to 18, 2022



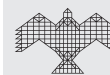
Theme: Science, Technology and Innovation Policy

Inaugural Address: The programme was inaugurated by Dr Srivari Chandrasekhar, Secretary, Department of Science and Technology, Government of India.

About the Programme: The objective of this programme was to expose senior personnel in S&T departments to various facets of S&T and Innovation which will help them in future while dealing with national level policy issues. Twenty-one participants from various research institutions participated in this programme. The programme concluded with the valedictory function in which Dr Rishiksha Krishnan, Director, Indian Institute of Management, Bengaluru delivering the valedictory address and interacted with the participants.

Feedback: The participants were appreciative about the excellent organization, eminent speakers as faculty and interactions with scientists from diverse fields.

Coordinators: The programme was coordinated by Dr Nithin Nagaraj and Dr Amit Mukherjee. Mr KS Rama Krishna assisted in the coordination of this Training Programme.



NIAS-DST Online Training Programme for Women Scientists on Social Responsibility of Scientists: Pathways and Outcomes – February 7 to 11, 2022



Theme: Social Responsibility of Scientists: Pathways and Outcomes

Inaugural Address: Prof Suhas Palshikar of Lokniti began the training programme with his address on Challenges to Democracy in the Twenty First Century.

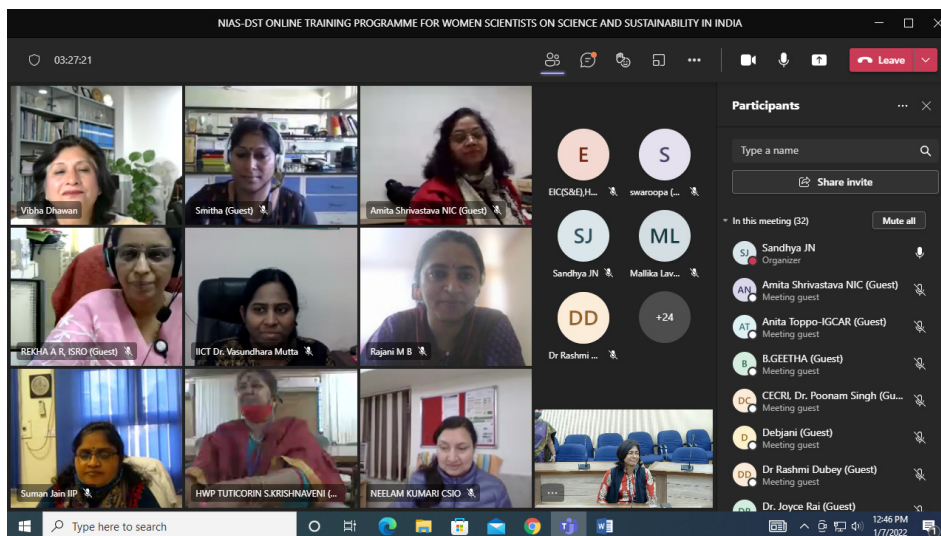
About the Programme: The programme included lectures by several leading scientists, technologists, science administrators, social scientists and policy makers. Twenty-five participants from various research institutions participated in this programme. The programme concluded with valedictory address by Prof Shobhana Narasimhan of Jawaharlal Nehru Advanced Scientific Research. The discussions that followed the lectures allowed for interesting and sometimes contentious debates on the responsibilities of scientists and technologists in making scientific enquiry socially relevant. The participants made presentations in the Discussion Sessions.

Feedback: The participants felt that the programme was of high standards and had room for interactions and discussions. The programme focused on the roles and social responsibilities of scientists and also the issues faced by women/scientists in the past and present. The years of hard work, commitment and knowledge of each speaker was evident in their presentations. A well-designed programme, with a diverse array of speakers who are not only experts in their respective areas, but were tuned to the objectives of this programme.

Coordinators: The programme was coordinated by Dr Shivali Tukdeo and Dr Harini Santhanam. Ms V Girija assisted in the coordination of the programme.



NIAS-DST Online Training Programme for Women Scientists on Science and Sustainability in India – January 3 to 7, 2022



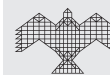
Theme: Science and Sustainability in India

Inaugural Address: The Inaugural address was given by Prof Vijalakshmi Ravindranath from the Centre for Neuroscience, IISc, Bengaluru, who spoke about developments in neuroscience, the adaptive capacity of the brain and how humans can always train themselves to respond proactively to the challenges of life.

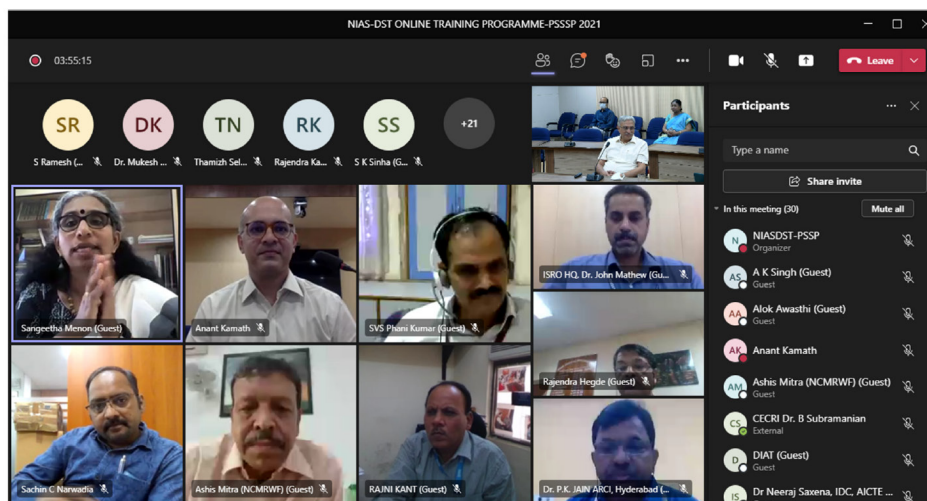
About the Programme: The programme included lectures by eminent academics, scientists, social scientists and science administrators from a number of institutes across the country. Twenty-seven participants from various research institutions participated in this programme. The valedictory address of the programme was given by Prof Vibha Dhawan from TERI.

Feedback: Participants reported that they enjoyed attending the course and learning about the various aspects of sustainability in different fields. They were particularly enthused about their exposure to sustainability issues in everyday living such as sustainability of food systems, energy consumption and water conservation. They felt that the course provided them an opportunity not only to interact with eminent scientists from different fields but also with their co-participants and learn about how they navigated the challenges in their personal and professional lives.

Coordinators: The programme was coordinated by Prof Sindhu Radhakrishna and Dr MB Rajani. Ms JN Sandhya assisted in the coordination of the programme.



NIAS-DST Online Training Programme on Policy for Science and Science for Policies for Directors/Divisional Heads/Chief Scientists/Senior Scientists – October 25 to 29, 2021



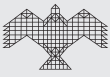
Theme: Policy for Science and Science for Policies

Inaugural Address: The programme was inaugurated by Dr Renu Swarup, Secretary, Department of Science and Technology, and Department of Biotechnology, Government of India.

About the Programme: The programme included lectures by eminent speakers and a panel discussion on AI and Society: Policies, Possibilities and Challenges for India. Mr Jayachandran Palazhy, Founder Director, Attakkalari Centre for Movement Arts conducted a lecture-performance on Interdisciplinary Approaches in Dance. Thirty-one participants from various research institutions participated in this programme. Dr Shailesh Nayak, Director, NIAS gave the valedictory address.

Feedback: The participants reported that the course was knowledge enriching, well organized and that it made them understand many different perspectives of scientific practices and science policies which will be helpful in planning and organizing the work better. The programme was well thought out to incite thought process in the participants, both in terms of the expert talks and also through the experiences of their peers in other fields. All the faculty were excellent in communicating their points and all the sessions were managed efficiently.

Coordinators: The programme was coordinated by Prof Sangeetha Menon and Dr Anant Kamath. Ms V Girija assisted in the coordination of the programme.



DOCTORAL PROGRAMME

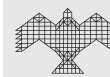


The objective of this programme is to nurture a broad base of scholars, managers and leaders who would respond to the complex challenges that face contemporary India and global society, with insight, sensitivity, confidence and dedication. NIAS is recognised as a research institute and its doctoral students awarded the doctoral degree by the University of Mysore, Manipal Academy of Higher Education (MAHE), the University of Trans-Disciplinary Health Sciences and Technology (TDU) and the Defence Institute of Advanced Technology (DIAT).

The online written examination and two sets of online interviews for admission to the Doctoral Programme 2021 were conducted in May and June 2021, respectively. 363 applications were received across the four Schools, out of which fourteen candidates were finally selected.

The academic year in the Institute began in August 2021 with the first semester of coursework ending in December. All teaching was conducted online, with the fresh cohort of students attending two mandatory courses: Research Methodology – consisting of two modules, Qualitative Research Methods and Quantitative Research Methods – and Research and Publication Ethics. The other sixteen optional courses, offered by the faculty during this semester, included: Qualitative Data Analysis; Connecting Cognition with Science Communication; GIS for Spatial Data Visualisation and Analysis; Learning and Cognition; Introduction to National Security; Gender and Society: Contemporary Perspectives; Introduction to Maritime Security; Major Conventional and Non-Conventional Pathways to Harness Energy; GIS for Strategic Studies; Introduction to Animal Behaviour and Cognition; Introduction to Education Research; Energy and Environmental Policy and Governance; Theoretical Constructs of Conflict and Peace Research; Geopolitics, Warfare and International Relations in the 21st Century, An Introduction to the Built Heritage of India and Introduction to Inequality. All the courses were open to students from other institutions and to the interested public as well.

Following the completion of coursework, during which time the students developed their doctoral research proposals, the Qualifying Examination for the cohort was held on March 18, 2022. All fourteen students successfully qualified in this examination for the registration of their doctoral degree in the various universities that they chose to register in. The doctoral research proposals were then presented to the Institute and their methodologies subjected to the scrutiny of the NIAS Research Ethics Committee. The students were thus prepared to form their Doctoral Advisory Committees – including members from within and outside NIAS – and finally submit their proposals to the respective universities for registration.



The following students presented their respective doctoral research proposals to the Institute.

No.	Name	Supervisor	Doctoral Research Proposal
School of Conflict and Security Studies			
1.	Ankit Singh	D Suba Chandran	Political Economy of External Public Debt of Pakistan
2.	David Jangminlien	Anshuman Behera	Ethnic Conflict in Manipur: A Case of Kuki-Naga Conflict
3.	Hema S Karnam	Prakash Panneerselvam	Detecting Anomalous Vessel Behaviour using AIS Data
4.	Varun Mohan	Prakash Panneerselvam	Conceptualizing and Assessing Political Salience of the United Nations' Role in Addressing Climate Security Discourse
School of Humanities			
5.	Meera Viswanath	Srikumar M Menon	The Influence of External Temple-Building Traditions on the Indigenous Laterite-Timber Tradition on the West Coast of India
School of Natural Sciences and Engineering			
6.	Anjali Bharati	Binoy VV	Impact of Citizen Science Engagement on Participants' Scientific Knowledge, Scientific Sensemaking and Trust in Science
7.	Ankita Sharma	Anindya Sinha	The Arthropod City: Taxonomic and Functional Diversity of Ant and Spider Species Assemblages across an Urban Gradient in Guwahati, Northeastern India
8.	Zakhiya P C	Anindya Sinha	Primate Worlds: Demographic Structure and Dynamics, Social Networks and Life-History Strategies in Wild Bonnet Macaques
School of Social Sciences			
9.	Aiswarya T	Shivali Tukdeo	Life and Learning on the Move: A Study of Murshidabad-Perumbavoor Migration Corridor and Family Strategies for Education
10.	Ashirwad G Wakade	Shivali Tukdeo	The Social life of Rural Universities: Institutional Structures, Processes and Politics
11.	Navaindu Joshi	Jeebanlata Salam	Symbolic Violence in Schools and its Impact on the Social Identity and Aspiration of Students
12.	Surachita Lal	Anitha Kurup	Traveling through the Portals of Engineering Colleges: Experiences of Dalit Girls in India
13.	Tirthankar Chakravorty	Jeebanlata Salam	The "Self" in Classrooms – Exploring Identities through Narratives from Teaching of Social Sciences
14.	Vishal George	Anant Kamath	Youth, Sport and Urban Spaces

The coursework for the second semester, January to April 2022, has commenced with the following courses being offered by different faculty: GIS for Maritime Security Studies; Urban Sociology; Sustainable Development Goals (SDGs): A Primer; Social Sciences Beyond the Human; Advanced Energy Systems and Futuristic Solutions; Schooling, Identity and Culture: Current Research and Debates, and Perspectives on Technology.

The Annual Students' Colloquium, which was organised online, from January 17 to 20, 2021, saw forty-nine doctoral students present progress reports of their work to the community. The first-year students had prepared



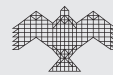
poster presentations of their proposed work at the Colloquium and these were also held online. The Colloquium, as in every year, allowed the student community to directly interact with and have discussions on their work with the faculty, postdoctoral researchers and the other academic staff of the Institute. Several members of the Doctoral Advisory Committees of the respective students also attended the Colloquium and this facilitated critical discussions, not only on the achievements of the researchers but also in the directions that their work could take in the future.

The following students were awarded the doctoral degree between April 1, 2021 and March 31, 2022.

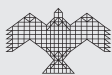
No.	Date	Name	Supervisor	School	Title of Thesis	University
1.	July 26, 2021	Neesha Dutt	Dilip R Ahuja	Natural Sciences and Engineering	Urban Greens: Ecological Impacts and Socio-Economic Drivers of Turfgrass Ecosystems	MAHE
2.	December 20, 2021	Keya Bardalai	Carol Upadhya	Social Sciences	Aspirational Labour and Self-Making: A Study of Retail Workers in Delhi Malls	MAHE
3.	November 29, 2021	Sashi Kiran C	Kshitija Joshi	Natural Sciences and Engineering	Understanding and Modelling Residential Electricity Demand in India	MAHE
4.	February 7, 2022	Ekta Gupta	MB Rajani	Humanities	Advancing Archaeological and Geomorphological Understanding of the Indian Coast using Old Cartographic and Visual Records	MAHE

The following students are currently pursuing their doctoral studies in the Institute.

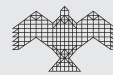
No.	Name	Supervisor	Date of Joining	Title of Thesis	University
1.	Meera Sudhakar	Narendar Pani	August 3, 2015	Development Policy as a Social Process: Case Study of <i>Niranthara Jyothi</i> in Karnataka	MAHE
2.	Vijay CS	Kshitija A Joshi	August 3, 2015	Electricity System Modelling for Large Scale Renewable Integration in India	MAHE
3.	Subroto Dey	Shivali Tukdeo	August 1, 2016	Mapping Life Paths of Youth in a Backward District: A Case Study of Three Higher Secondary Schools in Mandla, Madhya Pradesh	MAHE
4.	Kuili Suganya	MB Rajani	August 1, 2016	Geospatial Analysis of Ancient Water Features in the Archaeological Landscape of Malaprabha River Valley	MAHE
5.	Vijayashree CS	Carol Upadhya	August 1, 2016	Production, Circulation and Consumption of Bhuta Masks and Sculptures: An Ethnographic Study	MAHE
6.	Sherin Ajin Jose	M Mayilvaganan	August 1, 2016	Spatialising Nation-State through the Discourses of Development and Security at the Borderland: A Case Study of Tawang	MAHE



No.	Name	Supervisor	Date of Joining	Title of Thesis	University
7.	Surya Sankar Sen	Anshuman Behera	August 1, 2016	Implications of Local Conflicts on Bilateral Relations: Cases of Land Boundary and Enclave Conflicts on India–Bangladesh Relations	TDU
8.	Sarvajeet K Sinha	R Srikanth	August 1, 2017	Consolidation of Laws Related to Environment Protection in Surface Coal Mining in India: Prospects and Challenges	MAHE
9.	S Vignesh	Sindhu Radhakrishna	August 1, 2017	Interactions of Consent: Human–Bovine Relations in Tamil Nadu	MAHE
10.	Cheshta Arora	Anitha Kurup	August 1, 2017	Scientific, Technological, and Gendered Relations: An Ethnographic Study of Women Scientists, Engineers and Factory Workers	MAHE
11.	Snehashish Mitra	Carol Upadhya	August 1, 2017	Contesting Settlements on the Hills of Guwahati: A Study of Urban Political Ecology in Northeast India	TDU
12.	Ashni K Dhawale	Anindya Sinha	August 1, 2017	Ecological and Behavioural Adaptations of Lion-Tailed Macaques to a Rainforest–Anthropogenic Habitat Matrix in the Western Ghats Mountains of Southern India	TDU
13.	Chandana R Bindu	Narendar Pani	August 1, 2017	Patterns of Response to Inequality in Relation to the Development Process: A Study of Two Villages in Gujarat and Kerala	TDU
14.	Shilajit Sengupta	Narendar Pani	August 1, 2017	Political Consequences of Intra-village Inequalities in Rural Transformation: A Study of Two Villages in West Bengal	TDU
15.	Ajit Kumar Babu	Narendar Pani	August 1, 2017	Inequalities in the Process of Former Agriculturists Learning Non-Agricultural Skills	TDU
16.	Lavanyaa VP	Raman Srikanth	August 1, 2018	Air Quality and Public Health: A Case Study in Bengaluru	MAHE
17.	Soumyadeep Das	Raman Srikanth	August 1, 2018	Way Forward for the Viability of Power Distribution Sector in India: A Case study in Karnataka	MAHE
18.	Aparupa Bhattacharjee	D Suba Chandran	August 1, 2018	Role of Religion in Contemporary Nation-Building: A Case Study of Sri Lanka, Myanmar, and Thailand	TDU
19.	Sreshtha Mondal	VV Binoy	August 1, 2018	Determinants of the Protective Action Decision Making during Floods and Cyclones: A Study of Kerala	MAHE
20.	Zarnain Manzoor	Anshuman Behera	August 1, 2018	Discourses around the Kashmiri Pandits: Engaging with 'Fractured Identity' and the 'Politics of Deadlock'	TDU
21.	Shaima Amatullah	Shalini Dixit	August 1, 2018	Perceptions of Social Discourses and Identity Negotiations: A Psychological Study of Muslim Community in India	TDU



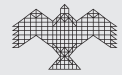
No.	Name	Supervisor	Date of Joining	Title of Thesis	University
22.	Hrudaya Chandana K	Anshuman Behera	August 1, 2018	Discursive Formulations of Violence in Ethnic Conflict: Generation and Transmission of Values	MAHE
23.	Meera Kumar	Sangeetha Menon	August 1, 2018	The Secret of the Word and the Theatrics of Faith Healing: Tracing the Language-Consciousness Nexus Through <i>Mantravada</i> Traditions in Kerala	MAHE
24.	Niharika Sharma	Sangeetha Menon	August 1, 2018	<i>Parāsamvit</i> and <i>Pratyabhijñā</i> : An Onto-Epistemic Enquiry in Kashmir Shaivism	TDU
25.	Shruti Ragavan	Anindya Sinha	August 1, 2018	<i>Of Cash Cows and Piggy Banks?</i> Natures, Cultures and Politics of the Cultivated Animal in Urban India	TDU
26.	Anmol Chowdhury	Anindya Sinha	August 1, 2018	Rethinking the Urban 'Wild' Animal: Ethnologies and Ethnographies of Nonhuman Primates in Indian Cities	TDU
27.	Sneha Gutgutia	Anindya Sinha	August 1, 2018	Life at the Urban Margins: Human-Animal Relations and Precarity in Indian Cities	TDU
28.	Shubhangi Srivastava	Anindya Sinha	August 1, 2018	A Tail of Two Cities: Ecological, Socioeconomic and Political Dynamics of Human-Dog Relations in Urban India	MAHE
29.	Sayan Banerjee	Anindya Sinha	August 1, 2019	Encountering More-than-Human Lifeworlds: Behavioural and Political Ecologies of Human-Elephant Relations in Northeast India	MAHE
30.	Preeth Khona	MB Rajani	August 1, 2019	Early Fusion Music: Cross-Cultural Musical Exchanges in Colonial India from the Late 18 th to the Early 20 th Century	MAHE
31.	Anna George	Smriti Hariharan	August 1, 2019	Reverberations of <i>Cilapatikaram</i> and the Worship of <i>Kannaki</i> in Caste, Gender and Regional Identities of Kerala and Tamilnadu	MAHE
32.	Megha Poonia	Shalini Dixit	August 1, 2019	Collective Memory and Social Identity: A Study of Denotified Tribes in Rajasthan	TDU
33.	Sabna ES	Anitha Kurup	August 1, 2019	Understanding Practices Related to Menstrual Health among Women in Rajasthan	MAHE
34.	Athira Balakrishnan	Sindhu Radhakrishna	August 1, 2019	From Wild to Vermin: A Study on Human-Wild Pig Conflict in India	MAHE
35.	Rakesh G Nannewar	Tejal Kanitkar	August 1, 2019	Assessment of Socio-Economic Impact of Agromet Services in Hyderabad-Karnataka Region	MAHE
36.	Tanmay Ghosh	R Srikanth	August 1, 2019	Assessing Public Transit Integration with Special Focus on First and Last Mile Connectivity	MAHE
37.	Sudip Kumar Kundu	Harini Santhanam	August 1, 2019	Assessment of the Socio-Economic Impacts of Marine Fishery Advisories for Odisha	MAHE



No.	Name	Supervisor	Date of Joining	Title of Thesis	University
38.	Aariz Ahmad	R Srikanth	August 1, 2019	Interlinking of Rivers: Case Study of the Almatti-Pennar Link	MAHE
39.	Rashmi BR	D Suba Chandran	August 1, 2019	Arctic Governance: The Role of Institutions with Special Reference to the Arctic Council, Saami Council and Arctic Circle	TDU
40.	Harini Madhusudan	D Suba Chandran	August 1, 2019	Militarisation in Outer Space: A Case Study of India, Japan, and France	TDU
41.	Shruti Shankar	Shivali Tukdeo	August 1, 2019	The Many Meanings of Work in Bengaluru's Schools: Histories, Cultures and Practices	MAHE
42.	Akriti Sharma	D Suba Chandran	September 1, 2020	Climate Change and the Himalayas: A Case for Regional Governance	TDU
43.	Lokendra Sharma	D Suba Chandran	September 1, 2020	Technology and International Relations: A Case Study of Cyberspace and Artificial Intelligence	TDU
44.	Anand Ganesh	Nithin Nagaraj	September 1, 2020	Recursion, Dynamics and Causality: Topics in Model Analysis	MAHE
45.	Pushya A Gautama	Sangeetha Menon	September 1, 2020	Situating the Correlates of Wellbeing through an <i>Ayurvedic</i> Approach to the Concepts of Consciousness, Self and Life-Purpose	MAHE
46.	Ankita Ranjan	Tejal Kanitkar	September 1, 2020	Exploring the Various Axes of Equity in Climate Change	MAHE
47.	Abhijit Konwar	Sindhu Radhakrishna	September 1, 2020	Distribution and Ecology of Scaly Anteaters in India	MAHE
48.	Ashisha K	Sindhu Radhakrishna	September 1, 2020	Ecological Flexibility and Gut Microbial Dynamics in the Gray Slender Loris <i>Loris lydekkerianus</i>	MAHE
49.	Joan Shilpa Kiran	Tejal Kanitkar	September 1, 2020	Energy Dependence and Just Transitions: A Study of Developing and Developed Countries	MAHE
50.	Kumar Saurabh	Rudrodip Majumdar	September 1, 2020	The Potential of Oil and Gas Sector in India's Energy Mix during the Energy Transition Period	MAHE
51.	Vinitha MS	VV Binoy	September 1, 2020	Study on the Determinants of Social Decision Making in Deccan Mahseer (<i>Tor khudree</i>), A Megafish	MAHE
52.	Shashank SR	Shivali Tukdeo	September 1, 2020	Higher Education as a Site of Investments: A Case Study of Institutions run by Lingayat and Veerashaiva <i>Mathas</i> in Karnataka	MAHE
53.	Souri Majumder	Anitha Kurup	September 1, 2020	Role of Mythology in the Learning and Identity Formation among Adolescents: A Study of Two Schools in West Bengal	MAHE
54.	Varun Sudhakaran	Jeebanlata Salam	September 1, 2020	Aspiration and Higher Education among the OBCs: A Study among the Thiyys and Vannathan	TDU



No.	Name	Supervisor	Date of Joining	Title of Thesis	University
55.	Ankit Singh	D Suba Chandran	August 2, 2021	Political Economy of External Public Debt of Pakistan	Yet to register
56.	David Jangminlien	Anshuman Behera	August 2, 2021	Ethnic Conflict in Manipur: A Case of Kuki-Naga Conflict	Yet to register
57.	Hema S Karnam	Prakash Panneerselvam	August 2, 2021	Detecting Anomalous Vessel Behaviour using AIS Data	Yet to register
58.	Varun Mohan	Prakash Panneerselvam	August 2, 2021	Conceptualizing and Assessing Political Salience of the United Nations' Role in Addressing Climate Security Discourse	Yet to register
59.	Meera Viswanath	Srikumar Menon	August 2, 2021	The Influence of External Temple-Building Traditions on the Indigenous Laterite-Timber Tradition on the West Coast of India	Yet to register
60.	Anjali Bharati	VV Binoy	August 2, 2021	Impact of Citizen Science Engagement on Participants' Scientific Knowledge, Scientific Sensemaking and Trust in Science	Yet to register
61.	Ankita Sharma	Anindya Sinha	August 16, 2021	The Arthropod City: Taxonomic and Functional Diversity of Ant and Spider Species Assemblages across an Urban Gradient in Guwahati, Assam, Northeastern India	Yet to register
62.	Zakhiya PC	Anindya Sinha	August 2, 2021	Primate Worlds: Demographic Structure and Dynamics, Social Networks and Life-History Strategies in Wild Bonnet Macaques	Yet to register
63.	Aiswarya T	Shivali Tukdeo	August 2, 2021	Life and Learning on the Move: A Study of Murshidabad-Perumbavoor Migration Corridor and Family Strategies for Education	Yet to register
64.	Ashirwad G Wakade	Shivali Tukdeo	August 16, 2021	The Social life of Rural Universities: Institutional Structures, Processes and Politics	Yet to register
65.	Navaindu Joshi	Jeebanlata Salam	August 2, 2021	Symbolic Violence in Schools and its Impact on the Social Identity and Aspiration of Students	Yet to register
66.	Surachita Lal	Anitha Kurup	August 2, 2021	Traveling through the Portals of Engineering Colleges: Experiences of Dalit Girls in India	Yet to register
67.	Tirthankar Chakravorty	Jeebanlata Salam	August 2, 2021	The "Self" in Classrooms – Exploring Identities through Narratives from Teaching of Social Sciences	Yet to register
68.	Vishal George	Anant Kamath	August 2, 2021	Youth, Sport and Urban Spaces	Yet to register



ANNUAL MEMORIAL LECTURES

Two annual memorial lectures were organised in the Institute:

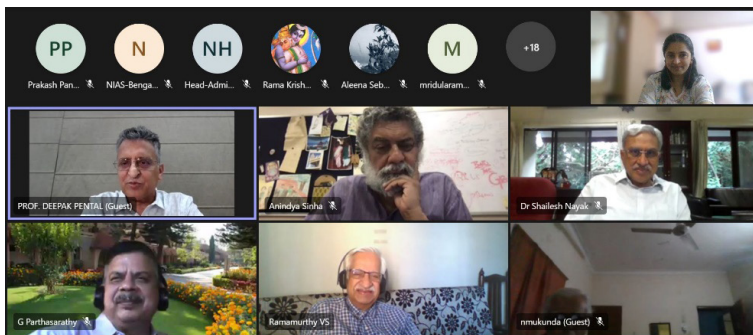
K Subrahmanyam Memorial Lecture



Prof SD Muni

Professor Emeritus, Jawaharlal Nehru University, New Delhi
India and Its Neighbourhood
January 7, 2022

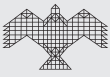
Sixteenth Raja Ramanna Memorial Lecture



Prof Deepak Pental

Former Vice-Chancellor, University of Delhi, Centre for Genetic Manipulation of Crop Plants, University of Delhi
R&D and National Prosperity
September 8, 2021

Dr MB Rajani is the Coordinator of Annual Memorial Lectures.



PUBLIC PROGRAMMES

EUROPE LECTURE SERIES - EUROPE STUDIES, STIR PROGRAMME

Amb PS Raghavan

Former Chairman, National Security Advisory Board
War Clouds Over Ukraine: Implications for Global Geopolitics

(In Association with Department of History, Kristu Jayanti College, Bengaluru)

February 22, 2022

SCIENCE COMMUNICATION PROGRAMME LECTURE

Prof Shailesh Nayak

Director, NIAS

Public-Scientist Interaction titled 'Mitigating Climate Change: What People Can Do?'

February 18, 2022

NIAS HERITAGE, SCIENCE AND SOCIETY PROGRAMME – FRIDAY LECTURES

Mr Ponni Selvanathan

Research Associate, Dr V Ganapati Sthapati Vaasthu Research Foundation, Chennai

Padmabhushan Dr V Ganapati Sthapati – The Doyen Shilpacharya of Bharath

December 10, 2021

Dr Pankaj Goyal

Archaeozoologist, Deccan College PGRI, Pune
Human-Animal Interactions during the Harappan Period at Kanmer

April 23, 2021

STIR PROGRAMME

Dr Manoharan N, Associate Professor, Department of International Studies, Political Science and History, Christ (Deemed-to-be-University), Bengaluru.

Dr Madhumati Deshpande, Head, Department of International Studies, Political Science and History, Christ (Deemed-to-be-University), Bengaluru.

Dr Shreya Upadhyay, Assistant Professor, Department of International Studies, Political Science and History, Christ (Deemed-to-be-University), Bengaluru.

Prof VS Ramamurthy, Prof Shailesh Nayak and Prof DK Srivastava, NIAS

Review Discussion on Living with Risks: The Art and Science of Managing Public Risks

(In association with and Department of International Studies, Political Science and History, Christ (Deemed-to-be-University))

October 26, 2021

ISSSP LECTURE SERIES ON INTERNATIONAL SECURITY

Prof Amin Saikal

Professor, University of Western Australia
9/11 and the Afghanistan Fiasco

September 23, 2021

Dr Gulshan Rai

Former Director-General, Computer Emergency Response Team

Cyber and International Security

August 27, 2021

Dr SS Sundaram

Former Director-General, Electronics and Communication Systems, DRDO

Technologies Used During Low-Intensity Conflicts

May 29, 2021

Prof Srikanth Kondapalli

Centre for East Asian Studies, SIS, Jawaharlal Nehru University

China and International Security: Beijing's Strategies and Global Responses

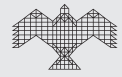
April 26, 2021

Prof Ummu Salma Bava

Jean Monnet Chair, Centre for European Studies, SIS, Jawaharlal Nehru University

Europe and International Security: Issues, Challenges and Options

April 7, 2021



STIR LECTURE ON GLOBAL POLITICS AND INTERNATIONAL RELATIONS

Prof Shibashis Chatterjee, Shiv Nadar University, New Delhi

Dr Nanda Kishor, Manipal Academy of Higher Education, Manipal

Prof A Subramanyam Raju, Pondicherry University
Dr Sameer Patil, International Security Studies Programme, Gateway House, Mumbai

Prof R Sridhar, Madras Christian College, Chennai
Panel Discussion on International Relations in the 2020s: Setting an Agenda
September 1, 2021

NIAS-EDUCATION PROGRAMME EVENT

Dr MK Baby, Head, School of Management, Kristu Jayanti College, Bengaluru

Dr Aloysius Edward, Dean, School of Management, Director, IQAC Kristu Jayanti College, Bengaluru

Prof Anitha Kurup, Head, Education Programme, NIAS

Panel Discussion on Women in Science Disciplines, and Nurturing the Gifted Children – A Critique of Two NIAS Reports – “A Comprehensive Report on Women in Science and Engineering in India” and “Challenges of Nurturing the Gifted and Talented in Developing Countries”
(In Association with Kristu Jayanti College)
August 28, 2021

NIAS-CRPR PROGRAMME EVENTS

Prof Mullaicharam Bhupathyaaj
College of Pharmacy, National University of Science and Technology, Sultanate of Oman
Novel Drug Delivery Systems for Herbal Isolates
May 7, 2021

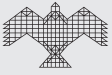
Dr Anshuman Behera, Dr SS Meenakshisundaram, NIAS and Dr N Manoharan, Christ (Deemed-to-be-University), Bengaluru
Policy Discussion on India’s Internal Conflicts: A Strategy Towards Resolution
April 13, 2021

KAAVYAALAAP POETRY SESSION

Ms Rukmini Vijayakumar
Artistic Director, Raadha Kalpa Dance Company
The Vachika Abhinaya in Bharatanatyam
Kaavyaalaap Vaisistya
April 27, 2021

NIAS-IPRI LECTURE ON CONTEMPORARY CONFLICTS

Prof Amin Saikal
Adjunct Professor of Social Sciences, University of Western Australia
Afghanistan: A Disrupted State in Limbo
April 15, 2021



WEDNESDAY DISCUSSION MEETINGS

NIAS Wednesday Discussion Meetings is one of the outreach events that have continued since the inception of the Institute. The faculty of the Institute meets every Wednesday for academic discussions after a lecture delivered by a member of the faculty. These Wednesday meetings also serve as a forum for invited guest speakers to deliver lectures on subjects of their choice.

Dr Sarasu Esther Thomas

Professor of Law, National Law School of India University, Bangalore
Family Matters: Gender Inequality in Family Law
March 30, 2022

Dr G Parthasarathy

INSA Senior Scientist and Adjunct Professor, NIAS
Rare Earth Minerals for a Sustainable Energy System
March 23, 2022

Dr Shivali Tukdeo

Associate Professor, Education Programme, NIAS
A Long Road to Recovery: Re-opening of Schools and Equitable Education
March 2, 2022

Dr Aleena Sebastian

Assistant Professor, Urban and Mobility Studies Programme, NIAS
Matriliny, Merchandise and Lived Islam: A Study of Keyis of North Malabar
February 23, 2022

Prof G Parthasarathy

INSA Senior Scientist and Adjunct Professor, NIAS
Minerals and Energy Management for a Sustainable Future
February 16, 2022

Dr Rudrodip Majumdar

Assistant Professor, Energy, Environment, and Climate Change Programme, NIAS
Covid-Induced Pulmonary Fibrosis and its Possible Linkages with Tuberculosis Infection: An Observation
February 9, 2022

Prof Dinesh Kumar Srivastava

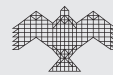
Homi Bhabha Chair Professor
Energy, Environment, and Climate Change Programme, NIAS
One Sun, One World, One Grid
February 2, 2022

Ms Aisha Abdul Kader

Human and Institutional Development Forum, Bengaluru

Ms Shamolie Oberoi

Content Marketing Specialist, FinTech
Understanding the Discourse around #MeToo and the LoSHA
January 12, 2022



Prof Narendar Pani

Head, Inequality and Human Development Programme, NIAS
Inequality and the Experience of Demonetization
January 5, 2022

Prof Supriya RoyChowdhury

Visiting Professor, Urban and Mobility Studies Programme, NIAS
Climate Change, Economic Backwardness and Migration: A Case Study in the Sundarbans
December 22, 2021

Dr Gufran Beig

Sir Ashutosh Mukherjee Chair Professor, NIAS
Air Quality: Science, Public Perception and Policy
December 15, 2021

Ms Diya Mukherjee

Project Associate, School of Humanities, NIAS
Experimenting with Copper: An Archaeological Approach
December 8, 2021

Ms P Ramya Bala

DST-Inspire Faculty Fellow, NIAS
Forests and Fires, Humans and Climate: An Investigation of Complex Interrelationships in A Tropical Dry Forest in Southern India
December 1, 2021

Dr Tejal Kanitkar

Associate Professor, School of Natural Sciences and Engineering, NIAS
"Keeping 1.5 deg. C Alive" at COP26, and the Road Ahead for India
November 24, 2021

Dr Prakash Panneerselvam

Assistant Professor, International Strategic and Security Studies Programme, NIAS
What Do Winning and Victory Mean in War?
November 17, 2021

Prof Malavika Kapur

Visiting Professor, School of Social Sciences, NIAS
Lost in Translation: Our Educational Policies
November 10, 2021

Dr Viraj Kumar, Adjunct Faculty, NIAS

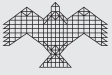
Holistic and Multidisciplinary Education in NEP 2020: Why and How?
October 27, 2021

Prof Dinesh Kumar Srivastava

Homi Bhabha Chair Professor, Energy, Environment, and Climate Change Programme, NIAS
Shades of Green Energy Options, and a Sustainable and Reliable Grid
October 20, 2021

Dr Tarun Menon

Assistant Professor, School of Humanities, NIAS
The Real Problem of the Arrow of Time
September 22, 2021



Dr CP Rajendran

Adjunct Professor, NIAS

Revisiting Great Earthquakes in History: The Indian Context

September 15, 2021

Dr AK Patra

Director, National Atmospheric Research Laboratory (NARL), Tirupati

Atmospheric Research – Current Activities and New Initiatives at NARL

September 1, 2021

Dr Saurabh Dutta Chowdhury

Adjunct Professor, International. Strategic and Security Studies Programme, NIAS

Mission 2025: Chinese Quest for Self-Reliance in Semiconductors – Implications for India Post 2020

August 25, 2021

Mr Abigail Miriam Fernandez

Project Associate, The Pakistan Reader Initiative, School of Conflict and Security Studies, NIAS

Breaking the Glass Ceiling: The Aurat March in Pakistan

August 18, 2021

Prof Narendar Pani

Head, Inequality and Human Development Programme, NIAS

Political Economy of Intrapersonal Inequality

August 11, 2021

Dr Aleena Sebastian

Assistant Professor, Urban and Mobility Studies Programme, NIAS

The Matrilineal Minangkabau Muslims of West Sumatra: Reflections from Preliminary Fieldwork in West Sumatra, Indonesia

August 4, 2021

Prof Shailaja D Sharma

Dr S Radhakrishnan Chair Visiting Professor, NIAS

Mathematics, Computation, Ganita Sastra: A Comparison

July 28, 2021

Dr Satyajit Rath

Indian Institute of Science Education and Research, Pune

COVID-19 Vaccines from Biology to Public Policy (and Back)

July 14, 2021

Mr Lokendra Sharma, Mr Vishnu Prasad, Ms Avishka Ashok

School of Conflict and Security Studies, NIAS

From Bitcoins to Dogecoins: Everything You Need to Know About Cryptocurrencies

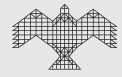
July 7, 2021

Dr Srikumar M Menon

Associate Professor, Heritage, Science and Society Programme, NIAS

Ek-Hathiya Dewal: A Unique Rock-Cut Temple in the Kumaon Himalaya

June 30, 2021



Dr V Jayasree

Principal Investigator, School of Natural Sciences and Engineering, NIAS
Knowledge, Attitudes and Practice: The Development of Effective and Sustainable Management Strategies for Drinking Water in the Kuttanad Region of Kerala
June 16, 2021

Prof D Suba Chandran

Professor and Dean, School of Conflict and Security Studies, NIAS
Emerging World Order: Between Status Quo, Transition and Transformation
June 9, 2021

Ms Shubhangi Srivastava

Doctoral Scholar, Animal Behaviour and Cognition Programme, NIAS
Canine Ecologies under Contagion Pressures: Altered Human-Dog Relations in Pandemic-Struck India
May 26, 2021

Prof Sisir Roy

Honorary Visiting Professor, NIAS
Periodicity of Redshift and New Challenge to Big Bang
May 19, 2021

Dr Chetan Choithani

Assistant Professor, Inequality and Human Development Programme, NIAS
Migration, Food Security and Development
May 12, 2021

Dr Tejal Kanitkar

Associate Professor, Energy Environment Programme, NIAS
The Supply-Need Gap in India's Vaccination Programme
May 5, 2021

Prof Vinay K Dadhwal

Indira Gandhi Chair of Environmental Sciences, NIAS, and
Director, Indian Institute of Space Science and Technology, Thiruvananthapuram
Indian Terrestrial Carbon Cycle: Challenges and Recent Results
April 28, 2021

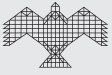
Dr Anant Kamath

Assistant Professor, School of Social Sciences, NIAS
Body Politics and the Politics of Technology: Technological Experiences among Street-based Sex Workers in Bangalore
April 21, 2021

Mr Lokendra Sharma

PhD Scholar, School of Conflict and Security Studies, NIAS
Are Collaborations in Social Sciences More Difficult than in Natural Sciences?
April 7, 2021

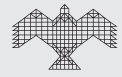
Prof Anindya Sinha and Mr KS Rama Krishna are the Coordinators of the Wednesday Discussion Meetings.



ASSOCIATES' PROGRAMME

NIAS shares its experiences, both intellectual and cultural, with a select group of distinguished persons. As Associates, they enjoy certain privileges, including access to the NIAS library, invitations to all major events and opportunities to dine with the NIAS faculty and distinguished visitors. As of now we have 125 distinguished personalities as our associates. NIAS organises regular associates' meetings, which include lectures, plays, and performing arts events.

Due to the on-going pandemic, Associates' Programme was not organised during the year 2021-22.



LITERARY, ARTS AND HERITAGE FORUM

The Literary, Arts and Heritage Forum aims to be an innovative platform for occasional lectures on diverse topics of cultural interest including literature, the arts and aspects of heritage. Major events and public lectures were held over the past year.

Maharaja (Titular) HH Yaduveer KC Wadiyar

Mahishuru Mahasamsthana

Hampi – Book Release

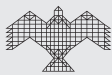
Prof Pierre-Sylvain and Ms Vasundhara Filliozat

Joint Authors of the Book 'Hampi: Sacred India, Glorious India'

Lectures on Hampi

November 15, 2021

Prof Sharada Srinivasan and Prof Sangeetha Menon are the Coordinators of the NIAS Literary, Arts and Heritage Forum.



LIBRARY

Resources

The NIAS library collection includes patron driven acquisitions and donations that support research needs of scholars. The primary objective of collection development has been to acquire books of immediate needs for research and teaching, strengthening core areas of ongoing research with seminal works and fulfilling broader mission of interdisciplinary research. The focus during the year was to acquire those books that did not arrive due to the pandemic in the previous years. Acquisition during the year included 191 books and 138 donations. Print resources includes 21027 books (18444 books, 2000 donations, 583 Kannada books), 55 subscriptions and 2708 bound volumes. Electronic subscriptions include American Economic Association journals, Taylor and Francis Special Collection of 1500 journals, Sage Social Science Collection of Indian Journals, JSTOR and a few individual journal titles. New subscriptions include *MIT Technology Review*, *Madras Courier*, *Harvard Business Review* and *The Economist*. Subscription to datasets includes *EPW India Times Series* in 27 modules and *indiastats.com*. The library recorded 752 book transactions during the year.

Publications and Website Activities

The library continued to support publication activity by disseminating faculty and student publications on the website and institutional repository. The library took stock of in-house publications published between 1998-2016 and organised donation of 5778 copies of these publications to Karnataka State Public Library's seven zonal libraries situated in Bangalore.

A checklist for publications was prepared as a ready reckoner. Due to space constraints, it was decided that only 30 copies of NIAS publications should be printed henceforth.

The library has been responsible for maintaining and updating the NIAS website since 1998. The webpages were updated daily throughout the year.

Plagiarism Software

The library continues to provide plagiarism detection services using *Turnitin*. The new faculty and students have also been provided with Turnitin accounts.

Institutional Repository

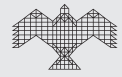
The Institutional Repository of NIAS is running on Eprints software and has 2300 records. The repository content includes formal and informal publications, doctoral theses and institutional documents. Consent is obtained from graduated students for uploading full text of their theses into the repository. The role of the repository has been extended to preserve and curate digital scholarship in different formats such as archiving audio recordings of talks and performances, in addition to datasets shared by faculty and students.

Archives

The library has been archiving publications, institutional documents (annual reports, brochures, newsletters, policy documents), newspaper clippings, photographs and audio recordings of lectures since inception. The library introduced a formal arrangement for using the materials from NIAS archives and repository with an *archives request form*.

Interlibrary Loans and Memberships

NIAS Library has interlibrary loan arrangements with libraries of Ashoka Trust for Research in Ecology and the Environment (ATREE), Srishti School of Art, Design and Technology, International Centre for Theoretical Sciences-TIFR, Raman Research Institute, Jawaharlal Nehru Centre for Advanced Scientific Research and National Centre for Biological Sciences. In addition, membership arrangements with libraries of Indian Institute of Science, Institute for Social and Economic Change, Indian Institute of Management Bengaluru, National Aerospace Laboratories, Indian Space Research Organisation, Headquarters, Bengaluru also help NIAS community to make use of its library.



PROFESSORS EMERITUS



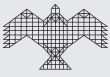
Dr K Kasturirangan

Dr K Kasturirangan was the Director of the National Institute of Advanced Studies during 2004-2009. He is presently Chairman, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Chancellor, Central University of Rajasthan, Chairman, Public Affairs Centre, Bengaluru, Chairman, Karnataka Knowledge Commission and Member, Atomic Energy Commission.



Prof VS Ramamurthy

Prof VS Ramamurthy was the Director of the National Institute of Advanced Studies during 2009-2014. His current research interests span the areas of managing public perceptions of public good and public risks associated with emerging technologies, identification and mentoring of children with unusual learning capabilities and science and technology communication.



CHAIR PROFESSORS

SCHOOL OF CONFLICT AND SECURITY STUDIES

International Strategic and Security Studies Programme



S Chandrashekar
JRD Tata Chair Visiting
Professor

Room No. F 08
Tele: 080-22185084
Fax: 080-22185028
Email: schandra@nias.
res.in

Joined NIAS on: July 2, 2004

Research Areas: Space, Business, Corporate, and National Strategies, Strategic Studies, Missiles, Nuclear Weapons, War and Deterrence, Technology and Development, Technological Competitiveness, Game Theory and Applications, Social Networks and Applications, Technology and Business, Innovation, Competitive Benchmarking, Crisis Management in Complex Systems.

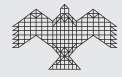
Research Contributions

The research study on China's Space Programme was published by Springer Nature after external review under the Title "China's Space Programme - From the Era of Mao Zedong to Xi Jinping". This is the first book published under the new NIAS Springer Nature Publishing Agreement.

An article 'China's Intelligence, Surveillance, and Reconnaissance (ISR) Space Constellation' was published in the Pinnacle ARTRAC Journal. This is a journal of the Army Training Command, and this issue of the journal was a special issue dealing with the role of space in future wars.

In collaboration with Dr Rudrodip Majumdar, prepared a commissioned study entitled 'A Status Report on the Indian Rare Earth Industry'. This is a project supported by the Department of Atomic Energy (DAE) & Indian Rare Earths Limited (IREL). The main task assigned to NIAS was to estimate the demand for Rare Earths in magnets that add "green benefits" in key value chains of Indian industry. The study also involved the formulation of a suitable national plan with appropriate incentives to industry for the creation of a robust national Rare Earth Industry. The report has been completed and submitted.

Work that began in collaboration with Dr Rudrodip Majumdar on the use of satellite imagery to identify individual solar plant operators at the Egyptian Benban Solar PV



Farm continued with extensions of the methods and techniques to the Indian Solar PV Farm at the Pavagada site in Karnataka India. The role of China in the supply chains associated with solar power plants and its geopolitical implications have also been covered in these studies.

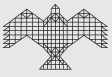
In addition to these research activities, also participated in consultations with The Science and Technology Policy Institute (STPI) related to “Global Trends in Orbital Servicing and Manufacturing, with the Takshashila Foundation on the prospects of India Russia collaboration in space activities, and some law firms and a few start-up companies on various space and space-related projects in India. Also mentored a doctoral student at IIM Kozhikode with his research project titled, “The use of satellite-based data analytics to assess the credit-worthiness of Indian Farmers.”

Lectures

- My Most Memorable Experiences in ISRO, invited YouTube broadcast for a History of Space in India project organised by Spaceport Sarabhai, Bengaluru, March 5, 2022.
- Classes on the Cuban Missile Crisis and the Accident to the Space Shuttle Columbia for Corporate Strategy Students of the Indian Institute of Management Bangalore (IIMB), Theme of Case Discussions ‘Crisis Management in Complex Systems’, February 12, 2022.
- On Prof Dhawan at the 6th Edition of the ORF Kalpana Chawla Space Dialogue in Memory of His 100th Birth Anniversary, November 19, 2021.
- Trends in Space Weaponization – Challenges for the Indo-Pacific, invited talk for the 6th edition of the ORF Kalpana Chawla Space Policy Dialogue, November 17, 2021.
- Foundations of China’s Space Programme and Its Current Capabilities, invited podcast for New Space India, May 2021.
- A Management Graduate in India’s Space Programme during 70’s, Invited Podcast for NewSpace India (online), April 2021.

Memberships

- Member, Board of Trustees of the RBANMS Group of Educational Institutions, Bengaluru.
- Member, Board of Governors, MVJ College of Engineering, Bengaluru.
- Member, Academic Council of the Chennai Centre for China Studies (C3S).



SCHOOL OF HUMANITIES



Shailaja D Sharma
S Radhakrishnan Chair
Visiting Professor

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Joined NIAS on: July 1, 2020

Research Areas: History and Philosophy of Indic Mathematical and Computational Tradition.

Research Contributions

PI for IKS-funded study on Study of Epistemic Paradigms, Logic and Causality in the Indic Tradition and SERB-funded Kaaryashala and SERB-funded Vrittika student internships.



Deepthi Navarathna
TV Raman Pai Chair
Professor

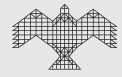
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Joined NIAS on:

Research Areas: Neuroscience of music, Cognitive Musicology, Musical Hermeneutics

Research Contributions: Initiated two lecture series with international and nationally acclaimed speakers: 'The Music, Brain and Creativity Lecture Series' and the 'Articulating NEP Lecture series'. These events were organized as part of the outreach for the newly initiated 'Music, Brain and Creativity Initiative' at NIAS.

Music, Brain and Creativity Initiative@NIAS: The Music, Brain and Creativity Programme is engaged in interdisciplinary research at the intersection of music, culture, neuroscience, neurotheology, cognition and creativity. The programme's research is geared towards applications of music in learning, education, health and cultural diplomacy – such as arts-based strategies in education in the backdrop of NEP's paradigm shift from STEM to STEAM, UNESCO's goals of cognitive enhancement through music and multicultural education through music-based diplomacy. The faculty



will work closely with musicians, artists, diplomats, scientists and policymakers in Government departments/ ministries, research institutions, and relevant industries to explore innovative solutions important to society at large.

The Raaga Laboratory@NIAS: The laboratory will focus on interdisciplinary research initially along these major projects:

Cognitive Hermeneutics of Indian Musicological Texts: Neuroscience interpretation of musical knowledge documented in ancient musicological texts such as Natyashastra, Sangeetha Ratnakara will be studied to re-examine and make available that knowledge for contemporary applications.

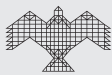
Creativity Studies with Musicians: How do musicians improvise? What does it tell us about creative cognition? How can he use this knowledge to formulate interventions for learning?

Cognitive Enhancement through Music: This research track will study strategies, interventions and applications of music, music pedagogical methods for cognitive enhancement paradigms in education and health.

Neurotheology: Cognitive Denominators of Religiosity: Despite the staggering differences in religious beliefs, doctrines and perspectives, there are common cognitive brain experiences that are common to many of the world's major religions. Under this track, cultural diplomacy will be explored through neurotheological perspectives.

Award

Chevening Clore Fellowship, given by the UK Government for extraordinary cultural leaders across the globe.



SCHOOL OF NATURAL SCIENCES AND ENGINEERING



PG Diwakar
ISRO Chair Professor

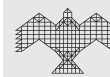
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Joined NIAS on: November 4, 2020

Research Areas: Digital Image Processing/Geospatial Technology/Remote Sensing Applications.

Research Contributions

1. Dynamics and Time Series Analysis of a Major Irrigation Tank in Tumkur District, Karnataka: A research project undertaken with IIM-Bengaluru. A detailed report submitted to IIM-B.
2. Integration of Space, ICT and Geospatial Applications in - SPACE+ initiative for our Earth and Future towards achieving SDGs: A research initiative taken up with UN-ESCAP, Bangkok, Thailand. A detailed technical report submitted to United Nations of Asia and Pacific Region for further actions with member states.
3. Status of Implementation of Interventions towards SDG in the Asia and Pacific Region: A research consultancy is taken up with UN-ESCAP and the focus here is to get an assessment of SDG implementation and plan for the future analytics.
4. Air Pollution Modelling – Design and Build Models and Analytics for Major Cities: A specific initiative is taken up for Bengaluru and Kolkata Cities. Good results were obtained in this initiative that has triggered more such studies for other cities also.
5. An Exclusive Model for Fontana City, USA was developed as part of a joint project with Berkeley University Students and faculty that enabled a geospatial presentation of air pollution phenomenon through the modelling approach. The output obtained was also further presented to the Mayor of Fontana for further action.
6. IIM-Bangalore, NIAS and NRSC, ISRO are jointly working together to provide a unique geospatial solution to selected villages of Tiptur and Madugiri of Tumkur District, Karnataka, on Agriculture and Weather advisories through Krishi Vignyana Kendras. Bhuvan portal software tools are being integrated with the project site for providing solution to the farming community. This research activity is being done under an MHRD Programme 'Rastreeya Ucchatar Shiksha Abhyaan' to reach out to the farming community through technological interventions.

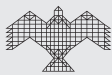


Lectures

- Presentation and Demonstration of Bhuvan Geoportal (online) for the PhD Students and Researchers, SRM Health University, February 20, 2022.
- Use of Space Technology in Addressing Time Series Analysis Using Space Data for Studying Dynamics of Irrigation Tanks in Tumkur District, Karnataka, Workshop on Facilitating Gram Panchayats, organised by IIM-Bengaluru at Dasarighatta, Tumkur District, February 22, 2022.
- Digital Image Processing and AI, Training Programme on Defence Space Training in Indian Army, Pune, organised by IAS through online mode, January 29, 2022.
- Radio Talk on Review of the Book – Space and Beyond: Professional Voyage of Dr K Kasturirangan, edited by Dr BN Suresh. Aired by All India Radio, December 19, 2021.
- EO and Geospatial Analytics, Keynote Address (Online), National Symposium on Advances in Remote Sensing: Trends, Challenges and Opportunities for Development – 2021. The symposium was organised at BIT MESRA, Ranchi, Jharkhand, December 10, 2021.
- Series of Talks on Digital Image Processing and Geospatial Technology, Gaganyaan Crew Members Training Programme of ISRO/DOS, ISRO HQ, Bengaluru, December 9 to 13, 2021.
- The Dynamics of Non-urban Waterbody and Timeseries Analysis in Tumkur District, on a request by IIM-B and Hanns Seidel Foundation, Germany, as part of HSS-IIMB Knowledge Partner Workshop on Water Use Efficiency and Management (Online), December 3, 2021.
- Series of Talks, Use of Space Images and GIS for Rural Development Programmes, for Students and Faculty of Indian Institute of Management, Bengaluru, October and November 2021.
- Use of Artificial Intelligence in Image Classification and Data Mining Techniques, Series of Talks for the Selected Students of DSU and AIT, Bengaluru, July and August 2021.
- Use of ICT and Space Technology for SDGs (online), as part of Briefing to RESAP National Focal Points on Preparation for the 4th Ministerial Conference on Space Applications for Sustainable Development, organised by UN-ESCAP, Bangkok, June 1, 2022.
- Series of Talks (online), UN-ESCAP Forum on 'Integration of Space, ICT and Geospatial Applications in -SPACE+ initiative for our Earth and Future' towards achieving SDGs, for representatives of the member nations of Asia and Pacific Region, coordinated by UN-ESCAP Office at Thailand, April 2021 and beyond.
- Series of Talks (online), Status of Implementation of Interventions towards SDG in the Asia and Pacific Region with a Focus on Comprehensive Questionnaire for Data Collection and Analytics, The UN-ESCAP Forum, coordinated by UN-ESCAP Office at Thailand, April 2021 and beyond.

Memberships

- National Geospatial Policy – Member of the National Level Technical Subcommittee to advise on the policy perspectives to the Department of Science and Technology, Government of India.
- Lead Indian Reviewer of a Department of Science and Technology's International Initiative, Indo-German Science and Technology Centre, jointly with German counterpart.
- Nominated Member, International Institute for Applied Systems Analysis, TIFAC.
- Nominated from India in SAC Council of IIASA, TIFAC to participate in various activities of IIASA and further decision-making.
- Committee lead with a Startup "Cultivate" on implementing IOT tools with space technology and field data for optimal farming practices. The focus is on optimising on the use of IOT sensors along with space data, especially while covering large farming areas with Agriculture/ Horticulture activities.
- Member, Editorial Board, International Journal, Environmental Monitoring and Assessment – Springer Nature, USA.
- Associate Editor, Journal of the Indian Society of Remote Sensing – Springer, India.



Other Activities

- UN-ESCAP Youth Forum on Space Applications and the Space+ Initiative – Represented India in the Panel Discussion on Challenges and Opportunities for Youth to Achieve Space+ Goals in Asia and the Pacific. Also, made an online presentation/ demonstration of the unique functionalities of Bhuvan Geoportal, March 11, 2022.
- Panellist from India for the APRSAF-27 on the theme, Climate Change and Environmental Issues Using Space Technology and made a presentation on the topic with technology focus, December 3, 2021.
- Expert and Panelist for the Release of a Report “A Study on Earth Observation Training Data Landscape in India”, organised by GIZ India, FAIRForward, presided over by Dr K VijayaRaghavan, PSA to Government of India, New Delhi, September 28, 2021.
- As part of collaboration with IIM-B, NRSC and NIAS took a lead role in an inter-departmental committee in design/implementation a Mobile App to capture field boundary and farmers’ data on to Bhuvan geoportal for near real-time assessment and analysis. This consortium has established an interesting set of technologies for farmers’ support in Agricultural activities.



Vinay Kumar Dadhwal
Indira Gandhi Chair
Professor

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Joined NIAS on: March 16, 2020

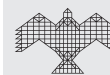
Research Areas: Terrestrial Carbon Cycle of India, Earth Observation Data – Analysis Techniques and Applications, Agriculture-Crop Yield Assessment and Crop Insurance; Land Science – Land Use, Land Transformations and Land Surface Processes; Space Economy of India.

Research Contributions

Annual maps of tree loss in India during 2001-20 prepared using Landsat data were combined with spatial forest biomass layers to map the loss of standing carbon from Indian forests. The expansion of rubber plantations in Tripura state were mapped during 1991-2020 to prepare an age-class map of rubber which would be used in modeling change in carbon cycle due to vegetation type change. Soil organic carbon assessment is being improved for its spatial variability over agricultural areas by creating a 250m resolution SOC geospatial layer from nearly 39.5 million SHC point observations. Satellite derived crop gross primary production has been merged with agricultural production statistics in a framework to prepare annual national productivity maps 2001-2020 which would be evaluated for use in crop insurance applications. Using a framework of economic activities in space during 2011-2021, the size of Indian space economy was assessed at rupees 35,000 crores with a contribution of 0.17 to national GDP in 2020.

Recognition

Based on publications and citations was listed in Stanford Global Scientist Ranking System for year 2021 in Science Field-Engineering and sub-field -Geological and Geomatics Engineering



Lectures

- Earth Observations and Geospatial Applications in Agriculture, Forestry and Global Change: Possible Linkages with STIP, NIAS-DST Training Programme on Science, Technology and Innovation Policy, March 10, 2022.
- Current and Future Space Missions and Their Societal Impact in Indian Context, National Webinar – Integrated Approach in S&T for Sustainable Future, on occasion of National Science Day 2022 organised by the Indian Society of Remote Sensing (Ludhiana Chapter) and PRSC (Ludhiana), February 28, 2022.
- Spatial Assessment of Vegetation and Soil Carbon stocks in India – Case Studies with Data-Driven Approach, Virtual International Symposium on Data Driven Approach for Agriculture and Natural Resource Management – Opportunities and Challenges, Indian National Society of Agro-informatics (INSAIT), January 22, 2022.
- Earth Observations and Terrestrial Carbon Cycle: Results from National Carbon Project, ISG ISRS National Symposium 2021, PRSC Ludhiana, December 16, 2021.
- Assessment and Modeling of Indian Terrestrial Carbon Cycle: Results from National Carbon Project, National Workshop on Greenhouse Gases (GHG-3): Observations and Inverse Modeling on Indian Regional Perspective, Indian Institute of Tropical Meteorology (IITM), Pune, December 15, 2021.
- Geo-Spatial Science and Technology: Looking Beyond RS & GIS, GEOSMART21, Hyderabad International Convention Centre, Hyderabad, December 8, 2021.
- Overview of Remote Sensing and Earth Observation Systems, Training Programme organised by Centre for Space Science and Technology Education in the Asia Pacific (UN-CSSTE-AP) and UN Office of Outer Space Affairs (UNOOSA) on Remote Sensing Applications for Crop Mapping and Monitoring, October 5, 2021.
- Use of Earth Observation (EO) Data for Terrestrial Carbon Cycle Assessment for India, 'Bhoo Mandal Talk' organised by IEEE GRSS, Bengaluru Chapter, September 24, 2021.
- Remote Sensing and GIS Applications, '33 ISRO Induction Training Programme', UR Rao Space Centre, Bengaluru, September 8, 2021.
- Earth Observation from Space: Opportunities and Challenges, 21st Foundation Day Lecture, North-East Space Application Centre, Shillong, September 6, 2021.

Memberships

- Member, Governing Body, Indian Institute of Tropical Meteorology, Ministry of Earth Sciences.
- Member, Research Advisory Committee, Indian Institute of Tropical Meteorology, Ministry of Earth Sciences.
- Member, Scientific Review and Monitoring Committee, Monsoon Mission, Phase II and Phase III, Ministry of Earth Sciences.
- Chair, National Awards Committee in Atmospheric Sciences (2021), Ministry of Earth Sciences.
- Member, High-Level Committee on PMFBY, Ministry of Agriculture and Farmer Welfare
- Chairman, Technical Expert Group on Use of Technology in PMFBY, Mahalanobis National Crop Forecast Centre, New Delhi.
- Member, Project Management and Monitoring Committee of National Centre for Geodesy at, IIT, Kanpur of DST/Government of India.
- Editor, Journal of Indian Society of Remote Sensing (Springer).

Other Activities

- Jointly conducted a two-credit elective on 'Space Economy and Policy' at Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram for two semesters (online mode), February to June 2021 and August to December 2021.
- As member of advisory group/Board of Studies was involved in establishing two new education programs, namely (i) PG Diploma in Developmental Informatics at Kerala University of Digital Sciences, Innovation and Technology (KUDSIT), Thiruvananthapuram, and (ii) PG Diploma in Agricultural Informatics at Dhirubhai Ambani-Institute of Information and Communication Technology (DA-IICT), Gandhinagar.



Energy and Environment Programme



Sudha Mahalingam
Raja Ramanna Chair
Professor

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Joined NIAS on: August 30, 2019

Research Areas: Energy Regulation, Energy Security, Energy Governance, Electricity Policy.

Research Contributions

The year was spent on writing a book on Evolution of Jurisprudence in a liberalized economy to be published by Springer International in 2022. During January to March 2022, was engaged in organising a high-level stakeholder workshop on Regulatory Reforms and Privatization in Electricity Distribution. Wrote the concept note, identified participants and followed up with them. The workshop was successfully completed on April 9, 2022.

Lecture

- Keynote Address, HERSTORY – Women in Leadership Series, organised by Edgeverve and Infosys, November 2021.



DK Srivastava
Homi Bhabha Chair
Professor

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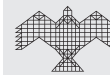
Joined NIAS on: August 5, 2019

Research Areas: Electromagnetic and Heavy Flavour Probes of Quark-Gluon Plasma.

Research Contributions

Studies on Public Risks, their management, and communication. (With Prof VS Ramamurthy and Prof Shailesh Nayak): It has resulted in a monograph tracing the lessons learned in handling various pandemics, natural disasters, industrial disasters and emerging technologies and the pivotal role of science and science communication in handling them.

Studies on how basic research has often involved international collaborations, even between nations at odds with each other, and how international collaborations in



sciences are becoming even more important as efforts and the cost of necessary equipment rises beyond the technological and financial as well as the skilled man-power of even the biggest and most prosperous nations. (With Prof VS Ramamurthy, Prof Shailesh Nayak, and Prof D Suba Chandran). It is hoped to result in a valuable monograph.

Honour

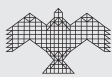
Honorary Professor, AMITY University, NOIDA, Uttar Pradesh.

Lectures

- Art and Science of Managing Public Risks, University of Allahabad, Prayagraj, March 25, 2022.
- The Crisis of Global Warming & Energy Options for a Sustainable Future, Annual Physics Colloquium Series, Rajiv Gandhi University, Itanagar, Arunachal Pradesh, March 23, 2022.
- Climate Change and Energy Options for a Sustainable Future, International Webinar on Climate Change and Future Challenges, St Mary's College, Thuthukudi, Tamil Nadu, February 28, 2022.
- Shades of Green Energy to Combat Global Warming, One Day National Seminar on Recent Trends in Applied Physics, National Institute of Technology, Warangal, January 31, 2022.
- One Sun, One World, One Grid, Fourth One Day International Conference on Science and Technology and Climate Change, Chennai Centre for Chinese Studies, Chennai, December 2021.
- Shades of Green Energy to Combat Global Warming, Inter University Accelerator Centre School on Nuclear Reactions 2021, New Delhi, November 2021.
- Shades of Green Energy, International Conference on Recent Trends in Energy Science and Engineering, Rajiv Gandhi Institute of Petroleum Technology, Jais, Amethi, October 28, 2021.
- Shades of Green Energy and Sustainability, Young Scientists Meeting on Air Quality, Water Resources, Energy, and Climate Change, The World Academy of Science, Central and South Asia Region Partner and Divecha Centre for Climate Change, Bengaluru, October 27, 2021.
- Green Energy Options for Combating Climate Change, International Symposium on Physics: Fascination to Aspiration, National Institute of Technology, Tiruchirappalli, October 25, 2021.
- Shades of Green Energy, BRICS Young Scientists Conclave on Affordable Healthcare, Energy Solutions and Cyber Physical Systems, The World Academy of Sciences, September 2021.
- Water, Water Every Where; And Yet ...", Presidential Address, International Webinar on World Nature Conservation Day, Gujranwala Guru Nanak Khalsa College, Ludhiana, July 28, 2021.
- The Challenge of Medical Waste, National Webinar on Interesting Physics Facts in Everyday Life, Gujranwala Guru Nanak Khalsa College, Ludhiana, June 1, 2021.

Memberships

- Member National Advisory Committee, 65th DAE Symposium on Nuclear Physics, Bhabha Atomic Research Centre, Mumbai.
- Member, Council of Indian Science News Association, Kolkata.
- Member Raja Ramanna Fellowship Programme Review Committee, DAE, Mumbai.
- Editorial Board Member, Pramana, Journal of Physics.
- Editorial Board Member, Scientific Reports, Nature Group of Publications, U.K.
- Editorial Board Member, Physics, MDPI Journals.
- President, Indian Physical Society (till November 2021).
- Member Research Advisory Committee, Indian Institute of Technology, Ropor.
- Member, Council Department of Physics, University of Delhi (VC's Nominee).



Other Activities

Chaired Plenary Session on Nuclear Reactions, DAE Symposium on Nuclear Physics, Bhabha Atomic Research Centre, Mumbai, December 2021.



Gufran Beig
Ashutosh Mukherjee
Chair Professor

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Joined NIAS on: October 18, 2021

Research Areas: Science Backed Services to Nation in Air Quality and Climate Change: Air Quality Modelling and Early Warning System Air Quality Management, Impact on Health and Food Security, Mitigation Planning and Policy

Research Contributions

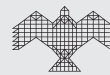
Gufran Beig; R Srikanth; Shailesh Nayak, Air Quality, National Standards and Human Health in India, NIAS Policy Brief, 2021.

Honours

- The Air Quality Management Research Lifetime Achievement Award for the year 2021 This award is given annually to recognize and reward scientific, technological and community talent in the country by the Indian International Conference on Air Quality Management (IICAQM) consortium.
- Fellow (FASc), Indian Academy of Sciences, Bengaluru
- Honorary Professor of Amity University by Amity University, Rajasthan.
- Editor-in-Chief of Journal of Earth System Science, Indian Academy of Sciences, Bengaluru.
- Editor, international journal 'Aerosol and Air Quality Research', Publisher – AAGR Aerosol and Air Quality Research, Taiwan.
- Editor, International Journal 'Journal of Atmospheric and Solar Terrestrial Physics' Elsevier Publication Company, United Kingdom.
- Editor of Indian Journal of Radio and Space Physics, CSIR.
- Associate Editor, Journal of Geophysical Research (Space Science), American Geophysical Union, Washington, DC.

Lectures

- Physics of Air Quality and Climate Change in India: From Sources to Control, 25th Indian Social Science Congress, March 29, 2022.
- Air Pollution: Its Impacts and Mitigation, Indian International Centre, New Delhi, March 28, 2022.
- Air We Breathe: Science, Public Perception and Policy, JECRC University, Jaipur, Rajasthan, March 24, 2022.



Memberships

- Member, Scientific Steering Group, Stratospheric Processes And their Role in Climate, World Climate Research Programme, World Meteorological Organisation.
- Member, Programme Advisory Committee on Earth and Atmospheric Sciences, Science and Engineering Research Board, Department of Science and Technology, Government of India.
- Member, Scientific Advisory Committee, Indian Council of Medical Research -National Institute of Research in Environmental Health, Bhopal.
- Member, Scientific Advisory Committee, Indian Council of Medical Research -National Institute of Occupational Health, Ahmedabad.
- Member, Sectional Committee of Indian Academy of Sciences, Bengaluru.

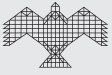


Upendra Tripathy
Sir Ashutosh
Mukherjee Chair
Visiting Professor
(July 5, 2021 to
August 26, 2021)

Joined NIAS on: July 5, 2021

Research Areas: Energy and Environment

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FACULTY MEMBERS

Conflict Resolution and Peace Research Programme



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Professor and Dean
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Joined NIAS on: November 18, 2015

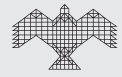
Research Areas: Peace Research Initiative (IPRI), NIAS Science Diplomacy, Global Politics.

Lectures

- Contemporary Issues in International Relations: With a special reference to Technology, NIAS-DST Course, March 11, 2022.
- Challenges to Peace in Asia, National Law University, Jodhpur, February 19, 2022.
- Strategic Visions of Russia–India Relations and Changes in the World Order, NIAS-RIAC Track-II Dialogue, January 28, 2022.
- Conceptualising and contextualising non-traditional security,” Quaid-e-Azam University, Islamabad, Pakistan, December 14, 2021.
- India and the Subcontinent, CRPF Lecture, December 8, 2021.
- Trends in Global Politics: India between Status Quo, Transition and Transformation, Jadavpur University, December 1, 2021.
- SCO in a Regional and Global Flux, ICWA-SCO Track-II Dialogue, October 30, 2021.
- Afghanistan, Post US Withdrawal, RCSS, Colombo, September 9, 2021.
- Reimagining South Asia, Jamia Milia Islamia, July 8, 2021.

Academic Courses

- Coordinated and taught an online course on Contemporary Pakistan, January to December 2021.
- Coordinated and taught an online course on Global Politics: Contemporary International Relations – Order and Theory, January to December 2021.
- Coordinated and taught an online course on Peace Studies: Contemporary Peace Processes – Thinkers and Theories, January to December 2021.



Anshuman Behera
Associate Professor
School of Conflict and
Security Studies

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Joined NIAS on: January 31, 2014

Research Areas: Maoist Conflict in India, Governance, Development, and Conflict, Religious Radicalisation in India, Political Process in South Asia, Political Theory, Formal and Informal Decentralisation.

Academic Courses

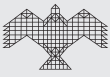
- Taught few classes on India's Internal Security for the Master students at Malviya Centre for Peace Research, Banaras Hindu University, February 7 to 11, 2022.
- Coordinated and taught a Two Credit Course on Qualitative Research Methodology in NIAS, October to December, 2021.
- Coordinated and taught a Two Credit Course on Theoretical Introduction to Conflict and Peace in NIAS, August to September, 2021.

Lectures

- India's Internal Security: Threat Perception and Way forward, Sambalpur University, Odisha, February 24, 2022.
- Five Decades of Left-Wing Extremism: Issues, Stakeholders and Responses, UGC-Human Resource Development Centre, Jawaharlal Nehru University, New Delhi, February 22, 2022.
- New Trends in Social Science Research', Christ University, Bengaluru, February 16, 2022.
- Consolidating Peace: Forecasting Nepal in 2022, Read a Paper in ISSSP, NIAS, January 7, 2022.

Memberships

- Lifetime member of Indian Social Science Association.
- Member, Board of Studies, Department of International Relations and History, Christ (Deemed to be University), Bengaluru.
- Associate member, MP-IDSA, New Delhi.



Amit Mukherjee
Assistant Professor
School of Conflict and
Security Studies

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Joined NIAS on: October 3, 2017

Research Areas: GIS for Defence Studies and National Security, Geo-computation (Modelling and Simulation) for Strategic Studies, Weapons Systems Research - Missiles - (Shaheen Systems Pakistan), Satellite Imagery Analysis for Strategic Security. Geospatial and Remote sensing methods for maritime studies.

Academic Courses

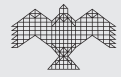
- School Level – Programme ISSSP: Theory of War, Modern Warfare, Terrorism and Unconventional War, Generations of Warfare Future of Warfare, Non-Traditional Security Threats, First Semester, August to November 2021.
- School Level - Programme CRPRP: One credit course for NIAS PhD Scholars on Modelling in Strategic and Security Studies. October to November 2021.
- Faculty Level – One credit course for NIAS PhD Scholars on GIS for Strategic Studies: An Introduction, First Semester, August to November 2021.
- Faculty Level – One credit course for NIAS PhD Scholars on GIS for Maritime (Security) Studies Programme, January to April 2022.

Lectures

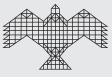
- Strategic Technologies Road Map: A Future Vision for India, NIAS-DST Training Programme on Science, Technology and Innovation Policy, March 17, 2022.
- Scientific Temperament in Higher Learning for Improvement in Quality of Education and Scientific Temperament in Higher Learning for Improvement in Quality of Education, Online Faculty Development Programme on Leadership in Academic Excellence, AICTE Training and Learning Academy, Dr Babasaheb Ambedkar Marathwada University, Aurangabad, December 3, 2021.
- Communication and Soft Skills: Foundation and Principles, Online Faculty Development Programme on Leadership in Academic Excellence, Department of Computer Science and Information Technology, AICTE Training and Learning Academy, Dr Babasaheb Ambedkar Marathwada University, Aurangabad, December 2, 2021.

Memberships

- DPC Expert Committee Member for Promotion of ISRO Scientists to Grade SF- ISRO HQ, Bengaluru, July 23, 2021.
- Project Committee Board Member GWC – UN Statistical Division GKI Project 2021 Phase I – (Under NIAS-GWC MoU).
- Member of the Thematic Group - Strategic STIP 2020 Policy for the Office of Principal Scientific Adviser to the Government of India, and the Department of Science and Technology, 2020.



- Institutional Member, OGC Geospatial Consortium India, 2021.
- Member, Indian National Cartographers Association, 2021.
- Member, Editorial Review Board: Electronic Journal of Social and Strategic Studies – Chennai, July 2021.



International Strategic and Security Studies Programme



Srikumar Pullat
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Joined NIAS on: May 24, 2017

Research Areas: Unmanned Aerial Vehicles for Civil and Military Applications; Space Environment, Space Security and Space Situational Awareness; Systems Analysis and Systems Engineering.

Academic Course

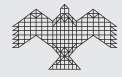
- Two credit optional course on Systems Engineering Fundamentals for NIAS PhD Scholars, November 18 and 25, 2021.

Lectures

- Challenges from Innovative and Disruptive Technologies, NIAS-DST Training Programme on Science, Technology and Innovation Policy, March 18, 2022.
- UAV Technologies for Military Applications and Civil Operations, BEL Academy of Excellence, August 26, 2021.
- NIAS-CISAC Virtual Dialogues on India-US Cooperation on Global Security – Strategic Security Threats of 21st Century covered Climate Change (May 25, 2021), Hypersonic Systems (August 23, 2021), Space Security (December 1, 2021) and Nuclear Security (March 11, 2022).

Memberships

- Life Member, Aeronautical Society of India
- Life Member, Astronautical Society of India.
- Core Member, Annual Assessment Board for Scientists of DRDO.
- Adviser, NITEE Meenakshi Institute of Technology for Design and Development of Amphibious Drone for Surveillance Applications in Air and Under Water.
- Mentor, MTech Student from NITTE Meenakshi Institute of Technology for project on Systems Engineering Approach to Design and Development of an Amphibious Drone.



Rajaram Nagappa
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Joined NIAS on: February 1, 2007

Research Areas: Weapon Systems and Advances in Weapon Systems.

Lectures

- New Happenings in Space, NIAS-DST Course on Science, Technology and Innovation Policy, March 8, 2022.
- Hypersonic Weapons and Space Situational Awareness, BEL Academy of Excellence, August 25, 2021.
- Indian Panelist in NIAS-CISAC Dialogue on Hypersonic Weapons, August 23, 2021.
- Presentation on Hypersonic Systems to Expert Review Committee, Defence Research and Development Organisation, June 7, 2021.



PM Soundar Rajan
Visiting Professor
School of Conflict and
Security Studies

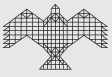
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Joined NIAS on: May 17, 2017

Research Areas: Advanced Weapon Systems; Fifth Generation Avionics Systems; Cyber Security; Defence Applications of AI; Air Power Assessment; Chinese Defence Technology Assessment; Lethal Autonomous Weapon Systems; Science Diplomacy; Hypersonic Weapon System Avionics and Vetrionics Systems for Battle Tanks.

Lectures

- Emerging Hypersonic Threats: An Assessment, Round Table Discussion Detection and Tracking of Hypersonic Threats – Ground and Space Based Sensors, Centre for Joint Warfare Studies, New Delhi, March 29, 2022.
- As Course Director gave talks on Avionics, Electronic Warfare, Cyber Security in Aerospace Systems, Fifth Generation Fighter Technologies etc, for IDST, DRDO Training Programme on Avionics and Electronics Warfare, BEL Academy, September 2021.



Memberships

- Member, Review Committee for Avionics, Electronic Warfare, and Electro Optics etc. for India's Fifth Generation Fighter Aircraft; ADA, DRDO.
- Fellow, Institution of Electronics and Telecommunication Engineers.
- Member, Aerospace and Electronic Systems Society, IEEE Bengaluru.
- Member, Aeronautical Society of India.



N Ramani

Visiting Professor
School of Conflict and
Security Studies

Joined NIAS on: November 1, 2007

Research Areas: Development of Tools for Missile and Space Asset Capability Assessment.

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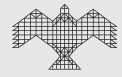
Lalitha Sundaresan

Visiting Professor (*till
May 13, 2021*)
School of Conflict and
Security Studies

Joined NIAS on: May 14, 2008

Research Areas: Satellite Imagery Analysis.

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Joined NIAS on: November 2, 2010

Research Areas: Indo-Pacific, Asia, Security and Non-Traditional Security Issues, Foreign Policy Analysis (India, the US, China, and Japan) and Borderland Studies.

Memberships

- Member, Association for Asian Studies (AAS), Ann Arbor, USA.
- Member, Australia-India Interdisciplinary Research Network.
- Member, Southeast Asia Research Group.
- Member and Convener, South Indian Scholars Group of International Studies.



**Prakash
Panneerselvam**
Assistant Professor
School of Conflict and
Security Studies

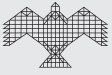
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Joined NIAS on: December 1, 2015

Research Areas: International Politics (Japanese Studies), Maritime Security, Defence and Strategic Studies.

Academic Courses

- Course Coordinator on Geopolitics, Warfare and the International Relations in the 21st Century for NIAS doctoral students (Summer Semester).
- Programme level course and Introduction to Maritime Security – Concepts, Principles and Practices for NIAS doctoral students (Summer Semester).
- International Relations and Collective Knowledge Frameworks, Trans-disciplinarity and Collective Knowledge Frameworks Course, TDU, Bengaluru, August 4, 2021.
- New Trends in International Relations Research, Advanced Research Methodology for PhD Scholars, Christ University, Bengaluru, July 6, 2021.

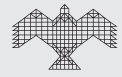


Lectures

- Infrastructure and Industrial Development in Northeast India: Exploring the Potential Role of Japan, IQAC Lamka College, Manipur, January 18, 2022.
- East Asian Perspective, The State of Global Politics in 2021, NIAS-Pondicherry University, December 20, 2021.
- Panel Discussion on Multidisciplinary Perspectives on Protests, NIAS-IPRI Workshop on Global Protest Movements, November 19, 2021.
- Panel Discussion on AI and Society: Policies, Possibilities and Challenges for India, NIAS-DST Training Programme on Policy for Science and Science for Policies, October 27, 2021.
- Additive Manufacturing During Covid-19 and Beyond, ASME Digital EFX BITS Pilani: Industry 4.0, July 21, 2021.

Membership

Member, Indo-Taiwan Expert Group Meeting on Social Science, 2022.



Consciousness Studies Programme



Sangeetha Menon
Professor and Dean
School of Humanities

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Joined NIAS on: January 8, 1996

Research Areas: The broad area of research work is 'consciousness studies', and the specific focus is the experiential self, with (i) the implications of experience, (ii) the place of emotions, self-identity and self-transformation, and (iii) the possible interdisciplinary dialogues that promote psychological health and deeper well-being.

Academic Courses

- Building and Experiencing Knowledge: Narrative Building and Its Role in Transdisciplinary Research, Module for course on Transdisciplinarity and Collective Knowledge Frameworks, The University of Trans-Disciplinary Health Sciences and Technology, August 9, 2021.
- Building and Experiencing Knowledge: Transdisciplinarity as a Method for Imaginative and Reflective Engagement in Research, Module for course on Transdisciplinarity and Collective Knowledge Frameworks, The University of Trans-Disciplinary Health Sciences and Technology, August 7, 2021.
- Philosophy, Self, and Consciousness: Exploring the Context of Experience, February 8 to June 7, 2021 –
- May 31, 2021- Autobiographical Self – Reading the Writer
- June 7, 2021 – Character and Characters: Building Narratives
- Research Writing and Communication, February 2 to May 4, 2021.
- May 18, 2021 – Class 14: Module 7 – Writing the Reader - Traversing through Words and the Magic between Them.
- Conceived the series 'Sanskrit Language and its Traditions: A Journey through its History and Contemporaneity – Online International Lecture Series', along with Prof Madhav Deshpande, January 20 to April 28, 2021.

Lectures

- Beyond the Self-narrative – How Do We Imagine the Extension of Humanism to include the Unseen and the Unknown? (online), concluding special lecture at the two-day Platinum Jubilee National Seminar organised by Department of Anthropology, School of Social Sciences, University of Madras, March 29, 2022.
- Women Empowerment, Humanism and Technology (online), Special lecture to the Panel Discussion, International Women's Day, NIAS, March 8, 2022.
- Entrepreneurial Imagination and Consciousness in the context of Humanism



(online), Keynote Address at the Inaugural Session of the Conference organised by Department of MBA, Acharya Institute of Technology, March 4, 2022.

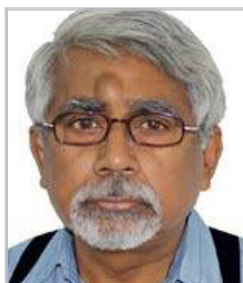
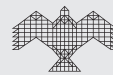
- Being in the State of Self-Abidance – The Process and System of Healing in the Yoga Sutrā of Patanjali (online), for the S-VYASA and ICHR National Seminar on Understanding Yoga and Community Health: Ancient vs Modern Perspective, February 24, 2022.
- Philosophy and the Method of Thinking (online), Panel Discussant, 'Tell Me Your Story' talk series finale on 'Home-making the World', September 20, 2021.
- AI and Consciousness: Humanities and the Two Forces that Change our Lives (online), for International TCS Groups, organised by Tata Management Training Centre as part of their series on Unconventional Wisdom, September 2, 2021.
- Contributed to the discussion meeting on Traditional Knowledge Systems (online), a leadership meeting led by PMO Office and CSIR – with IITs, NIAS and CSIR Institutions, June 21, 2021.

Memberships

- Member, National Task Force for Cognitive Science Research Initiative, Department of Science and Technology, India.
- Academic Council Member, The University of Trans-Disciplinary Health Sciences and Technology (TDU), Bengaluru.
- Chairperson, Internal Committee for the Prevention, Prohibition and Redressal of The Sexual Harassment of Women at Work Place, C-DAC, Government of India, Bengaluru.
- Member, IISc Institutional Human Ethics Committee.
- Member, Institutional Stem Cell Ethics Committee of NCBS.
- Member, Institutional Stem Cell Ethics Committee of InStem.
- Member, Institutional Stem Cell Ethics Committee, JNCASR.
- Member, Institutional Stem Cell Ethics Committee, IISc.
- Advisory Council Member - METI International, San Francisco.
- Fellow, International Society for Science & Religion (ISSR) Cambridge.
- Honorary Fellow, College of Humanities, University of Exeter, UK.
- Expert Member, Faculty Selection Committee, Department of Humanities and Social Sciences, NISER Bhuvaneshwar, June 25, 2021.

Other Activities

- Reading Women (online), conceptualised and chaired on the occasion of the International Women's Day on March 8, 2022, for the NIAS community
- External examiner for Srisrividhya Kalyanaraman, The University of Trans-Disciplinary Health Sciences and Technology (TDU), Bengaluru for a degree of Doctor of Philosophy, 2021.
- External examiner for the final defense of the doctoral thesis "Is the neural correlate of consciousness a holy grail?" by Gautam Sharda, Department of Philosophy, Delhi University.
- Reviewed papers for several journals, and Editorial Board member of several Journals.



Sisir Roy
Honorary Visiting
Professor
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Joined NIAS on: November 5, 2014

Research Areas: Current Debates on Some of the Concepts in Modern Science and Ancient Indian Wisdom; Yoga, Meditation and Progress in Consciousness Research and Modern Neuroscience; Microbial Communication, Noise and Bacterial Intelligence.

Lectures

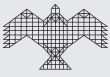
- Networks of Meaning, Mind-Body Problem and Consciousness, Jain Academy of Scholars, in association with Science and Spirituality Research Institute, Ahmedabad, March 29, 2022.
- Concept of Sunyata in Buddhist Philosophy and Category Theory, Zero Project, The Netherlands, March 6, 2022.
- States of Consciousness and Challenges to Neuroscience: Jain Academy of Scholars, Ahmedabad, in association with Science and Spirituality Research Institute, Ahmedabad, February 29, 2022.
- Interface Between Creation Hymns of Rigveda and Modern Cosmology: A Multiverse Dialogue, December 20, 2021.
- Physics in Ancient India, Seminar on Ancient Indian Science at Army War College, MHOW, Madhya Pradesh, December 18, 2021.
- Yoga Philosophy, States of Meditation and Modern Neuroscience on the eve of International Yoga Day, Amity University, Chhattisgarh, June 21, 2021.
- Modern Physics and Ancient Indian Wisdom by RV University, Bangalore, June 21, 2021.
- Periodicity of Quasar and New Challenge to Big Bang Model, Academy of Jain Scholars, Ahmadabad, June 15, 2021.

Other Activities

- Chairperson, Seminar on Understanding Mind through the Lens of Artificial Intelligence, Banaras Hindu University, March 26, 2022.
- Coordinator, A Dialogue between Quantum Physics and Nagarjuna Philosophy; Nicolas Gisin and Dorjee Damdul, Tibet House, Delhi, December 11, 2021.
- Expert for viva-voce examination for PhD at Utkal University.

Membership

- Member, Editorial Board, International Journal: Neuro Philosophy.



Nithin Nagaraj
Associate Professor
School of Humanities

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Joined NIAS on: October 15, 2015

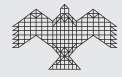
Research Areas: Scientific Theories of Consciousness, Causality, Brain-inspired Machine Learning, Indic Mathematics and Computation.

Academic Courses

- Lecture on Artificial Intelligence, as a part of Quantitative Research Methods Course for 1st Year NIAS PhD Students. December 7, 2021.
- From Good Reading to Great Writing, as a part of Module 7: Reading and Writing - Multidisciplinary Reflections of "Research Writing and Communication Course" - a free online 2-credit course via Zoom, NIAS Consciousness Studies Programme, April 27, 2021.

Lectures

- Mathematical Foundations of PCA & ICA (with applications to EEG analysis), Faculty Development Programme on Signal and Image Processing Innovations in Computational Neuroscience, MS Ramaiah Institute of Technology, Bengaluru, March 8, 2022.
- A Tale of Causality: Challenges, Methods and Applications (online), ARTPARK, Indian Institute of Science, Bengaluru, February 23, 2022.
- NeuroBytes, Virtual Fireside Chat Session (along with Dr Veeky Baths, BITS Pilani Goa Campus) (online) as a part of 8th Annual Conference of Cognitive Science (ACCS8), Amrita Vishwa Vidyapeetham, Amritapuri, January 22, 2022.
- What is Consciousness? (along with Mr Anand Ganesh), Nightingales Elders Enrichment Centre, Malleswaram, Bengaluru, December 13, 2021.
- The Fascinating World of Chaos and Fractals, Foundation Programme Lecture (online), IIT Jammu, December 4, 2021.
- "ABC" – AI, Brain and Consciousness: The Incompatible Trinity of the 21st Century, Concepts of Consciousness – Neuroscience and Indian Philosophical Perspective, Center for Consciousness Studies, NIMHANS, International Webinar, September 30, 2021.
- NL: Neurochaos Learning – Neuroscience Meets Machine Learning, Zoho Corp (online) September 6, 2021.
- Neurochaos Learning: When Neuroscience Meets Machine Learning, Distinguished Lecture (online), 2021 IEEE SPS Summer School on Deep Learning for Sensor Signal Analytics, CSIR-CSIO, Chandigarh, August 3, 2021.
- 'Siribhoovalaya', Magic Squares and Beyond, NIAS-SERB Online Workshop on Algorithms in the Indic Tradition, June 11, 2021.



- Neurochaos Learning, Spotlight Session of the General Machine Learning and Natural Language Processing Day (online), OCUPAI'21, Philips Innovation Campus, Bengaluru, June 2, 2021.
- Research Methodology in Computer Science, Department of Computer Science, University of Calicut, Webinar, May 25, 2021.



Shankar Rajaraman
Post-Doctoral
Associate
School of Humanities

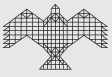
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rajaraman@nias.res.in

Joined NIAS on: August 1, 2018

Research Areas: Pratyabhijna Philosophy, Rasa Aesthetics, Kashmir Kavya Literature.

Honour

Vagdevi Prashasti Award by the Akhila Bharatiya Sahitya Parishat for contribution to Sanskrit literature in February 2021.



Tarun Menon
Assistant Professor,
Philosophy
School of Humanities

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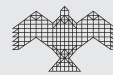
Research Areas: Philosophy of Science, Political Philosophy.

Academic Courses

- Course on Qualitative Methodology for NIAS PhD Scholars, Semester I, 2021-22.
- Course on Research and Publication Ethics for NIAS PhD Scholars, Semester I, 2021-22.
- Course on Philosophy of Science for Azim Premji University, Bengaluru, Semester I, 2021-22.
- Course on Social Sciences Beyond the Human for NIAS PhD Scholars, Semester II, 2021-22.

Lecture

- How Evidence-Based is Evidence-Based Policy?, IIT Tirupati, January 21, 2022.



Heritage, Science and Society Programme



Sharada Srinivasan
Professor
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Joined NIAS on: June 10, 2001

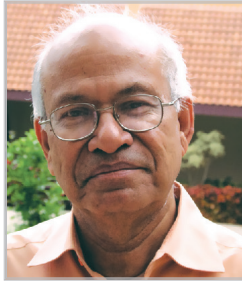
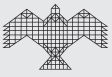
Research Areas: Archaeometallurgy.

Award

INAE Woman Engineer of the Year Award 2021 under the Academia Category.

Lectures

- SAMVAD Episode 4, Reimagining Girls Education in STEM, March 25, 2022.
- Wootz Steel: Technology Transfers in Antiquity, Webinar for IIT-B Alumni Network in Bangalore IITABC, February 12, 2022.
- Dance and Archaeology, India Science Festival, January 22, 2022.
- Metallurgy and History of Technology, Seminar of Army War College, December 16, 2021.
- Indian National Academy of Engineer INAE Woman Engineer of the Year 2022 Award in Academia Lecture, December 2021.
- Science in Culture, International Day of Scientific Culture, DSC, Nehru Science Centre Webinar, October 4, 2021.
- Art and Science of Metallurgy and Metal Artefacts, Sandeep and Gitanjali Maini Foundation, September 8, 2021.
- Dance Heritage of India, Cultural Heritage of India Seminar, Dept of History, Jyoti Nivas College, Bengaluru, September 1, 2021.
- Dance and Architectural Intertwining, Confluence of Heritage Narratives, Destination Heritage, August 8, 2021.
- Highlights of Indian heritage in ferrous metallurgy and the legendary wootz steel, ASET Colloquium, Tata Institute of Fundamental Research, Mumbai, August 6, 2021.
- Metallurgical Heritage of India, International Centre for Theoretical Sciences, Kuriosity During Kuarantine Series, July 25, 2021.



S Ranganathan
Honorary Visiting
Professor
School of Humanities

Joined NIAS on: July 2, 2004

Research Areas: Materials Heritage.

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Srikumar M Menon
Associate Professor
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Joined NIAS on: March 1, 2016

Research Areas: Archaeoastronomy, Ancient Architecture, Monumental Architecture of Ancient India.

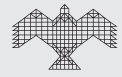
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menon@nias.res.in

Academic Course

- Programme level two credits course for NIAS doctoral students on Temple Architecture in South India – Origins and Evolution, August to November 2021.

Lectures

- Finishing the Unfinished: Conjectural Restoration of the Open Mantapas at Badami, Workshop on 3-D Imaging, NIAS, March 22, 2022.
- The Buddhist Art of Kanaganahalli: Animal Sculptures and Artisanal Identities, Speaking Archaeologically, March 3, 2022.
- From Megaliths to Temples: Astronomy in the Lithic Record in India, Army War College, December 18, 2021.
- Of Camels and Sculptors: Clues from Animal Motifs about Artisanal Migrations in Ancient India, Animals and South Asian History Symposium, Ashoka University, Delhi (along with Prof Anindya Sinha) December 17, 2021.



- Megaliths: Missives from the 'Silent' Period of History, School of Planning and Architecture, Bhopal, November 29, 2021.
- Megaliths: Missives from the 'Silent' Period of History, Paraspar Programme of the Indian Institute of Science, Bengaluru, May 24, 2021.

Membership

Member, PhD Committee, Martin Luther Christian University, Shillong.



MB Rajani

Associate Professor
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Joined NIAS on: January 1, 2015

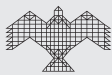
Research Areas: Landscape Archaeology; Geospatial Analysis for Cultural Heritage; Coastal Geomorphology and Cultural Heritage; Built Heritage and Physiography of Malaprabha River Valley; Cross-cultural Musical Exchanges in Colonial Period.

Academic Courses

- Five-day Workshop on '3D Landscapes' for Master/PhD students, researchers and practitioners in the fields of archaeology, history, art-history and conservation architecture, March 21 to 25, 2022.
- Remote Sensing and GIS Application for Cultural Heritage Studies (online), One Session in the Two-weeks Refresher Course on Research Methodology in Sciences, UGC-Human Resource Development Centre, Panjab University, Chandigarh, September 16, 2021.
- GIS for Spatial Data Visualization and Analysis, two-credit course for NIAS doctoral students, August to December 2021.

Lectures

- Patterns in Past Settlements: Geospatial Analysis of Imprints of Cultural Heritage, Book Talk, NUClearCSE-2022 Virtual International Conference, NIIT University, Neemrana, January 21, 2022.
- Patterns in Past Settlements: Geospatial Analysis of Imprints of Cultural Heritage, Book Talk, Department of History, Cotton University, Guwahati, December 16, 2021.
- Issues With Site Protection Boundaries and Use of RS and GIS in Site Preservation, Conservation and Management, Course on Archaeology and Science, Ashoka University, October 29, 2021.
- Site Specific Case Study: Agra, Course on Archaeology and Science, Ashoka University, October 29, 2021.
- General Introduction on What Remote Sensing and GIS Can Do for Archaeology, Course on Archaeology and Science, Ashoka University, October 22, 2021.



- Site Specific Case Study: Nalanda, Course on Archaeology and Science, Ashoka University, October 22, 2021.
- Patterns in Past Settlements: Geospatial Analysis of Imprints of Cultural Heritage on Landscapes, Book Talk, Archaeology Discussion Group, Deccan College, Pune, May 22, 2021.
- Patterns in Past Settlements: Geospatial Analysis of Imprints of Cultural Heritage on Landscapes, Book Talk, 78th IIRS Outreach Programme on Geospatial Technology for Archaeological Studies, May 21, 2021.

Membership

Member, Core Committee, Indian National Young Academy of Science for Earth Science Category (2021-2022).



Smriti Haricharan

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Joined NIAS on: January 2, 2017

Research Areas: Archaeological Field Methods, Landscape Archaeology, Iron Age Early Historic South India, Archaeology of Death, Disseminating Archaeology, Contemporary Archaeology.



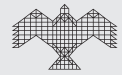
Asmita Mohanty

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Joined NIAS on: October 1, 2018

Research Areas: Geo-archaeology, coastal geomorphic studies and landscape evolution, remote sensing and GIS, Active Fault and Paleoseismology, Active Tectonics.



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Joined NIAS on: January 1, 2018

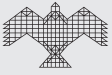
Research Areas: Archaeology, Experimental Archaeology, Archaeometallurgy and Ethnoarchaeology

Award

INSA Young Historian of Science Award 2021, Indian National Science Academy, New Delhi.

Lectures

- Revisiting the Role of Vishwakarmas in India Metallurgy (Lost-wax technique); Case Studies from Tamil Nadu and Kerala, In INDICA Hindu Art, Architecture and Artisan Traditions, November 19, 2021 (along with Ms Diya Mukherjee).
- Investigating the Ancient Heritage of Indian Iron Smelting Technology through Experiment approach, In International Camp of Experimental Archaeology Virtually Torun, August 26, 2021.
- Primary Understanding Ancient Technology through an Experimental Approach, 13th Annual Workshop, South Asian Archaeology Conference, Hartwick College, USA, April 24, 2021.



Animal Behaviour and Cognition Programme



Sindhu Radhakrishna
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Joined NIAS on: September 1, 2001

Research Areas: Animal Behaviour and Cognition, Primate Behavioural Ecology, Human-Animal Studies, Environmental Decision-Making, Human-Wildlife Conflict, Conservation Biology, Environmental Education.

Academic and Training Courses

- Animal Behaviour and Cognition Course (with VV Binoy and Shaurabh Anand) for NIAS PhD students from August to December 2021.
- Coordinator, NIAS-DST Online Training Programme for Women Scientists on Science and Sustainability in India, NIAS (January 3 to 7, 2022).
- Coordinator, Sexual Harassment Awareness Training Workshop, NIAS (December 9 and 10, 2021).

Lectures

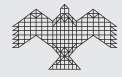
- 'Conducting Secondary Research'. Lecture delivered at the HSI-Farm Animal Leadership Programme, NIAS, July 2021.
- 'Brain size, Primates and Sociality'. Lecture delivered at Centre for Learning, November 2021
- 'Human-Wildlife Coexistence and Conservation Strategies'. Lecture delivered at the NIAS-DST sponsored course on 'Science, Technology and Innovation Policy' in NIAS, March 2022

Memberships

- Associate Editor, *Frontiers in Conservation Science*, 2022 onwards.
- Editorial Board Member, *Resonance*, 2018 onwards.
- Commission Member, IUCN SSC Primate Specialist Group - S. Asia, 2013 onwards.

Other Activities

Reviewed manuscripts for the following journals: *Human Dimensions of Wildlife*, *Folia Primatologica*, *Ecology and Evolution*, *Mammal Society*.



Anindya Sinha
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Joined NIAS on: November 15, 1996

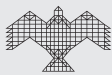
Research Areas: Mammalian Behavioural Ecology and Cognitive Psychology, Animal Molecular and Behavioural Genetics, Evolutionary Biology, Conservation Studies, Urban Ecologies and Human-Nonhuman Relationships, Other-than-Human Studies, Cultural and Performance Studies and Philosophy of Biology

Academic Courses

- Two lectures on Qualitative Methodologies for Nonhumans, as part of the two-credit course on Rethinking Qualitative Research in the Social Sciences for NIAS doctoral students, September 21 and 28, 2021.
- A one-credit course on Social Sciences Beyond the Human for NIAS doctoral students, February–May 2022 (with Dr Tarun Menon).
- A three-credit course on Behavioural Ecology, consisting of lectures, paper presentations and discussion sessions for master's degree students of the Postgraduate Programme in Wildlife Biology and Conservation, National Centre for Biological Sciences, Bengaluru, March to May 2021.

Lectures

- My Life with Animals, Pathshala, Vadodara, March 20, 2022.
- Primatological Research and Ethics, Panel Discussion, Nature Conservation Foundation, Bengaluru, February 25, 2022.
- Social Cognition and Consciousness in Nonhuman Primates, Institutional Colloquium, Sai University, Chennai, November 26, 2021.
- The Prolific 'Weed' Macaques of India: Uniquely Adaptable but Ultimately Threatened? Invited Talk, Weaving the MacaqueNet, Global Virtual Symposium, The MacaqueNet Consortium, November 17, 2021.
- The Monkey in the Town's Commons: Social and Cultural Evolution in Wild Bonnet Macaques, Keynote Address, National Webinar – National Wildlife Week, ENVIS Centre for Faunal Biodiversity, Zoological Survey of India, Kolkata, October 6, 2021.
- Why We Must Return to the Monkeys: Macaque–Human Ethnographies of Urban India, Human–Primate Interactions in the Urban, International Online Webinar, IUCN Section on Human–Primate Interactions, September 7, 2021.
- The Monkey in the Mirror: Thinking about the Urban Macaques of India, Webinar, Lecture Series on Nature in Our Cities, Azim Premji University, Bangalore, August 27, 2021.
- Making Urban Environments: Infrastructures of Power, Resistance and Negotiation, Panel Discussion, Virtual International Conference on Irritations and Unforeseen Consequences of the Urban, Urban Environments Initiative, Rachel Carson Center for Environment and Society, München, Germany, July 1, 2021.



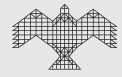
- A Rolling Stone does Gather Some Moss: Reflections on a Primate Life, Enrichment Lecture, Valedictory Programme, OCELS-21: Orientation for Competitive Examinations in Life Sciences – A Web-Based Workshop, Association of Teachers in the Biological Sciences, Mumbai and Indian National Young Academy of Sciences, New Delhi, June 13, 2021.
- Being Macaque: Nonhuman Ethnographies of Urban India, First Online Symposium on Posthumanism and India, Posthumanism India Network and Centre for Comparative Social Theory, Department of Sociology, West Bengal State University, Barasat, West Bengal, June 11, 2021.

Memberships/Honorary Appointments

- Nominated External Member, Combined Undergraduate and Postgraduate Board of Studies for Environmental Biology and Wildlife Sciences, Cotton University, Guwahati, March 2022 onwards.
- Member, Governing Board, The Lion-Tailed Macaque Project, Odense, Denmark, November 2021 onwards.
- Member, IUCN/SSC Primate Specialist Group – South Asia Section, Species Survival Commission of the International Union for the Conservation of Nature, Gland, Switzerland, March 2013 onwards, renominated from October 2021 to September 2025.
- Coordinator, Ethology and Evolution, Indian Biology Olympiad Programme 2021, Homi Bhabha Centre for Science Education, Mumbai.
- International Advisor, Online International Biology Olympiad Challenge II, Lisbon, Portugal, July 2021.
- Member, Governing Board, Institute of Public Health, Bengaluru, July 2021 onwards.
- Member, Subsection on Urban Primates, IUCN/SSC Primate Specialist Group – Section on Human-Primate Interactions, Species Survival Commission of the International Union for the Conservation of Nature, Gland, Switzerland, July 2020 onwards.
- Member, Subsection on Primates in Human Culture, IUCN/SSC Primate Specialist Group – Section on Human-Primate Interactions, Species Survival Commission of the International Union for the Conservation of Nature, Gland, Switzerland, July 2020 onwards.
- Affiliate Senior Scientist, Centre for Wildlife Studies, Bengaluru, July 2020 onwards.
- Adjunct Professor, Cotton University, Guwahati, March 2019 onwards.
- Member, Conservation Committee, International Primatological Society; January 2019 onwards.
- Adjunct Research Professor, Indian Institute of Science Education and Research, Kolkata, April 2018 onwards.
- Adjunct Faculty, Nature Conservation Foundation, Mysore, July 2017 onwards.
- Honorary Research Fellow, School of Humanities, University of Exeter, Exeter, United Kingdom, August 2015 onwards.
- Vice President, Association for Teachers in the Biological Sciences, Mumbai, India; May 2015 onwards.
- Scientific Advisor and Research Coordinator, Dhole's Den Research Foundation, Bandipur National Park, October 2012 onwards.
- Adjunct Faculty, Centre for Neuroscience, Indian Institute of Science, Bengaluru, June 2011 onwards.
- Adjunct Teaching Faculty, National Centre for Biological Sciences, Bengaluru, August 2010 onwards.
- Member, Steering Committee, Postgraduate Programme in Wildlife Biology and Conservation, National Centre for Biological Sciences, Bengaluru, July 2004 onwards.

Academic Programmes

- Engendered Primatology: Of Female Primates and Primatologists, NIAS–DST Training Programme for Women Scientists, February 9, 2022.
- Chair, Session on The Pandemic and Lessons for Science Policy, NIAS–DST Online Training Programme on Policy for Science and Science for Policies, October 25, 2021.



- Chair, Sixteenth Raja Ramanna Memorial Lecture, IAS, September 8, 2021.
- Macaque-Human Ethogeographies, Or Why We Must Return to the Monkeys, IAS Monthly Faculty Colloquium, April 30, 2021.



Arijit Pal
Post-Doctoral
Associate
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Joined IAS on: September 4, 2019

Research Areas: Animal Behavioural Ecology, Animal Cognition, Evolutionary Biology, Evolutionary Anthropology, Human-animal Interactions and Conservation Biology.

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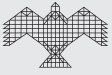


Viswanath Varma
Post-Doctoral
Associate (*till
September 30, 2021*)
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Joined IAS on: July 31, 2018

Research Areas: Animal Behaviour and Cognition.

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Complex Systems Programme



Janaki Balakrishnan
Professor
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Joined NIAS on: July 10, 2012

Research Areas: Nonlinear Dynamical Systems, Complex Systems, Nonlinear Oscillations, Stochastic Processes, Ecological Modelling.

Lectures

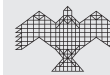
- Innovations with Theoretical Physics: Fundamental Science and Practical Applications, NIAS-DST Training Programme on Science, Technology, and Innovation Policy, March, 14, 2022,
- The dynamical World of Complex Systems, IISc-SIAM Student Chapter Faculty Lecture Series, September 16, 2021.

Memberships

- Member and Student Supervisor, Project Evaluation Committee of 5th (final) year project for a student of the BS-MS degree programme, Department of Mathematics, Indian Institute of Science, Bengaluru (till June, 2021).
- Member and Student Supervisor, Project Evaluation Committee of 5th (final) year project for a student of the BS-MS Degree Programme, IISER Pune (since May, 2021).
- Member and External Subject Expert, Doctoral Advisory Committee (Physics) of Two PhD Students, IIIT Bangalore.
- Guest Faculty, Department of Mathematics, Indian Institute of Science, Bengaluru.

Other Activities

Reviewer for Physical Review E, Scientific Reports, Europhysics Letters, Physica D: Nonlinear Phenomena, Physics Letters A, Chaos.



Energy and Environment Programme



R Srikanth
Professor and Dean
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Joined NIAS on: August 22, 2016

Research Areas: Energy and Environment, Minerals, Sustainable Development, Public Policy.

Lectures

Gave lectures in the NIAS-DST Training Programmes.

Memberships

- Member, Expert Group constituted by NITI Aayog to Study the Future Coal Scenario in India up to 2050.
- Member, Programme Advisory Committee (Energy Security), Science and Engineering Research Board, Government of India.
- Member, Advisory Committee of the A2K+ Studies Programme, Department of Scientific and Industrial Research, Government of India.

Other Activities

Co-authored the final report submitted by the Joint Committee appointed by the National Green Tribunal to determine the Environmental Compensation to be paid by the Udupi Power Corporation (UPCL)'s power plant in the Udupi district of Karnataka.



AV Krishnan
Visiting Professor
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Joined NIAS on: May 15, 2019

Research Areas: Clean Coal Technologies Related to Power Sector; Integrated Gasification Combined Cycle; Water conservation in Thermal Power Plants.

Lectures

- Presentation at the DST-IIT-B, Seminar on Future of Coal Research in India Mumbai, January 21, 2022.
- Transition Plan for Thermal Power Plants in India, Webinar on Clean Energy Transition to Net Zero for India, India Energy Forum, January 20, 2022.



Other Activities

As member of the Board of Governors at the Science and Technology Entrepreneurs Park attached with NIT, Tiruchirappalli provided guidance through review and interactions for development of incubation and entrepreneur development.



Tejal Kanitkar
Associate Professor
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Joined NIAS on: June 14, 2019

Research Areas: Climate Change Mitigation, Climate Policy and Negotiations; Energy Modelling, Renewable Energy Transitions and Energy Policy; Exploring Energy-Environment-Economy Linkages and Methods of Studying the Same; Social and Economic Impact Assessment: Focus on Energy, Irrigation and Agriculture.

Academic Courses

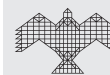
- Developed the Research Methodology and Semester-I Coursework Module for NIAS doctoral students.
- Developed and taught course on Quantitative Research Methods for NIAS doctoral students,

Lectures

- Climate Change and India's Energy Future, Oxford Energy Series, November 2021.
- What Should India's Position on the Global Net Zero Target Be?, GUAC, Indian Institute of Science, Bengaluru, November, 2021.
- Is the North to Blame for the Climate Crisis, Scottish Parliament, November, 2021.
- Are Net-Zero Targets Ambitious, University of Sussex, June, 2021.

Memberships

- Member, Government of India Delegation to the 56th Session of the Intergovernmental Panel on Climate Change: Approval of the report of Working Group-III to the 6th Assessment Report of the IPCC, 2022.
- Member, Government of India Delegation to the 55th Session of the Intergovernmental Panel on Climate Change: Approval of the report of Working Group-II to the 6th Assessment Report of the IPCC, 2022.
- Member, Government of India Delegation to the 26th Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC), 2021, November 1 to 14, 2021.
- Member, Government of India Delegation to the 54th Session of the Intergovernmental Panel on Climate Change: Approval of the report of Working Group-I to the 6th Assessment Report of the IPCC, 2021.



- Chairperson, Working Group on Energy for the formulation of 14th Five Year Plan, State Planning Board, Government of Kerala, 2021.
- Member of the Steering Committee of Bengaluru Sustainability Forum.



Rudrodip Majumdar
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Joined NIAS on: August 23, 2019

Research Areas: Heat Transfer and Fluid Flow-Based Fundamental Modelling of the Solar Thermal and Other Renewable Energy Systems; Sustainable Fuels for Transport Sector; Techno-Economic Analysis for Advanced Energy Systems; Application of Nuclear Radiation Technologies to Enhance Sustainability; Microclimate Modelling for Urban Settings in India; Mitigation of the Plastic Waste Problem.

Academic Courses

- Developed and taught the course titled Advanced Energy Systems and Futuristic Solutions in the Spring 2022 Semester at NIAS, January to April 2022.
- Developed and taught the course titled Major Conventional and Nonconventional Pathways to Harness Energy in the Fall 2021 Semester at NIAS, August to November 2021.



Harini Santhanam
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Joined NIAS on: July 29, 2019

Research Areas: Aquatic Ecosystems Sustainability, Land-Water-Human Nexus, Cumulative Impacts of Hazards on Sustainability.

Academic Course

- Sustainable Development Goals – A Primer, one credit course for NIAS doctoral students, January to May 2022.

Lectures

- The Inheritance Tax: Conjunctive Water Use to Enhance Ecosystems Services and Sustainability of Aquatic Ecosystems, Online Faculty Development Programme



on Sustainability, Conservation and Protection of Water Resources, World Water Day 2022, Centre for Ocean Research, jointly with the Centre for Remote Sensing and Geoinformatics and Department of Civil Engineering, Sathyabama Institute of Science and Technology in association with Earth Science and Technology Cell, Ministry of Earth Sciences and the IUCN-Commission on Ecosystem Management, from March 22, 2022.

- We: The People and Pulicat (online), World Wetlands Day Virtual Event, IUCN CEM South Asia, February 1, 2022.
- The Waste That We Do Not See - Marine Litter, Debris and Microplastics, National Webinar on Waste Management: Scientific Perspective, GGN Khalsa College, Ludhiana, September 30, 2021.
- Rediscovering Our World in An Ecosystem - From Restoration to Resilience (online), World Environment Day Talk, Raman Science Centre, Nagpur, June 4, 2021.



Abhishek Banerjee
Post-Doctoral Associate
(till February 24, 2022)
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Joined NIAS on: September 1, 2021

Research Areas: Energy and Environment.

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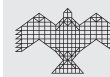


Abhilash Maryada
Post-Doctoral Associate
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Joined NIAS on: October 20, 2021

Research Areas: Energy and Environment.

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Science Communication Programme



VV Binoy

Assistant Professor
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Joined NIAS on: September 2, 2010

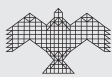
Research Areas: Social Cognition, Animal Cognition, Science of Science Communication, Citizen Science

Academic Courses

- Connecting Cognition with Science Communication for NIAS doctoral students, August to December 2021.
- Module on Animal Cognition and Conservation, Methods in Ethology for NIAS doctoral students, August 2021 to December 2021.
- Research and Publication Ethics (with Dr Tarun Menon) for NIAS doctoral students, August to December 2021.
- Module on Conundrum of Consciousness, Course on Consciousness and Self-Awareness; Academy of Research for the Cultivation of Indian Sciences, Kolkata, Kaivalyadhama Lonavla, Pune; July to October 2021.

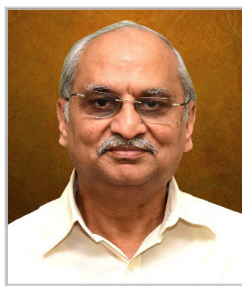
Lectures

- The Art of Communicating Disaster Risk. WATERCON-2022, jointly organised by MES College, Marampally, Vidhyabhyas Vikas Kendra, and Centre for Earth Research and Environmental Management, Kerala, March 22, 2022.
- Science Communication: Creating Public Trust in Science (online), Indo-German Research Day, DWIH New Delhi, German Academic Exchange Service, February 24, 2022.
- Social Cognition and Social Decision Making in Fishes (online), Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, November 30, 2021.
- Early Warning and Communication (online), National Institute of Disaster Management and Mahatma Gandhi State Institute of Public Administration, Chandigarh, November 17, 2021.
- Bridging Animal Cognition with Conservation Biology (online), Student Conference on Conservation Sciences-2021, Indian Institute of Science, Bengaluru, September 29, 2021.
- Communicating Risk and Ensuring Protective Action Decision-making, Virtual National Conference on Disaster Management with a Focus on Geohazards, National Institute of Disaster Management and Geological Society of India, September 23 and 24, 2021.
- Science Education – Can Cognitive Science Help Improve Quality? (online), Center for Educational Initiatives and Research, June 9, 2021.



Memberships

- Fellow, Intercontinental Academia: University-Based Institutes for Advanced Study, A global network of 44 institutes of advanced studies.
- External Affiliate, Krasnow Institute of Advanced Study, George Mason University, USA.
- Representative, UNESCO UniTwin Complex Systems Digital Campus (CS-DC).
- Member, IUCN Freshwater Specialist Group – South Asia.
- Member, IUCN Fish Conservation Network – South Asia.
- Member, Executive Committee, Ethological Society of India.



M Sai Baba

TV Raman Pai Chair
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Joined NIAS on: October 6, 2017

Research Areas: Science Communication



V Bhujanga Rao
Honorary Visiting
Professor

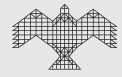
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Joined NIAS on: April 20, 2016

Research Areas: Medical Implants/Devices; Grassroots Innovation; Defence Manufacturing Technologies; Acoustics, Science, Technology and Innovation.

Research Contributions

As Chairman of Frugal Innovation Nurturing Programme (FINP) Committee, constituted by Indian National Academy of Engineering, came up with several new ideas which resulted in increased scope for commercialization of several grassroots innovations.



The FINP committee identified several grassroots projects of TRL 4-5 and upgraded them to TRL 8-9 through S&T intervention by taking the support of academic institutions.

Mentored doctoral student AVSN Murty in his research on Infrared signature and development of IR suppression devices for naval application to evade infrared seeker missile attack, Andhra University, Waltair.

Honour

- Corps of Engineers Prize (2021) for Design and Validation of Diesel Engine Infrared Signature Suppression Devices for Naval Ships, published in the Series C Journal of IEI, Vol. 100, Issue 5.

Lectures

- More than 14 invited talks on different occasions were given at GITAM University, Tata Steel, Engineering Colleges, NIAS-DST Training Programme, etc.

Memberships/Resource Person Positions

- Chairman, KIMS Foundation & Research Centre, Hyderabad (Sep 2021 onwards).
- Chairman, KIMS group of hospitals Charitable Trust, Hyderabad (2021 onwards).
- Chairman, Project Review Committee for manned Submersible Programme, Government of India (MOES) (2022 onwards).
- Chairman, R&D (Engineering) Committee, National Innovation Foundation, under DST, Govt of India (2019 onwards).
- Chairman, Frugal Innovation Nurturing Programme, Indian National Academy of Engineering, under DST (2018 to 2023).
- Chief Designer, Low-cost Indigenous Cochlear Implant Development, DRDO, Undergoing Human Clinical trials (2019 onwards).
- Member, Governing Council of Science and Technology, Government of Karnataka State, (2020 onwards).
- Chairman, National Committee on Mechanical Engineering, IE (2019 onwards).
Founder and Current President, Condition Monitoring Society of India (2003 onwards).
- Member, R&D Board, Ministry of Earth Sciences, Government of India (2016 onwards).
- Member, Project Review Committee, NIOT, Government of India (2017 onwards).



Other Members



Ramya Bala Prabhakaran
DST-INSPIRE Faculty
Fellow
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Joined NIAS on: August 16, 2021

Research Areas: Reconstructing the Complex Interrelationships Among Humans, Fires, Climate, and Vegetation of the Past Using Wetland Sediments.

Honours

- Nominated for the Online Campaign by Infosys Prize for International Day of Women and Girls in Science, 2022.
- Dean's Acceptance for Honorary Visiting Scholar at University of Pennsylvania, sponsored by Prof Kathleen Morrison, Department of Anthropology.

Lectures

- American Geophysical Union AGU2021 (virtual), Lightning Presentations for 2 Posters as First Author, December 2021.
- Reconstructing Environmental History with a Special Focus on Forest Fires, NIAS-DST Online Training Programme on Science, Technology and Innovation Policy, March 15, 2022.



V Jayasree
Principal Investigator
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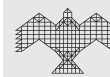
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Joined NIAS on: June 15, 2016

Research Areas: Issues and Challenges of Drinking Water in Kuttanad Region; Rural Livelihoods and Women Empowerment through Environment Friendly Approaches; Ancient Indian Knowledge on Water and Environment.

Lectures

- Can Aquatic Weeds be Challenge or a Solution Water Challenges, WATERCON 2022, National Conference on Dwindling Resources: Need Water Management in Kerala with Special Reference to Groundwater, MES College, Marampalli, Aluva, March 22 and 23, 2022.



- Societal Impacts of Advancements in Science and Technology, International Webinar on the Societal Expectations from Science and Technology, Gurujanwala Gurunanak Khalasa College, Ludhiana, Punjab, February 2, 2022.
- Journey of Indian Education (online), BMS Institute of Technology, Bengaluru, November 2021.
- Impact of Water Pollution on Living Organisms, Webinar, Sarala-Birla University, Ranchi, July 3, 2021.
- Invited Lecture, World Environment Day, National Council for Teacher's Education – Southern Regional Council and Vidyabhyasa Vikasana Kendram, Kerala, June 5, 2021.
- Ecosystem Restoration for Environment Sustainability, World Environment Day, MS PU College, Bengaluru, June 5, 2021.
- Paryavaran Samrakshan – Manasa Vacha Karmana, World Environment Day – Webinar, Shiksha Sanskrithi Utthan Nyas, Jharkhand, June 5, 2021.
- Water Management as a Pathway to Bhooposhan, Bhooposhan Yagna Samithi, Kerala, May 12, 2021.

Memberships

- Lifetime Member, Vigyan Bharathi – Swadeshi Science Movement.
- Member, National Paryavaran Team, Shiksha Sanskrithi Utthan Nyas, New Delhi,
- Member, Jalmithra_Rachenahalli Lake Rejuvenation.
- Core Member, Pampa River Rejuvenation, Kerala.
- Core Member, Bharathapuzha river rejuvenation, Kerala.
- Team Member, Environment Education, Vidyabhyasa Vikasana Kendram, Kochi, Kerala.
- Reviewer, Journal of Social and Economic Development, Springer Publication.
- Ethical Committee Member, Sri Sri Ravishankar Institute of Advanced Research, Bengaluru.



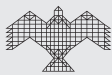
Sapam Tuleshwori Devi

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School of Natural Sciences and Engineering

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Joined IAS on: April 22, 2019

Research Areas: Genomics, Bioinformatics and Structure-based drug development in Chikungunya Virus and SARS-CoV2 research.



Kripa M K
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Joined NIAS on: October 1, 2021

Research Areas: Terrestrial Carbon Cycle, Remotesensing, Spatial Modelling, Ecology, Functional Aspects of Plants

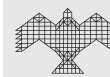


Shaik Vazeed Pasha
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Joined NIAS on: September 16, 2021

Research Areas: Spatial Biodiversity, Remote Sensing and Geoinformatics, Biomass-Carbon stocks, Spatial modelling, vegetation fires and Floristic Studies.



Education Programme



Anitha Kurup
Professor
School of Social
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Joined NIAS on: January 2, 1995

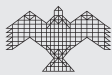
Research Areas: Sociology of Education, Education Leadership, Gender and Science, Education of the Gifted and Talented.

Academic Courses

- Co-designed (along with Dr Shivali Tukdeo) and taught two modules (i) Gender and Education and (ii) Globalisation and Higher Education, the school level course on Foundations and Perspectives in Education for NIAS doctoral students, August 30 to September 1, 2021.

Lectures

- Mapping Life Trajectories of Women Scientists in India, NIAS-DST Training Programme for Women Scientists on Science and Sustainability in India, February 10, 2022.
- Gender Science and Sustainability, NIAS-DST Training Programme on Policy for Science and Science for Policies, January 4, 2022.
- Paradigm Shift to Identify and Mentor Gifted and Talented Children in Developing Countries: The Indian Experience, International Conference on Inclusive Education organised by SNTD, Mumbai, November 29, 2021.
- Case Study Approach to Under the Gifted Children for Teachers of the Army Welfare Association, New Delhi, November 23, 2021.
- Looking Back Looking Ahead: Celebrating Women in STEM, Panel Discussion, IN-SQUARE, November 20, 2021.
- Higher Education in India, Core Course in Education for Graduate Students of Christ University, Bengaluru, October 25, 2021.
- Gender and Education for the Students of Commerce and Management, Kristu Jayanthi College, Bengaluru, October 5, 2021.
- Problem Selection for Research in Education, Course for Practitioner Researchers, TISS, Mumbai, September 23, 2021.
- Gender Sensitisation in College Campuses for Students of Science and Arts, Kristu Jayanthi College, Bengaluru, September 17, 2021.
- The Educational Right of the Gifted and Talented for Teachers in Southern States of India, Oxford University Press, August 28, 2021.



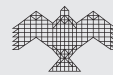
- Education and Support for the Education of the Gifted and Talented for Teachers in Maharashtra, Oxford University Press, August 27, 2021.
- Changing Patterns of Work-Life Balance of Women Scientists in India, Gender and Education Conference, Kristu Jayanthi College, Bengaluru, April 2, 2021.

Memberships/Recognitions

- Member, Expert Committee, Scheme for Trans-disciplinary Research for India's Developing Economy constituted by the University Grants Commission (2018 to 2021).
- Education Expert for Karnataka Evaluation Authority, Government of Karnataka.
- Expert Member, Mahatma Gandhi University for the STRIDE Research Project (2018 onwards).
- Subject Matter Expert Member, Public Affairs Centre preparing for SDG- Goal 4 – Application of Data Science to Achieve Sustainable Development Goal – 4.
- Advisor, Education Expert, Public Affairs Centre, Bengaluru.
- Advisor, Research and Innovation Council, Vidyashilp University.
- Member, Ethics Committee, Centre for Brain Research, IISc campus, Bengaluru, India
- Member, Academic Council, Christ University, Bangalore, India (2013- till date)
- Member, Academic Council, Bhagat Phool Singh Mahila Vishwavidyalaya, Sonpet, Haryana (2014 onwards).
- Member, Expert Committee for Sustainable development Goals (Education-4), Planning Department, Government of Karnataka (2017- till date).
- Member, Karnataka Evaluation Authority, Government of Karnataka.
- Member, Ethics Committee, Centre for Brain Research, Indian Institute of Science, Bengaluru.
- Expert, Education for the Committee to draft the Education chapter, Karnataka Human Development Report (2015 to 2022).
- Advisor, Research and Innovation Council, Vidyashilp University, Bengaluru.

Other Activities

- Parents' Workshop for Parents of Gifted Children 9-12 Grade, December 18, 2021.
- Training Workshop for the Teacher Representatives across All Army Schools of India, New Delhi, November 2, 2021.
- Training Workshop for the Teachers at Don Bosco School, Mumbai November 13, 2021.
- Training Workshop for the Leadership and Management of Army Welfare Association, New Delhi, October 15, 2021.
- Training Workshop for the Leadership and Management of Don Bosco School, Mumbai. September 16, 2021.
- Facilitator to Review and Plan Online Mentoring Workshop for the students of NIAS-Advanced Learning Centres in Bengaluru, June 21, 2021.
- Facilitator to Review and Plan Online Mentoring Workshop for the Students of NIAS-Advanced Learning Centres in Bengaluru, June 12, 2021.



Shivali Tukdeo
Associate Professor
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Joined NIAS on: March 10, 2010

Research Areas: Sociology of Education Policy, Social Exclusion, Globalisation, and Education and Urban Transformation.

Academic Courses

- Qualitative Data Analysis for NIAS doctoral students, September 2 to December 23, 2021.
- Introduction to Education Research for NIAS doctoral students, August 16 to December 6, 2021.

Honour

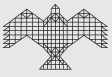
Research Partner, German Historical Institute, London.

Lectures

- Social Justice and Education. Annual Research Meet, Homi Bhabha Centre for Science Education, September 24, 2021.
- Family and Familiality in Education, Tata Institute of Social Sciences Hyderabad. August 17, 2021.
- What Can Universities Do to Protect Academics? Interactive Discussion (online) organised by The Bastion, April 23, 2021.

Memberships

- Executive Committee Member, Comparative Education Society of India.
- Book Review Editor, Contemporary Education Dialogue.



Shalini Dixit
Assistant Professor
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Joined NIAS on: December 21, 2015

Research Areas: Social Psychology of Education, Teaching of History, Collective Memory, and Education for Sustainability.

Academic Courses

- Learning and Cognition for NIAS doctoral students and students from other institutes, Summer Semester, July to November 2021.
- Collective Memory for NIAS doctoral students and students from other institutes, Winter Semester, January to May 2021.

Lectures

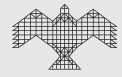
- Cognitive Biases and Cultural Factor in Public Policy, Takshashila Institution, Bengaluru, February 13, 2022.
- Emerging Vistas of Psychology: Re-thinking and Re-building Disciplinary Perspectives, Department of Psychology, DDU Gorakhpur University, October 9, 2021.
- Cultural and Cognitive Biases in Public Policy, Defence and Foreign Affairs Specialisation hosted by Takshashila Institution, Bengaluru, June 5, 2021.
- Ethics in Research with Children of Marginalised Cultural Communities, National Symposium on Ethics in Social Science Research and Publication, Institute of Home Economics, University of Delhi, April 9 to 10, 2021.

Memberships

- Part of the Technical Secretariat of the National Steering Committee for the National Curriculum Framework setup by the Ministry of Education, March 2022 onwards.
- Part of Division of Cultural Psychology, National Academy of Psychology in India.

Other Information

Was invited to be part of expert deliberation in a National Workshop on Infusing Gender Consciousness, Intersectionality & Social Inclusion Perspectives in Disaster Pedagogies, March 10, 2022.



Jeebanlata Salam
Assistant Professor
School of Social
Sciences

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Joined NIAS on: February 22, 2016

Research Areas: Sociology of Education, Social Exclusion and Education, Education Policies Vocational-Skill Education Policies, Studies in Ethnicity, and Identity.

Memberships

- Member, American Sociological Association.
- Member, Indian Sociological Society.
- Member, Comparative Education Society of India.



Malavika Kapur
Visiting Professor
School of Social
Sciences

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Joined NIAS on: May 1, 2003

Lectures

- Learning From Children What to Teach Them, Keynote Address, National Seminar on Reading with Understanding and Numeracy, Indian Institute of Teacher Education, Gandhi Nagar, Gujarat, March 21, 2022.
- Chief Guest Lecture, Book Launch of Growing Up Karanth, Bangalore International Centre, October 9, 2021.

Memberships

- Member, Steering Committee, SAMA Project – Safeguarding Adolescent Mental Health and Neurosciences, Bengaluru.
- Member, National Focus Group for Developing Position Paper for Early Child Care and Education, National Education Policy, National Council of Educational Research and Training, December 28, 2021 to December 27, 2022.



Inequality and Human Development Programme



Narendar Pani
Professor and Dean
School of Social
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Joined NIAS on: April 9, 2007

Research Areas: The Causes and Consequences of Inequality; A Neo-Gandhian Approach to the Economy as a Process; The Conceptualisation of Sustainability; and The Theorisation of Conflict.

Academic Courses

Taught a part of the course on inequality.

Lecture

Webinar on Inequality and Rural Transformations in India, Chadha Center for Global India, Princeton University, USA, March 4, 2022.



Anant Kamath
Assistant Professor
School of Social
Sciences

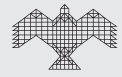
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Joined NIAS on: September 1, 2020

Research Areas: Economic Sociology; Human Development; Political Economy; Sociology of Technology. His current research at NIAS is a technological enquiry into inequality, in the context of social and economic transition processes in India.

Academic Courses

- Introduction to Inequality (two-credit core programme-level course, for semester 1, co-taught with other members of IHDP), September to December 2021
- Perspectives on Technology (two-credit elective, for semester 2), January to May 2022



Chetan Choithani
Assistant Professor
School of Social
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Joined NIAS on: October 1, 2020

Research Areas: Development, Livelihoods, Migration and Urbanization, Rural-Urban Connections, Food and Nutrition Security.

Academic Course

Co-instructed the Programme-level Course titled *Introduction to Inequality* to the NIAS PhD student cohort of 2021-22 in the first semester, August-December 2021.



Debosree Banerjee
Assistant Professor
School of Social
Sciences

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Joined NIAS on: November 2, 2020

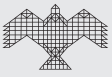
Research Areas: The direction of labour migration and that of capital flows. Her research is about inequalities between the local and the national.

Academic Courses

- Co-instructor, Core Course on Quantitative Research Methodology for NIAS doctoral students, August to December, 2021.
- Co-instructor, Programme Level Course on Inequality and Human Development for NIAS doctoral students, August to December, 2021.

Lecture

- Conditional Cash Transfers to Mothers, Intra-household Allocations: The Role of Uncertainty, Amsterdam-Copenhagen Cooperation Colloquia, September 3, 2021.



Swati Narayan
Post-Doctoral
Associate (*till January
31, 2022*)
School of Social
Sciences

Joined NIAS on: February 1, 2021

Research Areas: The analysis of human development and social policies from an interdisciplinary perspective, across South Asia and especially in India.

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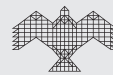


Nisar Kannangara
Post-Doctoral
Associate
School of Social
Sciences

Joined NIAS on: February 25, 2021

Research Areas: Issues Examining Climate Change Patterns that Will Help Identify Issues for Deeper Empirical and Conceptual Analysis.

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Kshipra Jain
Post-Doctoral Associate
(till February 28, 2022)
School of Social
Sciences

Joined NIAS on: March 3, 2021

Research Areas: Issues on Mental Health in India.

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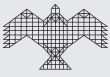
SS Meenakshisundaram **Joined NIAS on:** December 10, 2004
Visiting Professor
School of Social
Sciences

Honour

Honorary Degree of Doctor of Literature by the Karnataka State Rural Development and Panchayat Raj University, Gadag, March 30, 2022.

Lectures

- Evolution of Development Administration from Nehru to Rajiv Gandhi, Gandhigram Rural University, Dindigul, Tamil Nadu, March 22, 2022.
- Evolution of Rural Development Schemes in India, Capacity Building Programme for 'NGOs on Rural Level democracy in India, Azim Premji University, Bengaluru, February 12, 2022.
- Centrally Sponsored Schemes – A Critique, Capacity Building Programme for 'NGOs on Rural Level democracy in India, Azim Premji University, Bengaluru, February 12, 2022.
- Inaugural Address, Translating the Spirit of Jal Jeeven Mission into Ground Level Action, Training Programme for Middle Level Managers, Centre for Organisation Development and MARI, Hyderabad, January 27, 2022.



- Strengthening Rural Communities: Challenges and Opportunities, AB Vajpayee institute of Good Governance and Policy Analysis, Bhopal, January 6, 2022.
- Inaugural Address, Workshop on Capacity Building for Child Budget for Karnataka 2022-23, Department of Education, Government of Karnataka, Bengaluru, December 6, 2021.
- Can Bureaucracy Deliver Development?, Institute of Rural Management (IRMA), Anand, Gujarat, November 24, 2021.
- Recommendations of the 15th Central Finance Commission and its implications for Karnataka, Fiscal Policy Institute, Government of Karnataka, Bengaluru, October 27, 2021.
- Participatory Management of Natural Resources at the Grassroots: Experiences of MYRADA, Gandhigram Rural University, Dindigul, Tamil Nadu, September 15, 2021.
- Leading Change within the Government System, Nudge Foundation, Bengaluru, July 1, 2021.
- How to Strengthen Local Self-governments in India: My Experience, International Society for Human Awakening and Development and the Commonwealth Local Government Forum, Mumbai, June 12, 2021.
- Role of Volunteers and Voluntary Organizations in the Current and Post COVID Situation, Karnataka State Rural Development and Panchayat Raj University, Gadag, May 6, 2021.
- Fiscal Federalism and Centre-State Relations, Fiscal Policy Institute (FPI), Government of Karnataka, Bengaluru, May 5, 2021.

Memberships

Appointed as the Chairman of the:

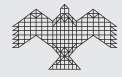
- Inter-Ministerial Committee to Review the Rural Area Development Plan Formulation and Implementation (RADPFI) Guidelines by the Ministry of Panchayat Raj, Government of India.
- Committee Constituted to Review and Simplify the Karnataka State Rural Development and Panchayat Raj University Act 2016 by the Government of Karnataka.
- Expert committee for formulation of Model Rural Transformation Act 2022 by the Government of India.

Continues to be on the Board of Management of:

- Centre for Sustainable Development, Bengaluru.
- Institute of Social Sciences, New Delhi.
- Indian Institute of Public Administration, Karnataka Regional Branch, Bengaluru.
- Institute for Societal Advancement, Thiruvananthapuram.
- National Design and Research Forum (NDRF), Bengaluru.
- DHAN Panchayat Development Foundation, Madurai.

Continues to be a Member of:

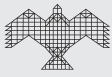
- Karnataka State Policy and Planning Commission
- Academic Council, Karnataka State Rural Development and Panchayat Raj University, Gadag.
- Technical Advisory Group for the UNICEF sponsored research project on Public Finance for Children and Capacity Building for Child Budget in Karnataka, at Fiscal Policy Institute, Bengaluru.
- Project Advisory group for the research project on 'Devolution and Performance Index for Panchayat Raj Institutions of Karnataka' undertaken by the Centre for Multi-Disciplinary Research, Dharwad, Karnataka.
- Social Audit Monitoring Committee of the Government of Chhattisgarh, Raipur.



- Guidance Committee to the School of Local Governance at National Institute of Rural Development and Panchayati Raj, Hyderabad.
- Committee to Review the Bye-laws of Institute for Social and Economic Change, Bengaluru.

Continues to be the Chairperson of:

- India Wash Forum, New Delhi.
- MYRADA and a few other institutions promoted by MYRADA.
- Academic Council for the Green Skills Academy, Bengaluru.



Urban and Mobility Studies Programme



Carol Upadhyia
Honorary Visiting
Professor
Professor (*till August
19, 2021*)
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Joined NIAS on: September 1, 2003

Research Areas: Urban Studies, Mobility and Transnational Studies, Labour Sociology.

Academic Course

Research and Publication Ethics Course (one session) for NIAS doctoral students.

Honours

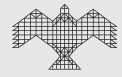
- Senior Visiting Fellow at the Institute for Ethnology, Ludwig-Maximilians-Universität, München, Germany, for six weeks during April to June 2022.
- Fellowship by the Swedish Collegium for Advanced Studies for 2022-23. Prof Carol Upadhyia will be in residence at Uppsala during the Spring Term to work on her book project *Forging New Futures: The Rise and Fall of a World-City Project in Rural South India*.

Lectures

- From Skill Training to Service Worker: Youth Aspirations, Inequalities and Precarity in Urban India, Online Conference on The Social Life of Skills, University of Sussex and University of Melbourne, July 5 to 7, 2021 (along with Prof Supriya RoyChowdhury).
- Taking the Train Back Home: Migrant Service Workers in Bengaluru. UCL Webinar on Youth Mobilities, May 4, 2021 (along with Prof Supriya RoyChowdhury).

Memberships

- Member, National Selection Committee, Fulbright-Nehru Senior Scholar Program (Arts, Humanities and Social Sciences, 2022-23)
- Co-editor, Journal of South Asian Development



**Supriya
RoyChowdhury**
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Professor
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Joined NIAS on: February 1, 2021

Research Areas: Labour, Trade Unions and Social Movements, Informal Work and Workers, Slums, Migration.

Lectures

- Democracy and Debates: Urban Poor Housing Movements International Centre for Advanced Studies- Metamorphosis of the Political Fellows' Lecture Series, March 29, 2022.
- Staying Poor in a Rich City: Slums and Informal Work in Bangalore, Webinar at the Institute of Development Studies, Kolkata, February 11, 2022.
- City of Shadows, Indian Institute of Human Settlements, Bengaluru, January 17, 2022.
- Staying Poor in a Rich City: Slums and Informal Work in Bangalore – Discussion on Book, September 2021.
- Surviving the Informal City, Workshop organised by the Urban and Mobility Studies Programme, NIAS, August 12, 2021.



Aleena Sebastian
Assistant Professor
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Sciences

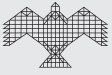
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sebastian@nias.res.in

Joined NIAS on: June 1, 2021.

Research Areas: City, Policy and Health, Urban Sociology, Gender and Kinship.

Academic Courses

- Gender and Society: Contemporary Perspectives for NIAS doctoral students (August to December, 2021)
- Urban Sociology for NIAS doctoral students (January to April 2022)



Award

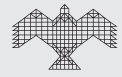
ICMR-International AIDS Vaccine Initiative (IAVI) Young Investigator Award 2021 for a Research Project Titled, "Influence of Minority and COVID-19 Stressors on HIV Risk and Access to Services among MSM and Transgender Women: A Longitudinal Observational Cohort (S3-Plus) Study in Chennai" Under the Category 'ICMR-IAVI Joint Call for Investigator Initiated Research (IIR)'.

Lectures

- Transformation of Matriliney and Women's Negotiation in the Malabar Coast, Grameen Talk Series 2022-23, School of Livelihood and Development, TISS Hyderabad, March 31, 2022.
- COVID-19's Impact on the Mental Health of Men who Have Sex with Men: A Mixed Methods Study, LGBTQI+ Health Symposium 2, organized by The Humsafar Trust Mumbai, C-SHaRP Chennai and UNDP, December 9 to 11, 2021.
- Right to Information Act, 2005: Genesis, Evolution and Implications for Indian Democracy, University of Calicut, Kerala, December 2, 2021.
- Doing Ethnography in Social Sciences: Methods and Ethics, University of Calicut, September 15, 2021.
- Impact of COVID-19 on Transgender Women in Bangalore, Workshop on Surviving the Informal City, organized by Urban and Mobility Studies Programme, NIAS, August 12, 2021.

Memberships

- Life Member, Indian Sociological Society.
- Scientific Committee Member, Gender and Sexuality Conference 2021 (The International Institute of Knowledge Management, Sri Lanka).



Library



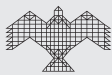
Hamsa Kalyani
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kalyani@nias.res.in

Joined NIAS on: May 1, 1992

Lecture

- Open Access Publishing and Initiatives, Research and Publications Ethics Course, IIITB, Bengaluru, October 16, 2021.



Director



Shailesh Nayak
Director

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Joined NIAS on:
March 19, 2018

Research Areas: Earth System Science, Blue Economy, Science Diplomacy, Sustainability.

Awards/Honours

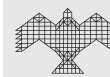
- Honorary Fellow, Ocean Society of India.
- Honorary Member, Society of Geoscientists and Allied Technologies, Bhubaneswar.

Policy Interventions

- Air Quality, National Standards and Human Health in India.
- Satellite Remote Sensing Data Policy: Benefits of Free and Open Data.

Professional

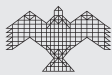
- Chancellor, TERI School of Advanced Studies, New Delhi.
- Life Trustee, India International Centre, New Delhi.
- Editor-in- Chief, Journal of the Indian Society of Remote Sensing, Dehradun.
- Honorary Scientific Consultant, Office of the Principal Scientific Adviser (PSA), Government of India.
- Fellow, Indian National Science Academy, New Delhi.
- Fellow, Indian National Science Academy, Delhi.
- Fellow, National Academy of Sciences, India, Allahabad.
- Fellow, Indian Academy of Sciences, Bengaluru.
- Fellow, International Society of Photogrammetry, Remote Sensing and Spatial Sciences.
- Academician, International Academy of Astronautics, Paris.
- President, Indian Geophysical Union, Hyderabad (2020-2022).
- President, Mangrove Society of India, Goa.
- Member, Governing Board, The Energy and Resources Institute, New Delhi.
- Member, Governing Board, Foundation for Ecological Security, Anand.
- Member, Governing Council, Indian Council of World, New Delhi.
- Member, Governing Board, Research and Information System for Developing Countries, New Delhi.



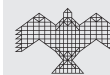
- Member, Board of Indian National Space Promotion Authorization Centre (IN-SPACE), Government of India, Department of Space, Delhi.
- Chair, Programme Advisory Committee (PAC)-Koyana Deep Borehole Research, Ministry of Earth Sciences, Delhi, February 2022 onwards.
- Chair, Committee on Performance Review Mechanism for Directors of CSIR Labs (September 2021 onwards)
- Chair, Research Council, ESSO-National Centre for Polar and Ocean Research, Goa.
- Chair, Research Council, ESSO-National Centre for Coastal Research, Chennai.
- Chair, Research Council, Wadia Institute of Himalayan Geology, Dehradun.
- Chair, National Nitrogen Steering Committee, Ministry of Environment and Forests, Government of India.
- Chair, Screening cum Expert Committee, Facility Creation Projects, Council of Scientific and Industrial Research.
- Chair, Blue Flag National Jury, India (2018 onwards).
- Chair, Expert Committee, Coastal Regulation Zone.
- Co-Chair, Monsoon Mission-III, Ministry of Earth Sciences, Government of India.
- Member, Search-cum-Selection Committee for Selection the Post of Scientific Secretary in the Office of Principal Scientific Adviser; Secretary, Ministry of Earth Sciences, and Secretary, Department of Science and Technology, Government of India.
- Member, Advisory Committee on National Environment, Forest and Climate Disaster Management Plan, NIDM, New Delhi
- Member, Research Advisory Board, JK Lakshmi Pat University, Jaipur.
- Member, Steering Committee, 2nd International Indian Ocean Expedition (IIOE-2).
- Member, National Committee of IOE-2
- Member, Indian National Commission for Cooperation with UNESCO (INCCU), New Delhi, Sub- Commission on Natural Sciences (January 2020 onwards).
- Member, Council, National Academy of Sciences, India (2019 onwards).
- Member, Current Science Association General Body (February 2020 onwards).
- Expert Member, Society for Indian Institute of Tropical Meteorology, Pune, February 2022.
- Regional Member for Asia, International Society of Photogrammetry, Remote Sensing and Spatial Sciences.
- Member, International Science Advisory Committee, International Society of Photogrammetry, Remote Sensing and Spatial Sciences.
- Member, Board of Trustees, the ISPRS Foundation.

Lectures

- Towards Blue Economy: An Indian Perspective. Plenary Talk. International Indian Ocean Science Conference (IIOSC-2022), CSIR-NIO, Goa, March 14, 2022.
- India's Space Sector Programme - Opportunities and Challenges. National Security and Strategic Studies Course, National Defence College, New Delhi, March 10, 2022.
- Earth System Science: Policy for Societal Benefits. NIAS-DST Online Training Programme on 'Science, Technology & Innovation Policy,' National Institute of Advanced Studies, Bengaluru, March 7, 2022.
- Mitigating Climate Change: What People Can Do? Public-Scientist Interaction (online), NIAS, February 16, 2022.



- Towards Heralding an Era of Blue Economy. Plenary Talk. Oceans 2022, IEEE Oceanic Engineering Society and Marine Technology Society, IIT- Madras, Chennai, February 22, 2022.
- Earth Science and their importance for Nation's well-being. Public Lecture. Vivekanand International Foundation, New Delhi, February 9, 2022.
- Inaugural Address: i-Geomatics: An Integrated technology to Empower Citizens towards Self-Reliant Nation. Indian Society of Geomatics and Indian Society of Remote Sensing. Punjab Remote Sensing Centre, Ludhiana, December 15, 2021.
- Goals for Geoscience Research in Coming Decades. Dr Hari Narain Memorial Lecture. 42nd Annual Convention and Seminar on Exploration Geophysics, Wadia Institute of Himalayan Geology, Dehradun, December 2, 2021.
- Towards Blue Economy. Plenary Lecture. 12th Annual ISAJ Symposium on Science-Technology-Innovation Towards a Sustainable World. Tokai University, Japan, November 26, 2021.
- Addressing Natural Hazards – A Perspective. Technology and Innovation for Building Resilience of Disasters. 5th World Congress on Disaster Management, IIT-Delhi, November 25, 2021.
- Towards Understanding of Triggered Earthquakes. 2nd Prof Jai Krishna Memorial Lecture, IIT, Roorkee, October 13, 2021.
- Special Address. Policy Perspective of Disaster Management in Polar Regions with special reference to Himalaya. On-line Training Program on Climate Change and Disaster Management related Challenges in Polar Regions. National Institute of Disaster Management, New Delhi, ESSO-National Centre for Polar and Ocean Research, Goa, SCAR Nation Committee, INSA, New Delhi, September 27, 2021.
- Advances in Earth System Science and their Societal Benefits. Distinguished Lecture Series, Society of Geoscientists and Allied Technologies, Bhubaneswar, September 6, 2021.
- Earth System Science Research in India: Opportunities and Challenges. Workshop on Remote Sensing and GIS based Disaster Mitigation and Management - Building Infrastructure, Promoting Sustainable Industrialisation and fostering innovation. Chandigarh University, September 2, 2021.
- Towards stewardship of Oceans and Promoting Blue Economy. Celebration of Acadia aka Amrit Mahostav and National Remote Sensing Day. National Remote Sensing Centre, Hyderabad, August 13, 2021.
- Towards Stewardship of Blue Economy. 7th National Conference of Ocean Society of India, OSICON-21, August 12, 2021.
- Towards Blue Economy. Webinar on 5th National Geo-Research Scholars Meet. Wadia Institute of Himalayan Geology, Dehradun, July 23, 2021.
- Importance of Earth System Studies and the Way Ahead. Techno-Felicitation on Earth Observation for Earth System Studies, Indian Institute of Space Science and Technology, July 22, 2021.
- Preserving the Himalaya System: A Need for Cooperation. 9th Prof RC Misra Life Time Achievement Award Lecture. The Paleontological Society of India, Lucknow, April 19, 2021.

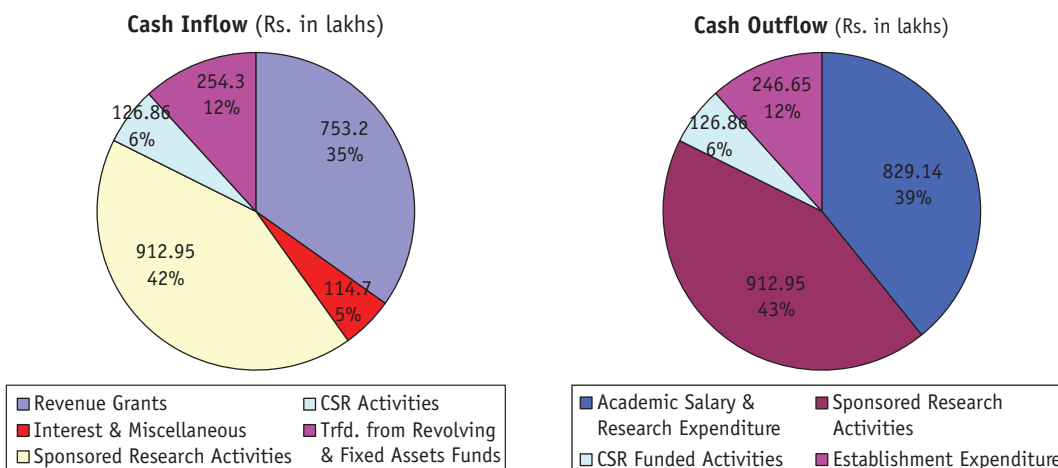


ADMINISTRATION

As a registered society, NIAS derives its administrative and financial authority through the society, represented by the general body. The Council of Management, which is currently chaired by Shri S Ramadorai, is vested with full power and authority to do all acts, deeds, etc which are necessary for the promotion and fulfillment of the objectives set out in the Memorandum of Association. The Director, presently Dr Shailesh Nayak is the chief executive and exercises general, administrative, and financial control over the affairs of NIAS. The Director is assisted in the administrative and finance matters by Head (Admin. & Finance).

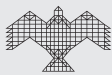
Besides management of all resources such as infrastructure, finance, human resources, estates etc., general administrative matters are also handled by Head (Admin. & Finance). Administration enables recruitment and deployment of staff, servicing their needs and empowering them to effectively contribute to the objectives of NIAS. It facilitates the students programme in which sixty-eight students work for their PhD degrees. Administration also takes care of the campus, its facilities such as the Auditorium, lecture halls, meeting rooms, classrooms, guesthouse, dining halls, etc. and all other infrastructure of NIAS. Procurement of materials and consumables, maintenance of facilities, inventory control, etc. are also done by Administration. Compliance with various statutory requirements such as Provident Fund, Professional Tax, Income Tax, etc., is also taken care by Administration. The administrative set up consists of the Head-Administration, an Office Manager, three Assistant Managers in the area of Administration, Accounts & Finance and IT and other Secretarial/Office/Supporting Staff, in all numbering 30.

Finance management, accounting, auditing (internal and statutory), resource mobilization and expenditure control are carried out systematically. An overview of finances for the year 2021-22 is given below:



NIAS has a specified investment of Rs.1532.10 lakhs (exclusive of project funds) as on March 31, 2022.

During the year, the Institute has received 15 new research projects with a total value of Rs.638.21 lakhs. Total value of projects handled during the year including the projects sanctioned in the earlier years was Rs.3653.78 lakhs. This is inclusive of CSR funded initiatives. Foreign exchange component included in this sum was Rs. 379.62 lakhs.



P Srinivasa Aithal
Head, Administration and Finance

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Joined NIAS on: November 1, 1995



B Lalu
Office Manager

Room No. Admin Block
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Email: manager@nias.res.in

Joined NIAS on: April 16, 2012



A Deva Raju
Coordinator (Admin & Logistics)
Assistant Manager (Administration) (*till 30 June 2021*)

Room No. Admin Block
Tele: 080-22185027
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Email: adevaraju@gmail.com

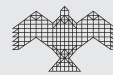
Joined NIAS on: March 27, 1989



P Satish Bhat
Assistant Manager (Accounts and Finance)

Room No. Admin Block
Tele: 080-22185023
Fax: 080-22185028
Email: accounts@nias.res.in

Joined NIAS on: June 22, 2009



Ramprasad R
Assistant Manager (IT)

Room No. Admin Block
Tele: 080-22185179
Fax: 080-22185028
Email: ramprasad@nias.res.in

Joined NIAS on: December 27, 2021



V Girija
Administrative Coordinator

Room No. Admin Block
Tele: 080-22185025
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Email: girija@nias.res.in

Joined NIAS on: March 26, 1992



KS Rama Krishna
Administrative Coordinator

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Email: ksr@nias.res.in

Joined NIAS on: December 10, 1990



S Lalitha
Administrative Coordinator

Room No. F 15
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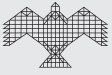
Joined NIAS on: October 1, 1992



VB Mariyammal
Senior Executive Assistant

Room No: F 15
Tele: 080-22185078
Fax: 080-22185028
Email: nias_mmu@yahoo.co.in

Joined NIAS on: December 1, 2006



JN Sandhya
Senior Executive Assistant

Room No. Admin Block
Tele: 080-22185024
Fax: 080-22185028
Email: jnsandhya@nias.res.in

Joined NIAS on: February 11, 1997



R Vijayalakshmi
Senior Executive Assistant

Room No. Library
Tele: 080-22185021
Fax: 080-22185028
Email: vlakshmi@nias.res.in

Joined NIAS on: October 9, 1996



V Ravisha
Executive Assistant (Accounts)

Room No. Admin Block
Tele: 080-22185030
Fax: 080-22185028
Email: ravisha@nias.res.in

Joined NIAS on: February 3, 2020



MS Shivakumar
Executive Assistant (Accounts and Admin)

Room No. Admin Block
Tele: 080-22185030
Fax: 080-22185028
Email: skumar@nias.res.in

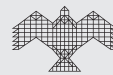
Joined NIAS on: July 7, 2008



AS Mary Stella
Executive Assistant

Room No. Reception
Tele: 080-22185000
Fax: 080-22185028
Email: stella@nias.res.in

Joined NIAS on: June 23, 1994



VA Ramesh
Junior Executive Assistant

Room No. Auditorium
Tele: 080-22185057
Fax: 080-22185028
Email: ramesh@nias.res.in

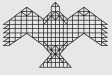
Joined NIAS on: July 1, 2011



Guruprasanna TS
Junior Executive Assistant

Room No. G 10
Tele: 080-22185026
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Email: gurunias@nias.res.in

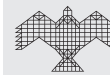
Joined NIAS on: May 3, 2021



SUPPORT STAFF



*Left to Right Row-1: R Harish, N Rajesh, B Shivanandappa, Shivakumar, S Sampath, Mohammed Umar
Row-2: SR Rathnam, Chandrashekar, N Ramesh, V Srinivasa, G Nagaraja
Row-2: Mujeeb Pasha, G Venugopal, Gajanana S Naik*



NIAS FINANCIAL REPORTS

**Deloitte
Haskins & Sells LLP**

Chartered Accountants
One International Centre, Tower 3, 27th -32nd Floor
Senapati Bapat Marg, Elphinstone Road (West)
Mumbai – 400 013, Maharashtra, India

Tele: + 91 22 6185 4000, Fax: +91 22 6185 4001

INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF NATIONAL INSTITUTE OF ADVANCED STUDIES Opinion

We have audited the accompanying financial statements of **NATIONAL INSTITUTE OF ADVANCED STUDIES** ("the Society"), which comprise the Balance Sheet as at March 31, 2022, and the Statement of Income and Expenditure for the year ended and a summary of significant accounting policies and other explanatory information.

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements give a true and fair view in conformity with the Accounting Standards issued by the Institute of Chartered Accountants of India (ICAI) and accounting principles generally accepted in India, of the state of affairs of the Society as at March 31, 2022, and its excess of expenditure over income for the year ended on that date.

Basis for Opinion

We conducted our audit of the financial statements in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

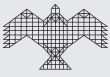
We are independent of the Society in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence obtained by us is sufficient and appropriate to provide a basis for our audit opinion on the financial statements.

Management's Responsibility for the Financial Statements

The Society's management is responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance of the Society in accordance with the Accounting Standards and other accounting principles generally accepted in India. This responsibility also includes maintenance of adequate accounting records to safeguard the assets of the Society and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statement that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Society's management is responsible for assessing the society's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

The Society's Management is responsible for overseeing the Society's financial reporting process.



Auditor's Responsibility for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the Society's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Society's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Society to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

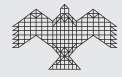
We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

For **DELOITTE HASKINS & SELLS LLP**
Chartered Accountants
(Firm Registration No. 117366W/ W-100018)

Sd/-
Joe Pretto
(Partner)
(Membership No. 77491)

MUMBAI,
Dated: September 19, 2022



BALANCE SHEET AS AT MARCH 31, 2022

Particulars	As at March 31, 2022 (In Rupees)	As at March 31, 2021 (In Rupees)
FUNDS AND LIABILITIES		
Funds		
(a) Corpus Fund	3,35,00,000	3,35,00,000
(b) Fixed Assets Fund	6,50,19,029	6,94,49,277
(c) Earmarked Funds	6,73,80,676	5,61,66,981
(d) Other Funds	11,97,10,000	14,07,10,000
(e) Income & Expenditure Account	2,43,05,997	2,80,31,513
	30,99,15,702	32,78,57,771
Current Liabilities and Provisions		
(a) Current Liabilities	13,84,327	51,18,855
(b) Provisions	23,36,590	1,27,04,329
	37,20,917	1,78,23,184
TOTAL	31,36,36,619	34,56,80,955
ASSETS		
(a) Fixed assets		
-Tangible Assets	8,58,91,918	9,17,33,082
(b) Investments	15,06,34,600	17,12,34,600
(c) Loans and advances	91,55,347	1,05,90,047
(d) Cash and bank balances	6,72,49,644	7,18,89,586
(e) Other Receivables	7,05,110	2,33,640
TOTAL	31,36,36,619	34,56,80,955

In terms of our report attached.
For **Deloitte Haskins & Sells LLP**
Chartered Accountants

For **National Institute of Advanced Studies**

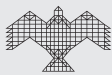
Sd/-
Joe Pretto
Partner

Sd/-
Dr. Shailesh Nayak
Director

Sd/-
P. Srinivasa Aithal
Head-Administration

Place : Mumbai
Date : September 19, 2022

Place : Bengaluru
Date : September 19, 2022



INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2022

Particulars	2021-22 (In Rupees)	2020-21 (In Rupees)
Income		
Grant income	20,47,31,479	19,04,30,663
Other income	1,14,69,551	1,47,03,683
Total Income	21,62,01,030	20,51,34,346
Expenses		
Sponsored Research Expenditure	10,39,81,219	8,84,73,069
Research Expenditure	8,29,13,544	8,79,60,544
Establishment Expenditure	2,43,74,737	3,12,27,340
Depreciation	61,31,428	66,09,414
Total expenses	21,74,00,928	21,42,70,367
Excess of Expenditure over Income for the year	(11,99,898)	(91,36,021)
Excess of Expenditure over Income for the year carried to Balance Sheet	(11,99,898)	(91,36,021)

In terms of our report attached.
For **Deloitte Haskins & Sells LLP**
Chartered Accountants

For **National Institute of Advanced Studies**

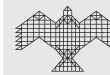
Sd/-
Joe Pretto
Partner

Sd/-
Dr. Shailesh Nayak
Director

Sd/-
P. Srinivasa Aithal
Head-Administration

Place : Mumbai
Date : September 19, 2022

Place : Bengaluru
Date : September 19, 2022



NATIONAL INSTITUTE OF ADVANCED STUDIES

SIGNIFICANT ACCOUNTING POLICIES AND NOTES ON ACCOUNTS FORMING PART OF THE FINANCIAL STATEMENTS AS AT MARCH 31, 2022

1) (a) Organization Overview:

The National Institute of Advanced Studies ("Society/Institute") is registered as a Society under the Karnataka Societies Registration Act, 1960, vide No.139/88-89 dated June 20, 1988.

Society is registered under Section 12A (a) of the Income Tax Act, 1961, vide No. Accts/718/10A/VOL./A II/N-110, dated February 13, 1990.

Society is registered under Foreign Contribution (Regulation) Act, 1976 ("FCRA") vide registration no. 094420614 dated October 1, 1993.

FCRA authorities have renewed FCRA certificate for the period starting from April 1, 2022 to March 31, 2027 vide letter dated January 5, 2022.

(b) The main objectives of the Society include:

- I. To establish and develop an Institute of Advanced Studies in order to impart higher knowledge and conduct Research;
- II. To set up and sponsor research groups on problems relating to the development of the country and for identifying problems which require immediate study and resolution; and
- III. To provide programmers of varying duration for executives and officers of Government, Public and Private Enterprises, and Personnel of Universities, Defense services and the Professions, to broaden their cultural and academic background for the successful performance of their duties.

2) Significant Accounting Policies:-

A. Basis of Preparation of Financial Statements:

The financial statements have been prepared in accordance with historical accounting convention and on the accrual basis of accounting. The Accounting Policies adopted in preparation of financial statements are consistent with those followed in the previous year.

B. Fixed Assets:

Fixed assets are stated at written down values i.e. cost of acquisition less accumulated depreciation. Cost of acquisition of fixed assets includes all direct expenses relating to acquisition of the asset.

C. Depreciation:

Depreciation on the fixed assets has been provided on written down value basis, in accordance with the rates prescribed under Income Tax Act, 1961.

D. Revenue Recognition:

- a) Donation/Revenue Grants are recognized as income in the Income and Expenditure Account in the period in which the collections are actually received.
- b) Earmarked grants are initially credited to a liability account in the Balance Sheet and are transferred to Income and Expenditure Account in the year in which and to the extent to which the Institute complies with the conditions attached to them.
- c) Interest Income is recognized in the time proportion basis taking into account the amount outstanding.



d) Income from symposia, seminars and workshops are recognized as income as and when symposia, seminars and workshops are organized and held.

E. Foreign Exchange Transactions:

Transactions denominated in foreign currency are accounted at the transacted exchange rates.

F. Investments:

Investments are stated at cost less provision for diminution, other than temporary, in the value of such investments.

G. Employee Benefits:

Employee benefits include provident fund, gratuity fund and compensated absences.

Short Term Benefits:

Short term Employee Benefits are accounted as expenses in the income and expenditure account in the year in which service is rendered. These benefits include compensated absences, which are expected to occur within twelve months after the end of the period in which the employee renders the related service.

Post Employment Benefits and Other long term Employee Benefits:

The society's contribution to the provident fund is recognized as expenses in the Income and Expenditure account of the year in which the contribution is paid to the provident fund trust. Any deficit in the Provident Fund Trust is recognized as expense in the Income & Expenditure Account of the Society. The exemption availed by the Institute under the Employees Provident Fund Act 1952 for having its own Provident Fund Trust has been surrendered to the Government with effect from 01 April 2021.

For defined benefit plans in the form of gratuity fund, the cost of providing benefits is determined using the Projected Unit Credit method, with actuarial valuations being carried out at each Balance Sheet date. Actuarial gains and losses are recognized in the Income & Expenditure Account in the period in which they occur. Past service, cost is recognised immediately to the extent that the benefits are already vested and otherwise is amortised on a straight-line basis over the average period until the benefits become vested.

Compensated absences, which are not expected to occur within twelve months after the end of the period in which the employee renders the related services, are recognised as an actuarially determined liability at the present value of the defined benefit obligation at the balance sheet date, as reduced by the fair value of scheme assets.

H. Provisions and Contingent Liabilities:

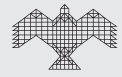
Provisions are recognized when the society recognizes that it has a present obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation and the amount can be reasonably estimated.

Provisions are not discounted to their present value and are determined based on best estimate required to settle the obligation at the balance sheet date. These are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

Contingent liabilities are not recognized but disclosed in the notes to financial statement. Contingent assets are neither recognized nor disclosed in the financial statement.

I. Revolving Fund:

Revolving Fund is in the nature of contingency reserve fund. The interest earned on investment made out of the Revolving fund is used to meet the revenue expenditure of the Institute and the fund may be used to meet shortfall, if any, in general fund and replenished back as and when surplus funds are available, in order to keep the revolving fund intact. During the year the Institute had drawn an



amount of Rs.210.00 lakhs(Previous year March 31, 2021, of Rs.160.00 lakhs) to meet the revenue shortfall.

J. Recognition of Capital Grants:

Capital Grants received towards cost of fixed assets is credited to Fixed Assets fund. The society has adopted Accounting Standard -12 issued by ICAI, in the case of Capital Grants. Accordingly, an amount equal to the depreciation on the assets created out of such grants is transferred from Fixed Assets fund to Income and Expenditure Account.

03) Section 12A Registration:

The Society is registered under Section 12A (a) of the Income Tax Act, 1961, vide No. Accts/718/10A/VOL./A II/N-110, dated February 13, 1990 which entitles it to claim an exemption from Income tax provided certain conditions laid down in the Income Tax Act 1961 are complied with. Provision for tax will be made only in the year in which the Society is unable to establish reasonable certainty of its ability to fulfill these conditions.

04) Income Taxes Paid:

During the year, Income Tax Department has deducted an amount of Rs.82,460/= from the refund amount released for the Assessment Year 2020-2021. This amount has been charges to Income & Expenditure Account.

05) Land Lease:

The NIAS had entered into lease agreement with Indian Institute of Science, Bangalore ("Institute") dated August 28, 1990 for plot of land of 5 acres for establishment of NIAS by way of license to NIAS, for the organisation and functioning of the NIAS at the Institute. The institute will levy a nominal amount of Rs. 1 (Rupee One only) per annum on the NIAS as license fee for the use of Institute ground. The said lease is perpetual in nature till the conditions specified in the agreement is observed. In failure to non-observance of the said conditions the Institute will revoke the licence and enter upon the site and buildings.

06) Coronavirus Impact (COVID-19):

A nationwide lockdown was imposed during April/May, 2021 due to COVID 19 pandemic, National Institute of Advance Studies being an Associate Organization of Tata Trust is following all protocols to curtail the epidemic spread in the campus. NIAS is involved in advanced multidisciplinary research, outreach programs, collaborations with various institutions to conduct different programs and projects, also carries several residential courses, trainings, conferences and workshops for educational Institutions and government establishments. Due to COVID 19, the training programmes were organised through online mode only.

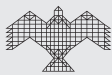
07) Previous years' figures have been regrouped/ reclassified wherever necessary.

For and on behalf of National Institute of Advanced Studies

Place: Bengaluru
Date: September 19, 2022

Sd/-
Dr. Shailesh Nayak
Director

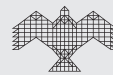
Sd/-
P. Srinivasa Aithal
Head-Administration



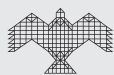
RESEARCH PROGRAMMES AND PROJECTS

RESEARCH PROGRAMMES AND PROJECTS

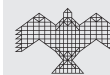
Sl. No.	Title of the R&D Project	Funding Agency	Name of the Project Investigator	Duration	Value (Rs. in lakhs)
School of Conflict and Security Studies					
1	RIS and NIAS Joint Programme in Science Diplomacy	DST	Prof D Suba Chandran	Feb'18 – Feb'22	45.14
2	KAS Sponsored Project Study on Armed Conflicts and Peace Process: A Global Primer (IPRI)	KAS	Prof D Suba Chandran	Jun'18 – Mar'22	52.34
3	Study on Adopting Sustainability into the Tourism Development	GoK	Dr Anshuman Behera	Jan'19 – Jun'21	23.75
4	Study of Weapon System Cyber Security Vulnerabilities	DRDO	Prof M Soundar Rajan	Jul'20 – Jul'22	41.49
5	Critical Weapon System Technologies, Sensors and Platforms for National Security	DRDO	Dr Srikumar Pullat	Dec'20 – Jun'22	203.34
6	Hosting of the BRICS YS Forum Secretariat and Implementation of Its Scientific Activities/Events etc.	DST	Prof D Suba Chandran	Apr'21 – Mar'22	66.85
7	NIAS-ICWA Research on PR Insights: Weekly Dispatch on Contemporary Pakistan	ICWA	Prof D Suba Chandran	Apr'21 – Mar'22	15.00
8	NIAS-ICWA Research on Indian Neighborhood	ICWA	Prof D Suba Chandran	Apr'21 – Mar'22	2.50
9	Preparation of Social Impact Assessment for Proposed Kalpasar Dam at Gulf of Khambhat, Gujarat	NCCR-MoES	Dr Anshuman Behera	Dec'21 – Oct'22	133.58
10	Formal and Informal Decentralization: A Study of Manipur and Mizoram	ICSSR	Dr Anshuman Behera	Mar'22 – Mar'24	12.60
School of Humanities					
11	Exploring India's Medieval Coastline Using Geospatial Analysis and Historical Records	MoES	Dr MB Rajani	Mar'18 – Sept'22	52.12
12	Casual Structure, Vimarsa and the Pratyabhijna: A Comparative Research Study on Kashmir Saivism and Information Theory	TET	Prof Sangeetha Menon	Mar'18 – Jul'22	161.15
13	Documentation and Study of Alternate and Indigenous Psychiatric and Psychological Practices of Healing and Wellness (with a pilot project of model building focusing on Kerala)	TET	Prof Sangeetha Menon	Mar'18 – Jul'22	125.91



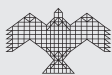
Sl. No.	Title of the R&D Project	Funding Agency	Name of the Project Investigator	Duration	Value (Rs. in lakhs)
14	Causality Testing in Cognitive Neuroscience with Applications to Measures of Consciousness	DST	Dr Nithin Nagaraj	Jul'18 – Jul'22	22.43
15	A Study of Consciousness Measures and Synchrony between Brain Cardiovascular Dynamics in Yoga Experience	DST	Dr Nithin Nagaraj	Aug'18 – Aug'22	33.08
16	Historical Water Systems in the Extended Landscape of Malaprabha River Valley	DST	Dr MB Rajani	Aug'19 – Aug'23	36.17
17	Research on Kannada Language, Literature and Script, and Publishing of Halagannada Language Studies	GoK	Prof Ravi Korisettar	Sept'19 – Mar'22	25.00
18	Cultural Landscape Research: Characterising and Managing Built Heritage Sites	ISRO	Dr MB Rajani	Oct'19 – Sept'22	41.86
19	Project on Lamp Making, Vilakku: Illuminating the Lamp Making Metal Craft of South India	The Luigi Laura Dallapicola Foundation	Prof Sharada Srinivasan	Jun'20 – Mar'22	8.93
20	Cultural Heritage, Migration and the Indian Diaspora	ICHR	Dr Smriti Haricharan	Sept'20 – Mar'22	4.50
21	Understanding the Past: Intervention through Dissemination – Phase-II	SFL	Dr Smriti Haricharan	Nov'20 – Oct'22	15.00
22	NIAS and SAC, Ahmedabad Joint Work Plan on Geo-archaeology	SAC, ISRO	Dr MB Rajani	Dec'20 – Nov'23	17.88
23	Archeometallurgical Insights on Ancient Tamil Sites	TCS	Prof Sharada Srinivasan	Mar'21 - Feb'22	30.00
24	A Documentational Study on Indigenous Cultures and Art, Craft and Health Traditions of Lesser Known, and Tribal Communities	SKF	Prof Sangeetha Menon	Apr'21 – Mar'23	15.00
25	Archaeometallurgical, Ethnometallurgical and Ethnoarchaeological Investigations on Metal Artefacts and Related Tangible Heritage from Early Tamil Sites	DST	Prof Sharada Srinivasan	Sept'21 – Sept'24	119.60
26	Investigation into the Chaotic Dynamics of Neural Networks	SERB	Dr Nithin Nagaraj	Dec'21 – Dec'24	10.05
27	The Visual Ethnography of Tribal Culture: An Emic Representation Through a Thematic Painting Series-25 Paintings by Artists from Three Tribal Communities on Their Life, and Living	SKF	Prof Sangeetha Menon	Apr'22 – Mar'23	7.00
School of Natural Sciences and Engineering					
28	Determinants of Nuclear Risk Perception in India: An Integrated Analysis	DAE	Prof M Sai Baba	Jun'17 – Mar'22	34.39
29	An Integrated Approach to Development and Environment in the Power Sector	DST	Prof R Srikanth	Jun'18 – Jun'21	150.76



Sl. No.	Title of the R&D Project	Funding Agency	Name of the Project Investigator	Duration	Value (Rs. in lakhs)
30	To Understand the Interaction between Components of Earth Systems and Human Systems at Various Spatial and Temporal Scales	MoES	Prof R Srikanth	Jun'18 – May'23	318.00
31	Drug Discovery research Project on the Selection and Prioritization of Target and Lead Molecules for Neglected Diseases or Diseases of Interest to India such as Tuberculosis and Chikungunya	OSPF	Dr Madhusoodan Hosur	Jun'18 – May'23	86.25
32	Urban Ecologies: governing Nonhuman Life in Global Cities	ERC	Prof Anindya Sinha	Aug'18 – Jul'23	184.38
33	Water Hyacinth: A Resource for Energy, Rural Enterprise and Women Empowerment in Kuttanad Region, Kerala	DST	Dr V Jayasree	Jan'19 – Jun'21	26.38
34	Frugal Innovation Nurturing Programme	INAE	Prof V Bhujanga Rao	Feb'19 – Mar'22	28.00
35	Complex Dynamics of Simple Nonlinear Mechanical Systems and Their Applications	SERB	Prof Janaki Balakrishnan	May'19 – Apr'22	6.60
36	Research Project on Affordance Learning: From Object Play to tool Use?	Leakey Foundation	Prof Anindya Sinha	Jul'19 – Sept'22	15.61
37	Human Reliability Programme	Texas University	Prof M Sai Baba	Aug'19 – Mar'22	32.84
38	Early Fusion Music: Cross-Cultural Musical Exchanges in Colonial India from the Late 18 th to the Early 20 th Century	DST	Prof Anindya Sinha	Aug'19 – Jul'23	40.84
39	Project on Cost of Food Choices in India	HSI	Prof Sindhu Radhakrishna	Oct'19 – Apr'22	13.60
40	Ecological and Behavioural Adaptations of the Endangered Lion-Tailed Macaque to a Rainforest-Anthropogenic Habitat Matrix in India: Implications for Management	Rufford Foundation	Prof Anindya Sinha	Jan'20 – Jul' 21	5.52
41	Food Object Recognition in Primates: How do Monkeys Identify Novel Food as Edible Objects	DST	Prof Sindhu Radhakrishna	Mar'20 – Mar'23	24.56
42	Addressing the complex challenges facing India and Global Society in the area of Environmental Sciences	IGMT	Prof Vinay Kumar Dadhwal	Sept'20 – Aug'25	300.00
43	Epilepsy Research – 1) Use Database and Molecular Modeling Techniques, to Modify the Presently Used AEDs for Better Performance, and 2) Synthesise and Test on Biological Systems the Designed Derivative Drugs	BBST	Dr Madhusoodan Hosur	Oct'20 – Mar'24	44.70



Sl. No.	Title of the R&D Project	Funding Agency	Name of the Project Investigator	Duration	Value (Rs. in lakhs)
44	Understanding Elephant-Human Interaction Patterns in a Human-Wildlife Conflict Landscape in Northern Eastern India	Rufford Foundation	Prof Anindya Sinha	Jan'21 – Dec'21	5.86
45	SERB-National Post-Doctoral Fellowship Programme for Scientific Social Responsibility (SSR) Activities	SERB	Prof Anindya Sinha	Feb'21 – Feb'23	22.37
46	A Study on Role and Economic Viability of Nuclear Power	NPCIL	Prof R Srikanth	Mar'21 – Feb'22	19.80
47	Dynamics of Complex Systems: Effect of the Environment on Living systems	SERB	Prof Janaki Balakrishnan	Jul'21 – Jul'24	29.16
48	Indian Rare Earth Industry – A Status Report	IREL	Dr Rudrodip Majumdar	Jul'21 – Mar'22	28.71
49	INSPIRE Faculty Fellowship Programme	DST	Dr Ramya B Prabhakaran	Aug'21 – Jul'26	112.40
50	Preparation of Draft Chapter on Climate Change Mitigation for India's Third National Communication	MOEF& CC	Dr Tejal Kanitkar	Sept'21 – Jun'22	29.34
52	Identification of Potential Sites for Nuclear Power Plants for a Sustainable Energy Mix	BRNS-DAE	Prof R Srikanth	Dec'21 – Nov'23	24.24
52	Coping with an Invader: Understanding the Behavioral Adaptations Exhibited by the Juveniles of Deccan Mahseer in Response to Alien Invasive Fishes	SERB-DST	Dr VV Binoy	Feb'22 – Feb'+25	39.89
School of Social Sciences					
53	Interdisciplinary Approaches to Economic Issues	RBI	Prof Narendar Pani	On-going	5.60 (Yearly)
54	Voices from Margins: Education and Aspirations among Youth from two Tribal Districts in Maharashtra and Karnataka-RGNIYD	RGNIYD	Prof Anitha Kurup	Oct'16 – Mar'22	8.50
55	Speculative Urbanism: Land, Livelihoods and Finance Capital	NSF	Prof Carol Upadhya	Jan'17 – Jun'21	60.54
56	Vocational Skill Policy, Dropout Reduction and Employability Among Adolescent Youth: A Study in Odisha and Assam	TSWT	Dr Jeebanlata Salam	Nov'20 – Mar'23	106.88
57	Inequality and Human Development	TCSF	Prof Narendar Pani	Dec'20 – Nov'23	518.50
58	Labour Supply Chains in the Construction Industry: Circular Migrants, Contracting and Covid	APU-IITH	Prof Carol Upadhya	Oct'21 – Sept'23	7.29



STAFF

Director

Shailesh Nayak

Professors Emeritus

K Kasturirangan

VS Ramamurthy

Professors

Janaki Balakrishnan

D Suba Chandran, *Dean (School of Conflict and Security Studies)*

Anitha Kurup

Sangeetha Menon, *Dean (School of Humanities)*

Narendar Pani, *Dean (School of Social Sciences)*

Sindhu Radhakrishna

Anindya Sinha

R Srikanth, *Dean (School of Natural Sciences and Engineering)*

Sharada Srinivasan

Carol Upadhyaya (*till August 19, 2021*)

Visiting Professors

Gufran Beig, *Sir Ashutosh Mukherjee Chair Professor*

S Chandrashekar, *JRD Tata Chair Visiting Professor*

Vinay Kumar Dadhwal, *Indira Gandhi Chair Professor*

PG Diwakar, *ISRO Chair Professor*

Malavika Kapur

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Sudha Mahalingam, *Raja Ramanna Chair Professor*

SS Meenakshisundaram

Deepti Navaratna, *TV Raman Pai Chair Visiting Professor*

Srikumar Pullat

PM Soundar Rajan

N Ramani

V Bhujanga Rao (*till September 14, 2021*)

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DK Srivastava, *Homi Bhabha Chair Professor*

Lalitha Sundaresan (*till May 13, 2021*)

Upendra Tripathy, *Sir Ashutosh Mukherjee Chair Visiting Professor (till August 26, 2021)*

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M Sai Baba

Supriya RoyChowdhury

PS Goel

Rajaram Nagappa

S Ranganathan

V Bhujanga Rao

Sisir Roy

Carol Upadhyaya

Associate Professors

Anshuman Behera

VV Binoy

Tejal Kanitkar

M Mayilvaganan

Srikumar M Menon

Nithin Nagaraj

MB Rajani

Shivali Tukdeo

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Debosree Banerjee

Chetan Choithani

Shalini Dixit

Smriti Haricharan (*till October 25, 2021*)

Anant Kamath

Rudrodip Majumdar

Tarun Menon

Amit Mukherjee

Prakash Panneerselvam

Jeebanlata Salam

Harini Santhanam

Aleena Sebastian

DST-INSPIRE Faculty Fellow

P Ramya Bala

Post-Doctoral Associates

Abhishek Banerjee (*till February 24, 2022*)

Sapam Tuleshwari Devi

Kshipra Jain (*till February 28, 2022*)

Nisar Kannangara

Kripa MK

Abhilash Maryada

Asmita Mohanty (*till March 20, 2022*)

Swati Narayan (*till January 31, 2022*)

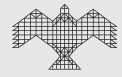
Arijit Pal

Shaik Vazeed Pasha

Shankar Rajaraman

S Udayakumar

Vishwanath Varma (*till September 30, 2021*)

**Principal Investigator**

Jayasree V

Library & Information Officer

Hamsa Kalyani

Head (Administration & Finance)

P Srinivasa Aithal

Office Manager

B Lalu

Coordinator (Admin & Logistics)

A Deva Raju

Assistant Manager (Administration)

A Deva Raju (*till June 30, 2021*)

Assistant Manager (Accounts & Finance)

P Satish Bhat

Assistant Manager (IT)

Ramprasad R

Administrative Coordinators

V Girija

KS Rama Krishna

S Lalitha

Senior Executive Assistants

VB Mariyammal

JN Sandhya

R Vijayalakshmi

Executive Assistants

R Ravisha (Accounts)

AS Mary Stella

MS Shivakumar (Accounts & Admin)

Junior Executive Assistants (Technical)

Guru Prasanna

VA Ramesh

Office Assistant

V Srinivasa

Support Staff

Chandrashekar

R Harish

G Nagaraja

Gajanana S Naik

Mujeeb Pasha

N Rajesh

N Ramesh

SR Rathnam

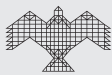
S Sampath

Shivakumar

B Shivanandappa

Mohammed Umar

G Venugopal



ADJUNCT PROFESSORS AND ADJUNCT FACULTY

ADJUNCT PROFESSORS

School of Conflict and Security Studies

Amb Syed Akbaruddin
Shri Shamanna Balasubramanya
Shri Saurabh Dutta Chowdhury
Rear Admiral Monty Khanna
Cmde Kartik Krishnan
Lt Gen (Retd) Dr Prakash Menon
Shri VVR Sastry
Prof Gautam Sen
Shri S S Sundaram
Prof KP Vijayalakshmi

School of Humanities

Prof Tilak Agerwala
Shri Benoy K Behl
Prof Madhav M Deshpande
Prof S Siraj Hasan
Prof Ravi Korisettar
Prof (Dr) Thomas E Mical
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School of Natural Sciences and Engineering

Prof S Ayyappan
Prof Sudipto Chatterjee
Shri M Gopalakrishnan
Dr VS Hegde
Dr Madhusoodan Hosur
Shri K Jairaj
Prof Manas K Mandal
Dr G Parthasarathy
Prof Manoj Kumar Patairiya
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School of Social Sciences

Dr Ing BVA Rao
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ADJUNCT FACULTY

School of Conflict and Security Studies

Rear Admiral P Ashokan (Retd)
Dr BR Guruprasad
Dr Moumita Mandal
Dr Ritu Mathur
Cmde (Retd) KG Ramkumar
Dr V Siddhartha

School of Humanities

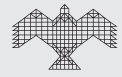
Prof Jerri Daboo
Dr Madhurima Das
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Ms Meera Natampally
Dr Sarada Natarajan
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Dr Saurabh Todariya
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Dr Maan Barua
Shri Shailesh Gaur
Shri Sanjay Kumar
Dr Nicolas Lainé
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Shri MD Radhakrishna
Dr Asmita Sengupta
Dr Narayan Sharma
Dr Joseph Ivin Thomas
Dr G Umamathy

School of Social Sciences

Dr Michael Goldman



PUBLICATIONS

BOOKS

Dixit Shalini (2022). *The psychology of teaching critical history*. New Delhi: Routledge.

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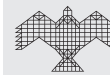
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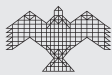
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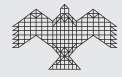
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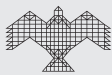
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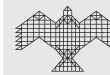
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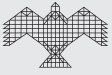
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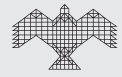
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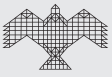
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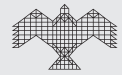
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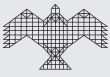
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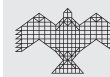
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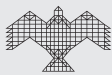
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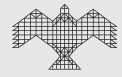
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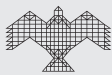
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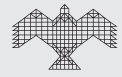
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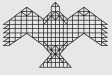
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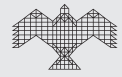
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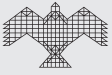
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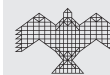
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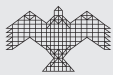
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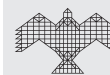


LIST OF COMMITTEES

Name of the Committee	Chairperson	Members
Faculty Committee	Director, NIAS	Prof Janaki Balakrishnan Prof D Suba Chandran Prof Anitha Kurup Prof Narendar Pani Prof Sindhu Radhakrishna Prof Anindya Sinha Prof Sharada Srinivasan Prof R Srikanth Prof Carol Upadhya Prof Srikumar Pullat Prof Sangeetha Menon (Convener)
Appointments Committee	Director, NIAS	Prof Narendar Pani Prof Anindya Sinha Prof Sangeetha Menon Prof D Suba Chandran Prof R Srikanth Respective Programme Head Two Subject Experts
Faculty Renewal/Promotion Committee	Director, NIAS	Prof Narendar Pani Prof Anindya Sinha Prof Sangeetha Menon Prof R Srikanth Prof D Suba Chandran Two Subject Experts
Committee to Oversee PhD Programme	Prof Anindya Sinha (Academic Head)	Dr MB Rajani Dr Tejal Kanitkar Dr Anshuman Behera Dr Shalini Dixit Dr Anant Kamath Ms JN Sandhya (Secretary)
Research Ethics Committee	Prof Sharada Srinivasan	Dr Shivali Tukdeo Dr Prakash Panneerselvam Dr Jeebanlata Salam Dr Tarun Menon
Institutional Academic Integrity Panel	Prof Carol Upadhya	Prof Anindya Sinha Library and Information Officer, NIAS Prof TA Abinandanan (External Member)
Library and Publications Committee	Prof Janaki Balakrishnan	Dr Srikumar Menon Dr Anshuman Behera Dr Rudrodip Majumdar Dr Chetan Choithani Library and Information Officer (Convener)



Name of the Committee	Chairperson	Members
Grievance Redressal Committee	Prof Anitha Kurup	Dr Nithin Nagaraj Dr Amit Mukherjee Dr Harini Santhanam Dr Debosree Banerjee Head-Administration, NIAS (Member Secretary)
Internal Committee for Redressal of Complaints of Sexual Harassment of Women at NIAS (IC, NIAS)	Prof Sangeetha Menon	Dr MB Rajani Dr Chetan Choithani Ms VB Mariyammal Ms Laxmi Murthy (External Member)
Committee to Oversee Website, Outreach and e-Newsletters	Prof D Suba Chandran	Prof N Ramani Dr VV Binoy Dr Prakash Panneerselvam Dr Chetan Choithani Library and Information Officer (Convener)

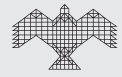


DETAILS OF MEMORANDUM OF UNDERSTANDING (MOU)

Sl. No.	MoU with	Areas of Co-operation
1	Manipal University	NIAS PhD Programme & Collaborative Research to address national challenges and priorities in areas including, but not limited to energy, healthcare, ecology, conservation of natural resources and education.
2	Defence Research and Development Organisation	To support and strengthen collaboration and cooperation in identified topics pertaining to national security
3	Sahapedia, New Delhi	Collaboration through various programmes in arts and humanities disciplines
4	Acharya Institute of Management Studies	Collaborative Research
5	The Institute of Trans-Disciplinary Health Sciences and Technology	PhD Programme
6	Indian Heritage Cities Network (IHCN)	To establish a framework of co-operation to share knowledge and expertise towards strengthening the resource and projects taken up on mutual benefit
7	Kyoto University, Inuyama, Japan	To exchange scientific information in the fields of primatology, wildlife biology, and conservation. Both Institutes will promote the development of joint research projects in the fields of primatology, wildlife biology, and conservation.
8	Indian Institute of Science	To establish a framework that would guide both the Institutions in establishing a cooperative working relationship for planning and accomplishing mutually beneficial research projects, teaching programmes and other activities, as may be periodically discussed and mutually agreed upon.
9	Indian Institute of Science	To establish a framework that would guide the students of both parties to credit or audit courses conducted by the other institution.
10	National Centre for Biological Sciences	To promote joint research and development activities of mutual interest in accordance with their respective needs and objectives, and shall by joint agreement, determine the areas and subject of such collaboration, on the basis of understanding set out in the MoU
11	Open Source Pharma Foundation	Collaborative programme relating to open source approaches to the development of new affordable therapies and other pharmaceutical products in diseases of interest to India
12	National Institute of Science Technology and Development Studies (NISTADS)	To create value-added policy analysis and policy advocacy for applications of science and technology for sustainable and holistic development at national and global scale.
13	NITI Aayog, Government of India	Part of SAMAVESH initiative and work under the S&T cluster group
14	Institute of Rural Management Anand, Gujarat	Academic collaboration between the Faculty and Staff of both Institutions
15	Institute of Frontier Science and Application (IFSA)	To create value-added policy advocacy and exploratory science for applications of science and technology for sustainable and holistic development at national and global scale
16	University of Liverpool	Undertake collaborative, interdisciplinary research activities – Heritage, Conflict resolution and other fields of mutual interest.



Sl. No.	MoU with	Areas of Co-operation
17	DIAT, Pune	Collaborative Research Programs, Joint events and activities, Collaborative PhD Programme, Exchange of Research and Faculty & Collaborative Projects
18	Geospatial Media and Communications	Collaborate in conducting research; Research Publications; Joint Proposals for Research Funding; Co-hosting of Conferences etc.
19	Karnataka Science & Technology Academy	Collaborate and partner to Promote Science, Technology and Innovation for Societal Welfare
20	Indian Council of World Affairs	To organize studies and webinars on agreed topics, mainly on the Indian neighborhood.
21	Digital Discourse Foundation, Bangalore	To create since-based communication strategy applications of science and technology for sustainable and holistic development at national and global scale
22	Indian Institute of Remote Sensing	To encourage academic collaboration between the faculty, researchers, and students.
23	Public Health Foundation, New Delhi	Encourage academic collaboration between the faculty, researchers, and students in the area of Energy and Environment, Air Pollution and Health and any other topic or activity of mutual interest.
24	Florida International University	To explore the possibility of developing the highest quality programs to advance the needs of NIAS and FIU.
25	Southern Regional Load Despatch Centre (SRLDC), POSOCO	For knowledge sharing and capacity building in areas of mutual interest
26	Agastya International Foundation	To work together on programs aimed at identifying and nurturing Highly Able/Gifted children in India, optimally utilizing the experience, strengths and capabilities of both organizations for that goal.
27	Sanskriti Foundation	Joint research activities such as explorations into Indic Mathematical Heritage, Indic philosophical, computational and astronomical knowledge systems. Visits by and exchange of doctoral students and faculty members for research. Exchange of information including, but not limited to, research publications of faculty members. The Kannada work Siribhoovalaya shall be initially taken up for exploration of mathematical and informatics content.
28	Kristu Jayanti College	To develop a collaborative academic partnership and to collaborate in the areas of; Research Projects, Internship Programme, Exchange of Faculty/Senior Scholars, Joint events and workshops and Academic network on International Relations.
29	SRM Institute of Science and Technology, TN	Collaborative cooperation through: Research Programs, Student Training Program, Faculty Exchange Program, Sharing of Instrumentation/Library facility /Other facilities, Organisation of joint meetings & any other areas of mutual interests
30	Pondicherry University	Collaboration on academic and research activities
31	Maritime Research Centre, Pune	Collaborate in maritime research and studies, academic exchange and interaction to further scholarship, knowledge and information in the field of underwater domain awareness.
32	Ghent University, Belgium	To promote international academic, cultural and scientific exchange.



REPORT OF INTERNAL COMMITTEE FOR REDRESSAL OF COMPLAINTS OF SEXUAL HARASSMENT OF WOMEN AT NIAS

Two complaints were brought before the NIAS ICC in 2021 and investigated by the committee in keeping with the guidelines as outlined in the NIAS policy document. Post-enquiry, the committee presented the findings of the investigation and its recommendations to the head of institute for further action.

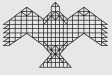
A Gender/Sexual Harassment Awareness Training Workshop was conducted for all at the Institute in December 2021. The goal of the workshop was to sensitize participants to the topic of gender and gender-based violence and discrimination, and sexual harassment at the workplace. The training session was conducted in four different sessions over two days (December 9 and 10, 2021) to accommodate participation by all members of the institute. Three sessions were conducted in English, and one session, by request, was conducted in Kannada.

The workshop was attended by more than 75% of Institute members. All participants expressed their appreciation of the workshop and how it made them think about their own experiences and actions in the context of dealing with gender discrimination in society. They indicated that they would like such workshops to be conducted regularly in the institute.

Prof Sindhu Radhakrishna

Chairperson

*Internal Committee for Redressal of Complaints of
Sexual Harassment of Women at NIAS*



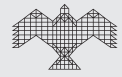
REPORT ON COUNCIL OF MANAGEMENT

The joint 53rd Meeting of the Council of Management of the National Institute of Advanced Studies (NIAS) – 31st Annual General Body Meeting of the Society of NIAS, was held online and partly in person in the E-Class Room of the Institute in Bengaluru on August 16, 2021.

The members of the Council, who attended these important meetings, included Mr S Ramadorai, Nominee of the Tata Trusts and Chairman of the Council; Dr Shailesh Nayak, Director, NIAS; Prof S Siraj Hasan, Dr AS Kiran Kumar, Mr B Muthuraman, Prof G Padmanaban, all Nominees of the Council; Prof Padma Sarangapani, Nominee of the Tata Trusts; Prof Govindan Rangarajan, Director, Indian Institute of Science, Bangalore; and Mr Kailash Dan Ratnoo, Director, Department of Personnel and Training, Government of India. Mr P Srinivasa Aithal, Head, Administration, NIAS, was present at both meetings as Special Invitee while several academic members of the Institute, including Prof VS Ramamurthy, Prof Narendar Pani, Prof AV Krishnan, Dr Srikumar M Menon, Prof Srikumar Pullat and Prof PG Diwakar attended part of the 53rd Meeting of the Council of Management as Special Invitees.

The annual academic report, financial status of the Institute, audited financial statements and other administrative reports of the Institute were presented by Dr Nayak at both these meetings. Some of the academic members of NIAS, belonging to various programmes, including the doctoral programme at the Institute, made extensive presentations on the various institutional activities to the Council members during the 53rd Meeting of the Council of Management. The meetings concluded after widespread and in-depth discussions on both, the progress that the Institute has made in the recent past and the trajectories that could be followed in the years to come.

Prof Anindya Sinha
Secretary, Council of Management of NIAS



REPORT ON ACADEMIC COUNCIL

The fourth meeting of the NIAS Academic Council was held through Video Conference on October 4, 2021. Before this meeting, all faculty members of the Council circulated 2-page briefs on their respective Programmes to all Academic Council Members.

At the outset, Director, NIAS welcomed all members and explained the steps taken by NIAS to continue the academic and research activities despite the challenges posed by the 2nd wave of the COVID-19 pandemic. The following members of the Academic Council presented their Programme research during the meeting.

- Science, Technology, and International Relations by Prof Suba Chandran
- Inequality and Human Development by Prof Narendar Pani
- Energy, Environment, and Climate Change by Prof R Srikanth

In addition, Dr Nithin Nagaraj (Consciousness Studies Programme), Dr Anshuman Behara (Conflict Resolution and Peace Research Programme), and Dr Srikumar Menon (Heritage Science and Society Programme) also attended the meeting as Special Invitees and presented their respective research activities and key achievements to the Council. After these interactive sessions, Director, NIAS requested the external members of the Council to give their views on the research activities summarized by NIAS faculty in their briefs and presentations during this meeting.

Ambassador Raghavan stated that he has been involved with the activities related to the Conflict Resolution and Science Diplomacy Programmes in NIAS and appreciated the insights presented by Dr Anshuman Behera and Prof Suba Chandran. He advised Dr Anshuman to collaborate with the Rashtriya Raksha University at Gandhinagar since radicalization is also playing a role in certain states like Nagaland.

He stated that hardly any think tanks in India deal with Global Politics and Internal Relations (IR) in depth. He suggested that Prof Suba may build databases on other South Asian countries like the one being developed for Pakistan at NIAS. NIAS has increased policy impact over the last 2 years. Ambassador Raghavan congratulated Dr Shailesh Nayak on his appointment as a member of the Board of the Indian National Space Promotion and Authorization Center (IN-SPACe) and stated that NIAS can also contribute to IN-SPACe activities.

Prof Mewa Singh requested Director, NIAS to send the course design to the Academic Council for their inputs, which Academic Head, Prof Anindya Sinha agreed to do. He also agreed with Prof Srikanth that the transition away from coal will happen gradually to ensure energy access and security.

Prof Grover stated that nuclear power in India will pick up speed with the ongoing expansion program of the Nuclear Power Corporation of India (NPCIL) under the Department of Atomic Energy. He also stated that NIAS can deepen its involvement in nuclear power development in India as the Government will gradually retire coal-based power plants as envisaged in the NIAS Transition Plan for thermal power plants. He commented that nuclear power development in India is also held up by vested interests misleading public perceptions regarding nuclear power. He advised EEC Program to review the electricity demand projections carefully.

Prof Jayaram appreciated the work progress in NIAS despite the lockdown and restrictions due to the COVID-19 pandemic. He specifically appreciated the outreach activities of Dr Srikumar Menon. However, he stressed the need to consolidate the research activities in the School of Conflict and Security Studies to avoid spreading resources too thin. He also suggested that NIAS tie-up with international publishers to which the Director responded that NIAS has a co-publishing agreement with Routledge.

Finally, Director, NIAS thanked all members for their active participation in the Council's activities and extended his gratitude to the external Members of the Council for their contribution to NIAS.

Prof R Srikanth
Convener, Academic Council of NIAS



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