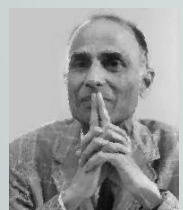
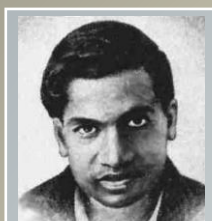


2017

# TOPAS

## A National Conference on Engineering Mathematics

(December 16-17, 2017)



Department of Mathematics  
Indian Institute of Technology Kharagpur  
Kharagpur- 721302, West Bengal, India

TOPAS 2017

## Program Schedule

16.12.2017 (SATURDAY)

Time Slot	Event	Venue
8:45 AM – 9:15 AM	<b>Registration</b>	Kalidas Auditorium
9:30 AM – 10:30 AM	<b>Inauguration:</b> <div> Prof. A Goswami (Dean Continuing Education Programme, IIT Kharagpur) Prof. M P Biswal (Head, Department of Mathematics, IIT Kharagpur) </div>	Kalidas Auditorium
10:30 AM – 10:50 AM	<b>High Tea</b>	Kalidas Auditorium
11:00 AM – 11:30 AM	Prof. Bimal K. Roy	Kalidas Auditorium
11:30 AM – 12:00 PM	Prof. A.K. Pujari	Kalidas Auditorium
12:00 PM – 12:30 PM	Prof. R.N. Mohapatra	Kalidas Auditorium
12:30 PM – 13:00 PM	Prof. S. Nanda	Kalidas Auditorium
13:30 PM – 14:30 PM	<b>Lunch Break</b> (Open Terrace, Department of Mathematics)	
14:30 PM – 15:30 PM	Paper Presentation by delegates (5 parallel sessions)	
15:30 PM – 16:30 PM	Invited Talks (5 parallel sessions)	
16:30 PM – 16:45 PM	<b>Tea Break</b>	
16:45 PM – 17:45 PM	Paper Presentation by delegates (5 parallel sessions)	
19:00 PM – 20:30 PM	Cultural Programme	
20:30 PM	<b>Dinner</b>	

## Program Schedule

17.12.2017 (SUNDAY)

Time Slot	Event
9:15 AM – 10:30 PM	Paper Presentation by delegates (5 parallel sessions)
10:30 AM – 10:45 AM	<b>Tea Break</b>
10:45 AM – 12:15 AM	Invited Talks (5 parallel sessions)
12:15 PM – 13:15 PM	Paper Presentation by delegates (5 parallel sessions)
13:15 PM – 14:30 PM	<b>Lunch Break</b> (Department)
14:30 PM – 15:30 PM	Invited Talks (5 parallel sessions)
15:30 PM – 16:00 PM	Paper Presentation by delegates (4 parallel sessions)
16:00 PM – 16:15 PM	<b>Tea Break</b>
16:15 PM	Valedictory

## Invited Guest Lectures

*Time and Date: 15:30-16:30, 16<sup>th</sup> December, 2017*

**Parallel Session: 1**      **Time and Date:** 15:30-16:30, 16<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *B R Seth Seminar room, Department of Mathematics (N343)*

**Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM1	Prof. N. Gupta	Monte Carlo Integration for Singular Integrals
AM2	Prof. Atanu Biswas	Distribution and Time-series Modelling of Ordinal Circular Data

**Parallel Session: 2**      **Time and Date:** 15:30-16:30, 16<sup>th</sup> December, 2017

**Group:** *Pure Mathematics (PM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
PM1	Prof. V. Vetrivel	Variational Inequalities in Nonlinear Analysis
PM2	Prof. B. K. Panda	Application of Fourier Series Method to Solve Eigenvalue Problem in a Biased Well

**Parallel Session: 3**      **Time and Date:** 15:30-16:30, 16<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *N325, Department of Mathematics*

**Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
TCS3	Prof. Sudarsan Padhy	
TCS4	Prof. Gadadhar Sahoo	Use of Mathematical Structures in Constructing Binary Codes

**Parallel Session: 4**      **Time and Date:** 15:30-16:30, 16<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *Seminar Room, Electrical Engineering (N208)*

**Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
TCS1	Prof. V. N. Sastry	Challenges in Major Decision Making Problems of Banking and Finance
TCS2	Prof. Anjan Sarkar	Robotic Mapping

**Parallel Session: 5**      **Time and Date:** 15:30-16:30, 16<sup>th</sup> December, 2017

**Group:** *Pure Mathematics (PM)*

**Venue:** *Venkata Ratnam Seminar Room, Electrical Engineering (N223)*

**Coordinator:** *Prof. G. Panda*

S. No.	Name	Title
PM3	Prof. R. K. Nayak	A low Complexity Semidefinite Approach to Solving BQPs Using Row-by-Row Method
PM4	Prof. Rabin Kumar Jana	Elitist Nonhomogeneous Genetic Algorithms

***Time and Date:*** 10:45-12:15, 17<sup>th</sup> December, 2017

**Parallel Session: 1**      **Time and Date:** 10:45-12:15, 17<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *B R Seth Seminar room, Department of Mathematics (N343)*

**Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM3	Prof. S. De	Mass Transport Across Porous Wall of a Microtube: A Facile Way to Diagnosis of Diseased State
AM4	Prof. L. S. Ramachandra	Nonlinear Static and Dynamic Stability of Plates and Shells
AM5	Prof. S. Dey	Sediment Inception By Stream Flow: A Novel Mathematical Model

**Parallel Session: 2**      **Time and Date:** 10:45-12:15, 17<sup>th</sup> December, 2017

**Group:** *Mixed (OR + PM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
OR4	Prof. Narayan Sahoo	OR Application in Integrated Resource Planning for a Watershed
PM5	Prof. Kasinath Chatterjee	Designs for Model Selections
PM6	Prof. Somantika Datta	Mathematical Aspects of Signal Processing

**Parallel Session: 3**      **Time and Date:** 10:45-12:15, 17<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *N325, Department of Mathematics*

**Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
AM6	Prof. T. Sahoo	Fourier Analysis and Allied Methods in the Hydroelastic Analysis of Floating and Submerged Structures
AM7	Prof. Krishna Kumar	Oscillatory Magnetoconvection
AM8	Prof. K P Sinhamahapatra	Dynamic mode decomposition of DNS and LES data

**Parallel Session: 4**      **Time and Date:** 10:45-12:15, 17<sup>th</sup> December, 2017

**Group:** *Statistics (ST)*

**Venue:** *Seminar Room, Electrical Engineering (N208)*

**Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
ST1	Prof. Debasis Dutta	Solid Transportation Problems
ST2	Prof. G. K. Panda	Almost Balancing-Like Sequences

**Parallel Session: 5**      **Time and Date:** 10:45-12:15, 17<sup>th</sup> December, 2017

**Group:** *Operations Research (OR)*

**Venue:** *Venkata Ratnam Seminar Room, Electrical Engineering (N223)*

**Coordinator:** *Prof. G. Panda*

S. No.	Name	Title
OR1	Prof. Rafikul Islam	Prioritization of Service Quality Dimensions for Healthcare Sector Using Analytic Hierarchy Process
OR2	Prof. Krupasindhu Chowdhury	Two-Echelon Manufacturer-Retailer Supply Chain Strategies with Price, Quality and Promotional Effort Sensitive Demand
OR3	Prof. S. Kar	Network Optimization

**Time and Date:** 14:30-15:30, 17<sup>th</sup> December, 2017

**Parallel Session: 1**      **Time and Date:** 14:30-15:30, 17<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *B R Seth Seminar room, Department of Mathematics (N343)*

**Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM9	Prof. N. K. Kishore	Data Analytics in Electrical Engineering
AM10	Prof. M. K. Panigrahi	Numerical modeling of subduction of lithospheric plates: A critical appraisal of the methodology

**Parallel Session: 2**      **Time and Date:** 14:30-15:30, 17<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
AM11	Prof. D. K. Swain	Climate determinants for food grain production
AM12	Prof. A. Routray	Inverse Problems in Signal Processing: Case Studies on Brain Signals

**Parallel Session: 3**      **Time and Date:** 14:30-15:30, 17<sup>th</sup> December, 2017

**Group:** *Mixed (ST + OR)*

**Venue:** *N325, Department of Mathematics*

**Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
ST3	Prof. D. Suar	Mediators, Moderators, and Confounders: Conceptual Meanings and Statistical Analyses
OR5	Prof. D. K. Pratihari	Realizing the Need for Intelligent Optimization Tool

**Parallel Session: 4**      **Time and Date:** 14:30-15:30, 17<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *Seminar Room, Electrical Engineering (N208)*

**Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
TCS6	Prof. Tapan Bagchi	Opportunities in Analytics Today
TCS7	Prof. M. M. Pal	L(d,1) Labelling of Intersection Graphs

**Parallel Session: 5**      **Time and Date:** 14:30-15:30, 17<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *Venkata Ratnam Seminar Room, Electrical Engineering (N223)*

**Coordinator:** *Prof. G. Panda*

S. No.	Name	Title
TCS8	Prof. S. P. Pal	
TCS9	Prof. D. Samanta	A Need of the Day and its Solution with Biometric Data



## Paper Presentation by delegates

*Time and Date: 14:30-15:30, 16<sup>th</sup> December, 2017*

**Parallel Session: 1**

**Time and Date:** 14:30-15:30, 16<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *B R Seth Seminar room, Department of Mathematics (N343)*

**Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM1	K. Choudhury	Soret effect on transient MHD convective flow past a semi-infinite vertical porous plate with heat sink and chemical reaction
AM2	A. H. Sheikh	Soret effect in MHD flow past an infinite vertical plate moving with variable velocity with chemical reaction and thermal radiation
AM3	Gurmeet Kaur	Two-Compartmental Modeling and Simulation Study of Sprayed Fluidized Bed Granulator
AM4	Aditya Kumar	Self-similar solution of population balance equation for aggregation with constant kernel

**Parallel Session: 2**

**Time and Date:** 14:30-15:30, 16<sup>th</sup> December, 2017

**Group:** *Pure Mathematics (PM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
PM1	Dr. S. K. Padhan	Fixed point results of rational F-contractions in b-metric-like spaces
PM2	S. Gadtia	A critical Study on machine method of root extraction
PM3	Dr. Bijaya Laxmi Panigrahi	Singularity preserving projection methods for eigenvalue problem of an integral operator with logarithmic kernel
PM4	Parama Dutta	A generalization of the probability that an automorphism fixes a group element

**Parallel Session: 3**                      **Time and Date:** 14:30-15:30, 16<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *N325, Department of Mathematics*

**Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
TCS1	Sk Amanathulla	Surjective L(2,1)-labeling of paths and interval graphs
TCS2	Sonia Mandal	Embedding of m-polar fuzzy graphs on Spheres
TCS3	Sumonta Ghosh	Some Useful Cordial Labeling of Cartesian Product Between Restricted Bipartite Graph and Path
TCS4	Joylal Sarkar	EMS: An Emergency Management System Using Mobile Cloud Computing

**Parallel Session: 4**                      **Time and Date:** 14:30-15:30, 16<sup>th</sup> December, 2017

**Group:** *Statistics (ST)*

**Venue:** *Seminar Room, Electrical Engineering (N208)*

**Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
ST1	Dr. V. R. Lakshmi Gorty	The use of finite Hankel-Clifford transforms of first kind of arbitrary order in statistics
ST2	Dr. P. Vijaya Laxmi	Performance measures of variant working vacations on batch arrival queue with server breakdowns
ST3	R. Rajapriya	Higher Order Statistics based feature extraction for Electromyography signal
ST4	Deepak Singh	Convergence theorems for previous k-sum stochastic model

**Parallel Session: 5**      **Time and Date:** 14:30-15:30, 16<sup>th</sup> December, 2017

**Group:** *Operations Research (OR)*

**Venue:** *Venkata Ratnam Seminar Room, Electrical Engineering (N223)*

**Coordinator:** *Prof. G. Panda*

S. No.	Name	Title
OR1	Dr. S. K. Barik	Possibilistic Linear Programming Problem Involving Randomness
OR2	Nirmalya Kumar Mohanty	An efficient hybrid conjugate gradient parameter for Nonlinear Conjugate Gradient Method
OR3	Dr. Om Prakash	Manufacturing inventory model with discrete random demand and finite production rate under two level of trade credit financing
OR4	Dr. Srikumar Acharya	Selection of Software Developing Vendor for An Educational Institution

**Time and Date:** 16:45-17:45, 16<sup>th</sup> December, 2017

**Parallel Session: 1**      **Time and Date:** 16:45-17:45, 16<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *B R Seth Seminar room, Department of Mathematics (N343)*

**Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM5	Timir Karmakar	Modeling of fluid flow inside a knee joint
AM6	Biswajit Sahoo	Application of Hilbert Transform in Machinery Condition Monitoring
AM7	A. Sinha	Thermal Diffusion effect on MHD Oscillatory Channel flow with Slip Condition and Mass Transfer
AM8	Mamani Kalita	Effect of rotation and thermal radiation on mhd convective flow along an infinite vertical porous plate with variable suction and heat absorption

**Parallel Session: 2**                      **Time and Date:** 16:45-17:45, 16<sup>th</sup> December, 2017

**Group:** *Pure Mathematics (PM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
PM5	R. C. Padhy	A theorem on degree of approximation of fourier series of a function of Lipschitz class by product means
PM6	Abhimanyu Kumar	Convergence of Ulm-type method in Banach spaces
PM7	Arjun Singh Chetry	Apery-like numbers, Gaussian hypergeometric function and supercongruences
PM8	Nilufar Mana Begum	A new look into generating functions for 5-regular partitions

**Parallel Session: 3**                      **Time and Date:** 16:45-17:45, 16<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *N325, Department of Mathematics*

**Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
TCS5	Milton Biswas	Solving multi objective optimization problem using fuzzy If-then rules consisting of type-2 fuzzy linguistic variables
TCS6	Mandeep Kumar	Continuous review inventory system for intuitionistic fuzzy random demand and service level constraint
TCS7	Somnath Maity	New Approach for Solving Type-2-Fuzzy transportation Problem.
TCS8	Jishu Jana	Solution of matrix games under generalized triangular fuzzy numbers using ranking function

**Parallel Session: 4****Time and Date:** 16:45-17:45, 16<sup>th</sup> December, 2017**Group:** *Applied Mathematics (AM)***Venue:** *Seminar Room, Electrical Engineering (N208)***Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
AM9	Pranab Jyoti Parashar	Thermal diffusion effect on transient MHD flow past an inclined plate embedded in porous medium
AM10	Ravula Sudharshan Reddy	Mathematical Modelling of heat and mass transfer in bread baking
AM11	Anup Kumar Thander	Optical modal analysis in rib wave guide structures using Higher Order Compact (HOC) FDM in combination with Biconjugate Gradient Stabilized (BiCGSTAB) Method
AM12	Jayanta Paul	An existence uniqueness result for the pure binary collisional breakage equation with unbounded kernels

**Parallel Session: 5****Time and Date:** 16:45-17:45, 16<sup>th</sup> December, 2017**Group:** *Operations Research (OR)***Venue:** *Venkata Ratnam Seminar Room, Electrical Engineering (N223)***Coordinator:** *Prof. G. Panda*

S. No.	Name	Title
OR5	D. K. Mohanty	Stochastic Programming Problems With Some Continuous Random Variables
OR6	Md. Abu T. Ansary	New Line Search Technique for Constrained Multi-objective Optimization
OR7	Dr. Avik Pradhan	Study of Multi-objective Linear Fractional Programming Problem with Multi-choice Parameters
OR8	Arjun Paul	An EOQ Model for Deteriorating Items With Ramp Type Demand, Time Dependent Holding Cost And Price Discount Offered On Backorders

***Time and Date: 9:15-10:30, 17<sup>th</sup> December, 2017***

**Parallel Session: 1**

**Time and Date: 9:15-10:30, 17<sup>th</sup> December, 2017**

**Group:** *Applied Mathematics (AM)*

**Venue:** *B R Seth Seminar room, Department of Mathematics (N343)*

**Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM13	Dr. S. K. Parhi	A new twelfth order iterative method for solving nonlinear equations in R
AM14	Falguni Roy	Complex eigenvalue sets for the generalized complex interval eigenvalue problem
AM15	Tufan Ghosh	Stokes' problem for simultaneous flow through both a pure fluid and a porous medium
AM16	Dr. Ranjan Kr Nayak	Effect of heat source on mixed convection of a nano-fluid in a skewed enclosure
AM17	Hemanta Mandal	Exact solution of time fractional generalized Hirota-Satsuma coupled KdV system using Lie symmetry

**Parallel Session: 2**

**Time and Date: 9:15-10:30, 17<sup>th</sup> December, 2017**

**Group:** *Pure Mathematics (PM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
PM9	Bikramaditya Sahu	Blocking sets of tangent lines to a hyperbolic quadric in PG(3;3)
PM10	Dr. K. Sujatha	Fixed Point Theorems in Metric Spaces and Application to Cone Metric Spaces
PM11	Jitendra Kr Behera	On a class of unitary operators on the Bergman space of the right half plane
PM12	Neelam Singha	Natural Boundary Conditions for a Class of Generalized Fractional Variational Problem
PM13	Dr. P K Parida	Majorant conditions on super-Halley method

**Parallel Session: 3****Time and Date:** 9:15-10:30, 17<sup>th</sup> December, 2017**Group:** *Theoretical Computer Science (TCS)***Venue:** *N325, Department of Mathematics***Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
TCS9	Prof. Kolin Paul	Generalized Boolean Algebra for n-input Majority
TCS10	Ranjan Kr Behera	Identifying Maximal Cliques in Large Scale Network using Genetic Algorithm
TCS11	Prathyusha Musunuru	Controllability of Nearest Neighbor Interconnections in Matrix Differential Systems
TCS12	Deepak Sharma	On the realization of the spectra of non-bipartite weighted directed graphs
TCS13	Dr. Rajashree Mishra	Unit Software Testing Using Genetic Algorithm

**Parallel Session: 4****Time and Date:** 9:15-10:30, 17<sup>th</sup> December, 2017**Group:** *Applied Mathematics (AM)***Venue:** *Seminar Room, Electrical Engineering (N208)***Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
AM18	Biswajit Mallick	Impact of Cattaneo-Christov heat flux model on electro-magneto-hydrodynamic transport of third order fluids
AM19	Manotosh Kumbakar	An explicit analytical solution to the generalized one-dimensional advection-diffusion equation for suspended sediment transport in open channels
AM20	Purnima Satapathy	A new exact solution of Chaplygin gas equations through potential symmetry analysis
AM21	V. Sharanya	Cross migration of surfactant-laden viscous droplets
GT	L. N. Das	Engineering mathematics impact on Academic and Industrial developments

**Parallel Session: 5****Time and Date:** 9:15-10:30, 17<sup>th</sup> December, 2017**Group:** *Operations Research (OR)***Venue:** *Venkata Ratnam Seminar Room, Electrical Engineering (N223)***Coordinator:** *Prof. G. Panda*

S. No.	Name	Title
OR9	Sudipta Midya	Fuzzy chance-constrained rough approximation to solve bi-criterion fractional fixed-charge transportation problem
OR10	Farida P. Barbhuiya	Analysis of batch service queue with batch renewal arrival process - an alternative approach
OR11	Dr. Deshabrata Roy Mahapatra	Study on Multi-choice and Stochastic Programming for Transportation Problem with Logistic Distribution
OR12	Chandra Prakash Chandra	Humanitarian logistics Operations for Riverine Flood Disaster
OR13	Deepti Bala Mishra	Test case prioritization and minimization based on mutation analysis

***Time and Date: 12:15-13:15, 17<sup>th</sup> December, 2017*****Parallel Session: 1****Time and Date:** 12:15-13:15, 17<sup>th</sup> December, 2017**Group:** *Applied Mathematics (AM)***Venue:** *B R Seth Seminar room, Department of Mathematics (N343)***Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM22	Chandra Sekhar Nishad	Flows in out-phase slip-patterned micro-channels using boundary element methods
AM23	Ranjit R. Dhunde	Solutions of Some Nonlinear Fractional Partial Differential Equations in Mathematical Physics
AM24	M. S. V. D. Sudarsan	H-Controllability and Observability of Periodic Matrix Lyapunov Bilinear Systems
AM25	S. H. Islam	Heat and Mass Transfer on MHD Oscillatory Free Convection Flow Past a Moving Vertical Plate with Chemical Reaction in Slip flow Regime



**Parallel Session: 2**                      **Time and Date:** 12:15-13:15, 17<sup>th</sup> December, 2017

**Group:** *Pure Mathematics (PM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
PM14	Rudrajit Sadhu	A generalised descent method for variational inequalities in a Hilbert space
PM15	Prashanta Majee	On proximal algorithm with inertial effect for split variational inclusion problems
PM16	Sanjay Kr. Mahto	A class of difference sequence spaces defined by 1-fractional difference operator
PM17	Nirupam Ghosh	Coefficient Bounds of Certain Subclass of Analytic function Defined by subordination

**Parallel Session: 3**                      **Time and Date:** 12:15-13:15, 17<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *N325, Department of Mathematics*

**Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
TCS14	Dr. A. K. Das	Remote User Authentication and Key Agreement for Internet of Things (IoT) Environment
TCS15	Pallavi Mishra	An improved genetic algorithm to solve Sudoku puzzles
TCS16	Sarbani Roy	Entanglement version of Gao's Protocol
TCS17	Arpita Das	Normalized Laplacian spectrum of partial subdivision-joins of regular graphs

**Parallel Session: 4**      **Time and Date:** 12:15-13:15, 17<sup>th</sup> December, 2017

**Group:** *Pure Mathematics (PM)*

**Venue:** *Seminar Room, Electrical Engineering (N208)*

**Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
PM17	Sudipta Kumar Ghosh	Fixed point theorems on partial G-metric space
PM18	Bijan Kr. Patel	A note on balancing non-Wieferich primes in arithmetic progression
PM19	Arnab Patra	On some study of the fine spectrum of lower triangular triple band matrices on the sequence space $l_p$
PM20	Soumitra Dey	A note on existence of projected solution to inverse quasi-variational inequality problems

**Parallel Session: 5**      **Time and Date:** 12:15-13:15, 17<sup>th</sup> December, 2017

**Group:** *Operations Research (OR)* **Venue:** *Venkata Ratnam Seminar Room, Electrical Engineering (N223)*

**Coordinator:** *Prof. G. Panda*

S. No.	Name	Title
OR14	Dr. Koushik Das	Set-valued minimax programming problems under generalized cone convexity
OR15	Shubham Singh	Robust optimization with different types of uncertainty sets
OR16	Himansu Kumar Samal	Transportation problems involving extreme value distribution and multi-choice parameters
OR17	Narmada Behera	Third order symmetric duality in nonlinear programming problems

*Time and Date: 15:30-16:00, 17<sup>th</sup> December, 2017*

**Parallel Session: 1**      **Time and Date:** 15:30-16:00, 17<sup>th</sup> December, 2017

**Group:** *Applied Mathematics (AM)*

**Venue:** *B R Seth Seminar room, Department of Mathematics (N343)*

**Coordinator:** *Prof. S. Bhattacharya*

S. No.	Name	Title
AM26	Prof. N. K. Chaudhury	Dissipative and free convective oscillatory flow of visco-elastic fluid past an infinite vertical porous plate with constant heat flux
AM27	Sashi Bhusan Raut	Determining the Priorities and Weightages of Age-friendly Criteria by Analytical Hierarchy Process

**Parallel Session: 2**      **Time and Date:** 15:30-16:00, 17<sup>th</sup> December, 2017

**Group:** *Pure Mathematics (PM)*

**Venue:** *N322, Department of Mathematics*

**Coordinator:** *Prof. P. D. Srivastava*

S. No.	Name	Title
PM21	Firdoshi Parveen	Criteria for univalence, integral means and Dirichlet integral for meromorphic functions
PM22	Sandipan Dutta	Invariant geometric figures under the Mobius action of $SL(2; \mathbb{R})$

**Parallel Session: 3**      **Time and Date:** 15:30-16:00, 17<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *N325, Department of Mathematics*

**Coordinator:** *Prof. D. K. Gupta*

S. No.	Name	Title
TCS18	Tarasankar Pramanik	Fuzzy shortest path in an interval-valued fuzzy hypergraph using similarity measures
TCS19	R. Lakshminaryana Charyulu	Output feedback fault tolerant control for a class of discrete time fuzzy bilinear Lyapunov systems

**Parallel Session: 4**                      **Time and Date:** 15:30-16:00, 17<sup>th</sup> December, 2017

**Group:** *Theoretical Computer Science (TCS)*

**Venue:** *Seminar Room, Electrical Engineering (N208)*

**Coordinator:** *Prof. U. C. Gupta*

S. No.	Name	Title
TCS20	Jadunath Nayak	Fuzzy Transportation Problem with Fuzzy Variables
TCS21	Dr. Baby Bhattachary	On generalized fuzzy $\gamma^*$ - closed sets