



Research and Sponsored Programs Office (RSPO)

Research Naval Postgraduate School (NPS Research Newsletter)

Research Naval Postgraduate School v.
4, no. 10, June 2012

Naval Postgraduate School Research, v. 4, no. 10, June 2012 ; pp 1-8

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VOLUME 4, NO. 10

JUNE 2012

RESEARCH AT NPS



Professor Jeffrey Paduan has been named vice president and dean of research. He will assume his new position on July 2nd. Professor Paduan's statement of candidacy is reprinted below.

"I have been a member of the faculty since June 1991, during which time I have acted as principal investigator for numerous reimbursable programs, the most extensive and complex of them

being the State of California's coastal ocean currents monitoring program. That program involved eleven campuses and the State Coastal Conservancy, which presented numerous administrative challenges. For the past four years, I have served as department chairman. In that capacity I have seen even more facets of the NPS research enterprise.

"I believe that research at NPS is at a crossroads and many of the possible paths do not lead to the healthy and growing enterprise that we all seek. I am convinced that the best ways to choose the right path involve active teamwork among researchers and administrators. This dean of research search and appointment process gives us a rare opportunity to agree on the way forward and to engage all of the stakeholders

...continued on page 8

BROWN-BAG SEMINAR SERIES WA-302, 1200-1300

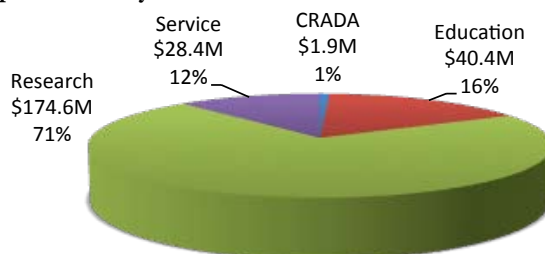
- Wednesday, 18 July, Research Initiation Program
 - Wednesday, 8 August, Research Initiation Program
- Workshops on FY13 proposal budget templates will be announced as soon as FY13 indirect rates are published.

RESEARCH UPDATES

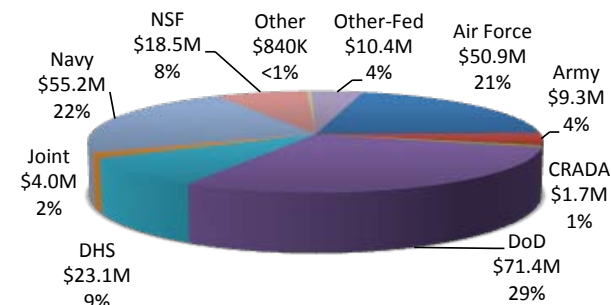
- **FY13 Indirect Cost Rates for Sponsored Activities:** The methodology and rate structure for indirect recovery is scheduled to change for FY13. The proposed FY13 indirect rate structure is based on a fixed dollar amount per labor (NPS and contract labor) hour. The proposed indirect fixed rates are provided below:
Research: \$29.44
Education: \$36.49
Professional Development: \$22.28
Other Sponsored Activity: \$8.07
FY13 proposal budget templates are being developed, but will not be used till the indirect methodology/rates are confirmed. Updates will be disseminated as soon as they are received.
- **Sponsored Program Policy/Guidance Memo No. SPPGM-12-22:** Sponsored Research, Education, Professional Development, and Service: Who Can be a PI or PD? is now posted online at http://intranet.nps.edu//ResAdmin/SPPGM-12-22_PI_PD.pdf.
- **Proposal Routing Form:** A new proposal routing form will be distributed this week. A separate form for sponsored research/service and sponsored education/professional development will aid data collection about the sponsored activity. There will also be added areas of certification with respect to compliance. An email will be sent to faculty when the form has been posted.

SPONSORED PROGRAMS STATUS, MAY 2012 FUNDS AVAILABLE: \$245.2M

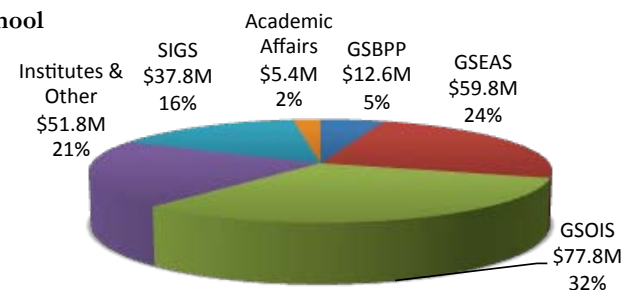
By Type of Activity



By Sponsor



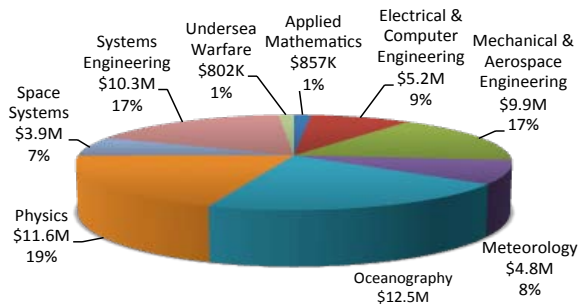
By School



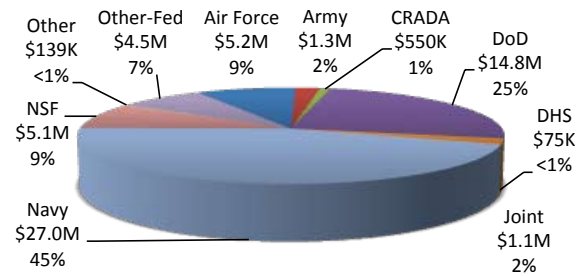
Graduate School of Engineering and Applied Sciences

Funds available to date: \$59.8M

By Department



By Sponsor



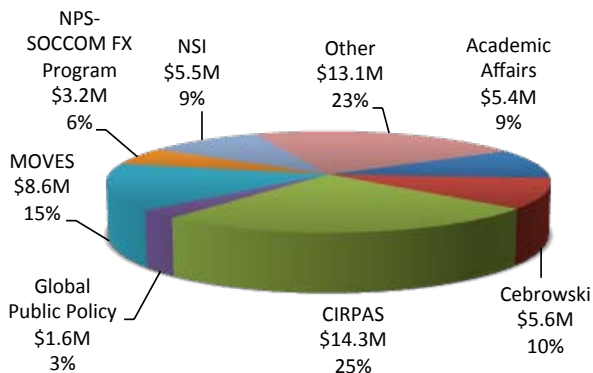
Projects funded in May

- Adapting Homer Micro-Power Optimization Model for USMC Utilization, *Sherif Michael, EC* (ONR)
- Observability in Data Assimilation and Optimal Sensor Configuration, *Wei Kang, MA* (NRL)
- Beam-Control Technology for Free-Electron Laser, *Brij Agrawal, MAE* (ONR)
- Use of NASA Observations and Numerical Model Simulations to Understand the Hurricane 'Fuel' and 'Anti-Fuel' Problems, *Mike Montgomery, MR* (NASA Goddard Space Flight Ctr)
- Collaborative Research: Origin, Dynamics and Transport Characteristics of the Large-Scale Eddy-Driven Patterns, *Timor Radko, OC* (NSF)
- Solid-State Spark Chamber for High Sensitive Radiation Detection, *Gamani Karunasiri, PH* (DIA)
- DL Program in Engineering Acoustics, *Kevin Smith, PH* (Various)
- N8F Chair of Systems Engineering Analysis, *Jim Eagle, SE* (CNO)
- System of Systems Engineering and Integration for Space and Naval Warfare Systems, *Warren Vaneman, SE* (SPAWAR)
- Development of Systems Engineering Competency Model and Survey Tool, *Cliff Whitcomb, SE* (ASN)

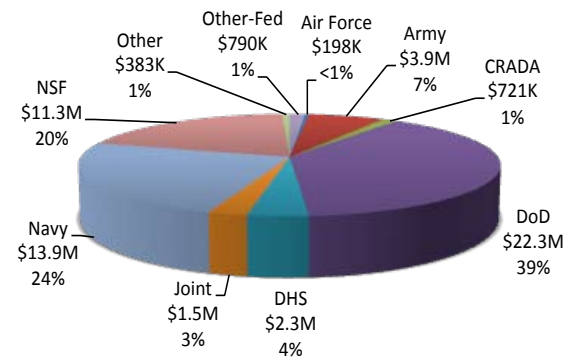
Research and Education Institutes, Centers, and Other

Funds available to date: \$51.8M

By Department



By Sponsor



Projects funded in May

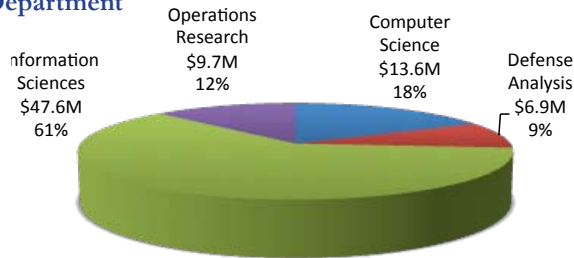
- Crisis Mapping in Humanitarian Assistance and Disaster Management (HADR) Applications, *Alan Jaeger, NSI* (ONR)
- Emergency Preparedness & Planning Study, *Alan Jaeger, NSI* (California Institute of Technology)
- Multi-Source Intelligence Data Integration and Assimilation, *Chris Olsen, NSI* (NGIA)
- Damage Control Visualization Prototype, *Perry McDowell, MOVES* (NSWC-Cardecro Division)
- DARPA CT2WS, *Bob Bluth, CIRPAS* (DARPA)
- Laser Parameter Extraction, Data Comparison, and Bistatic Detector-Enabled Countermeasures for Direct-Energy Weapons, *Sri Sritharan, DRCIS* (DIA)

Please submit your faculty and research news (published articles, conference proceedings, conference presentations, books, honors received, accomplishments, milestones, etc.) to research@nps.edu.

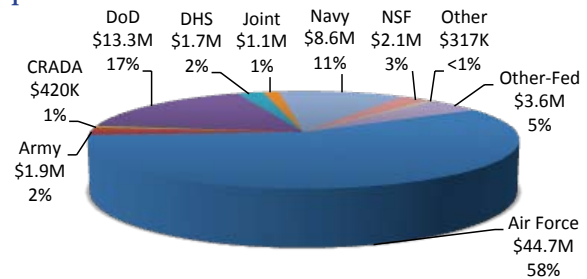
Graduate School of Operational and Information Sciences

Funds available to date: \$77.8M

By Department



By Sponsor



Projects funded in May

- Netlarge Collaborative Research: Exploring Evolution of IPV6 Topology, Performance, and Traffic, *Bob Beverly, CS* (NSF)
- Malware Research and Tools Project, *Chris Eagle, CS* (NELO)
- Adomex FY12, *Simson Garfinkel, CS* (DIA)
- Application Download Model, *Dennis Volpano, CS* (ONR)
- User-Centric Cloud Proof of Concept Master Network-Resident Cloud Controller Platform Prototype, *Dan Boger, IS* (NGIA)
- ISR Net-T and Tactical Rover Integration, Analysis, and Certification, *Bill Roeting, IS* (USAF Adv Capabilities Office)
- Design of Experiments for Follow-on Operational Test of the Aegis Modernization Program, *Pat Jacobs, OR* (NAVSEA)

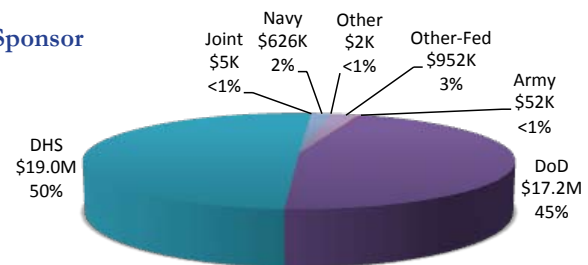
School of International Graduate Studies

Funds available to date: \$37.8M

Project funded in May:

- Asia Conference 2012, *Chris Twomey* (OSD)

By Sponsor



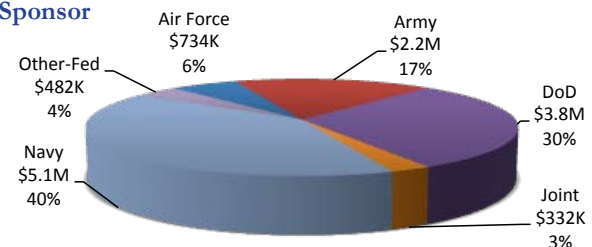
Graduate School of Business and Public Policy

Funds available to date: \$12.6M

Projects funded in May:

- Advanced Acquisition Program, *John Dillard* (Various)
- Multimodal Information-Sharing Team Workshop and Summary, *Susan Hovevar* (PM, Information Sharing Environment)
- PEO LCS Chair of Acquisition and Research Program, *Keith Snider* (PEO LCS)

By Sponsor



ACQUISITION RESEARCH SYMPOSIUM AT NPS

Nearly 300 acquisition officials decisions joined attendees from the defense industry on May 16–17 for the ninth annual Acquisition Research Symposium to learn about “Creating Synergy for Informed Change.” The focus was affordability and capitalizing on the knowledge accumulated in the symposium’s nine years.

The kickoff speech was given by Frank Kendall III, Acting Under Secretary of Defense for Acquisition, Technology and Logistics. Papers and presentations are online at:

<http://www.researchsymposium.com/?page=program&c=31>.

Frank Kendall, III



NATO SCHOOL AND USPTC CYBER PARTNERSHIP PROSPERS

A ten-week course, “Network Security,” conducted by **Senior Lecturer J.D. Fulp** (Computer Science) has concluded in Oberammergau, Germany. This was the second course taught in partnership between the NATO School and NPS, in fulfillment of NPS’s role as the only designated Partnership for Peace Training and Education Center (USPTC) in the U.S.

Building on their 2010 cooperative course, “Network Vulnerability Assessment and Risk Mitigation,” led by **Senior Lecturer Scott Cote** (Computer Science), the USPTC and the NATO School developed a cyber-security certificate program, in which the course just completed became the second installment. The remaining two courses will cover incident handling and disaster-recovery planning, and network-traffic analysis.

NPS is one of 24 NATO-recognized PTCs. The NATO School chairs the biannual PTC working group meetings and annual commandant’s conference hosted by the PTCs.

The network -security course was attended by 27 students from Romania, Italy, Spain, Morocco, Germany, Sweden, Finland, Tunisia, Lithuania, Moldova, Poland, the Netherlands, Great Britain, Portugal, Austria, and the U.S., from NATO Communication and Information Systems Services (Naples and Brunssum); NATO EF2000 and Tornado Development Production and Logistics Management Agency; and NATO Combined Air Operations Centers.

“All the students worked in IT or IT-security in some way, from high-level policy shaping to ‘down in the weeds’ device configuration,” noted Fulp. “All had a keen interest in advancing their know-how and network theory, because all of them, to varying degrees,

will be able to apply that knowledge to their daily job.”

The course explored the underlying principles involved in the bits-in-transit aspect of information security. The focus was on a thorough understanding of how computer networks function; identification and filtering of malicious network traffic via authentication mechanisms, attack-signature recognition, and filter mechanisms and strategies; and the protection of friendly/legitimate network traffic via cryptological mechanisms.

The first and last weeks consisted of immersive, all-day sessions at the NATO School, while the middle weeks featured individual lab work and reading administered via Sakai. Says Fulp, “This hybrid format allows busy, working professionals to more easily accommodate such a course into their calendars, as they only need to be absent from their normal duties for two, one-week periods.”

Adds Fulp, “The idea is to bootstrap them with core principles during week one, in residence, then reinforce and apply those principles in lab work they complete during the non-resident weeks. During our last week in residence, I cover more advanced topics, such as cryptography, do a review of all the 200-plus course learning objectives, then conduct a final exam assessment.”

The course is well received. “One thing we asked at the end of the course was, would you recommend this course to others, and every hand went up,” Fulp notes. “Students said they found the course technically challenging and of more technical depth than other security classes they have taken that are more policy-focused.” Both cyber classes are now offered regularly at the NATO School. The third course in the certificate series will be held in FY 2013.



APPLIED MATHEMATICS

Luca, F., & Stanica, P. (2012). "On the Euler Function of the Catalan Numbers." *Journal of Number Theory*, 132(7), 1404-1424.

Blaine, K., Phillips, D., Frenzen, C., Scandrett, C., & Haegel, N. (2012). "Three-Dimensional Transport Imaging for Spatially Resolved Determination of Carrier Diffusion Length in Bulk Materials." *Review of Scientific Instruments*, 83(4), 043702.

Neta, B., Chun, C., et al. (2012). A Note on the Modified Super-Halley Method. *Applied Mathematics and Computation*, 218(18), 9575-9577.

C.O. Aguilar, "On the existence and uniqueness of solutions to the output regulation equations for periodic exosystems," *Systems and Control Letters*, Vol. 61, No. 6, pp. 702-706, 2012.



Professor Francis Giraldo will be a visiting fellow of the Newton Institute for Mathematical Sciences of Cambridge University from August through December of 2012.

CENTER FOR DECISION, RISK, CONTROLS AND SIGNALS INTELLIGENCE (DRCSI)

S. S. Sritharan presented a keynote lecture, "Strategic Systems of the Future: Some Long-Term Scientific Challenges" at the 10th Security Conference organized by NPS, the Temasek Defense Systems Institute, and the Lawrence Livermore Laboratory, May 21-23, Monterey.

National Research Council Fellow **Sakthivel Kumarasamy, James Eagle** (Operations Research) and **S. S. Sritharan**, "New Advances in Sonar Models and Calculation of Probability of Detection," joint NPS-TDSI-LLNL Security Conference, Monterey, May 22, 2012.

National Research Council (NRC) Fellow **B. Fernando, James Eagle** (Operations Research) and **S. S. Sritharan**, "Some New Results in Search and Detection Theory for Randomly Moving Multiple Targets," joint NPS-TDSI-LLNL Security Conference, Monterey, May 22, 2012.

S. S. Sritharan visited the Defense Research Development Agency of Canada, Toronto, to discuss NPS-DRDC partnership and made a presentation, "Defense Research Programs at the NPS."

B. R. Nagaraj of the Tata Institute for Fundamental Research, Bangalore Center for Applicable Mathematics, will make presentations at NPS in June: "Near Boundary Flow Method for the Calderon Problem in Electrical Conductivity," and two lectures on microlocal analysis with applications to wave equation. His visit follows TIFR-Bangalore visit and partnership discussion by **Sritharan, Rudy Panholzer** (SSAG), **Oleg Yakimenko** (SE) and **Young Kwon** (MAE).

S. S. Sritharan, lecture, "An Invitation to Stochastic Navier-Stokes Equation and Hamilton Jacobi Equations in Infinite Dimensions," McMaster University of Canada, May 2012.

CIRPAS

Metcalf, A. R., Craven, J. S., Ensberg, J. J., Brioude, J., Angevine, W., Sorooshian, A., **Jonsson, H. H.**, et al. (2012). "Black Carbon Aerosol Over the Los Angeles Basin During CalNex." *Journal of Geophysical Research-Atmospheres*, 117, D00V13.

COMPUTER SCIENCE

Melaragno, A. P., Bandara, D., Wijesekera, D., et al. (2012). "Securing the ZigBee Protocol in the Smart Grid." *Computer*, 45(4), 92-94.

Pfleeger, S., **Irvine, C.**, & Kwon, M. (2012). "Security Training and Education Introduction." *IEEE Security & Privacy*, 10(2), 19-23.

DEFENSE ANALYSIS PUBLISHES
ONLINE JOURNAL

Combating Terrorism Exchange (CTX) is produced for the Combating Terrorism Fellowship Program, which has more than 25,000 members in the military, government, private, and academic sectors, from 160 countries. Published quarterly by the Department of Defense Analysis since summer 2011, CTX is written by practitioners for practitioners. CTX encourages submissions that challenge conventional wisdom and offer new perspectives and insights for CT professionals. Email ctxsubscribe@gmail.com to subscribe or see online [here](#). CTX will be posted on the Global ECCO project website beginning in summer 2012.

NPS contributors to the current issue (Vol. 2, No. 2, May 2012) include:

- **LT Malaka Chandradasa, Sri Lankan Navy**, "Learning from Our Enemies."
- **Rachel Davis**, "From yBa to Al Qaeda: A Spectrum of Postmodern Spectacular."
- **George Lober**, "Moral Courage: Take Two." Lober contributes a regular column, "Ethics and Insights."
- **LTC Jan Novak, Czech Army**, review of *Lions of Kandahar: The Story of a Fight Against All Odds*.
- **MAJ Marcus Forman, USA**, review of *Pakistan on the Brink: The Future of America, Pakistan, and Afghanistan*.
- **Kalev Sepp**, "Before Iraq and Afghanistan, there was Ireland." Sepp writes a regular film review.

DEFENSE RESOURCES MANAGEMENT
INSTITUTE (DRMI)

Berck, P., & **Lipow, J.** (2012). "Trade, Tariffs and Terrorism." *Applied Economics Letters*, 19(18), 1847-1849.

Jomana Amara, "Military Stabilization Efforts on Economic Development and Security: The Case of Iraq," *Journal of Development Economics*, May 2012.

Jason Hansen and Janie Chermak, presentation, "Living within our means: the case of population growth and economic development under scarce water resources," Environment and Resource Economics Seminar, Department of Agricultural and Resource Economics, the University of California, Berkeley, May 2012.

Eva Regnier, Jay Simon, Daniel Nussbaum, “Estimating Supply-Chain Burdens in Support of Acquisition Decisions,” 9th Annual Acquisition Research Symposium, Monterey, May 2012.

Associate Professor Anke Richter acted as a reviewer on a joint National Science Foundation and Agency for Healthcare Research and Quality (AHRQ) panel in April. NSF and AHRQ were reviewing proposals for research on advancing health services through systems modeling research. The proposals fell into the general categories of health-care systems modeling and behavior characterization, and health IT-enabled personalized diagnosis and treatment.

Assistant Professor Jay Simon attended “Southern California Operations Research/Operations Management Day,” University of California, Los Angeles, May 14.

Natalie Webb, keynote speech, “Desperately Seeking Performance in Organizations,” XIII Workshop Organizzazione Aziendale, University of Verona 28-29 May 2012.

Suppa, Armando & Webb, Natalie. “Managing Performance in the Defense Sector: Cases of the Italian Army and US Navy Surface Warfare Enterprise.” Refereed conference proceedings, XIII Workshop Organizzazione Aziendale, University of Verona 28-29 May, 2012.

Associate Professor Anke Richter reviewed a journal article for *Healthcare Management Science*, two articles for the *Homeland Security Affairs Journal*, and an article for the *Journal of Emergency Management*.

Assistant Professor Jay Simon served as an associate editor for papers submitted to *Decision Analysis*.

Assistant Professor Ryan Sullivan served as a referee for articles submitted to the *National Tax Journal and Public Finance Review*.

Associate Professor Natalie Webb served on the board of Non-profit Management and Leadership and reviewed articles for the best issue of 2011. She also reviewed for the *African Journal of Business Management*.

GRADUATE SCHOOL OF BUSINESS AND PUBLIC POLICY

K.J. Euske, Joseph San Miguel & Chong Wang, “How Does the Cost Performance of Defense Contracts Vary Among Services and Contractors? Evidence from Major Defense Acquisition Programs (MDAP),” *Advances in Management Accounting*, Volume 20, 75-100, May, 2012.

MECHANICAL AND AEROSPACE ENGINEERING

Back, S. C., Hobson, G. V., Song, S. J., Millsaps, K. T., “Effects of Reynolds Number and Surface Roughness Magnitude and Location on Compressor Cascade Performance,” *Transactions of the ASME, Journal of Turbomachinery*, Volume 134, 051013-1, September 2012.

METEOROLOGY

Bell, M. M., & Lee, W. (2012). “Objective tropical cyclone center tracking using single-doppler radar.” *Journal of Applied Meteorology*

and *Climatology*, 51(5), 878-896.

Bosart, L. F., Cordeira, J. M., Galarneau, T. J., Jr., Moore, B. J., & Archambault, H. M. (2012). “An Analysis of Multiple Predecessor Rain Events Ahead of Tropical Cyclones Ike and Lowell: 10-15 September 2008.” *Monthly Weather Review*, 140(4), 1081-1107.

Wang, Z., Montgomery, M. T., & Fritz, C. (2012). “A First Look at the Structure of the Wave Pouch During the 2009 PREDICT-GRIP Dry Runs Over the Atlantic.” *Monthly Weather Review*, 140(4), 1144-1163.

MOVES INSTITUTE

Research Associate Professor Ji Hyun Yang has been invited to present her work at the 4th International Symposium on Brain and Cognitive Engineering held at Korea University, Seoul, South Korea on 31 May 2012. Her presentation, “Understanding cognitive processes of helicopter navigation by characterizing visual scan patterns: what they see vs. what they believe” is work done by Ji Hyun Yang, Bradley Cowden, **Lecturer Quinn Kennedy (OR)**, and **MOVES director, CDR Joseph Sullivan, USN**.

J. Yang J. Huston, M. Day and I. Balogh, “Modeling Peripheral Vision for Moving Target Search and Detection,” *Aviation, Space, and Environmental Medicine*, Vol. 83, No. 6, pp. 585-93, June 2012.

NPS TO COLLABORATE IN MINERVA AWARD

The Minerva Steering Committee in the Office of the Secretary of Defense has selected ten proposals for 2012 award, to join ongoing Minerva efforts in social-science basic research to help the department to define sources of present and future conflict.

The DoD solicited proposals in seven topics of strategic importance and received 330 white papers and 55 full proposals. The awards were selected for funding based on merit review by government scientists, defense-policy experts, and DoD-external academics. More than 17 academic institutions, including two foreign institutions, are expected to participate in the ten research efforts.

Minerva funds basic research in the social sciences, with an inherently open time horizon, so important impacts are expected to come in the years ahead. Still, many of the insights can and have been applied to inform policy for today's defense priorities as well. Most of these university grants will run June 2012 through May 2015. Engagement throughout with government policy makers, operators, and scientists through the Minerva staff will help to ensure that this research is not conducted in a vacuum and that Minerva priorities continue to target the most critical social and cultural knowledge gaps.

Associate Professor Harold Trinkunas (National Security Affairs) will participate in the program as a sub-researcher under PI David Mares of the University of California, San Diego, managed by the Army Research Office. The research topic is “Brazil as a Major Power: The Impact of its Military-Scientific-Industrial Complex on its Foreign and Defense Policy.”

NATIONAL SECURITY AFFAIRS

Gingeras, R. (2012). "Margins of Empire: Kurdish Militias in the Ottoman Tribal Zone." *International Journal of Middle East Studies*, 44(2), 350-352.

Jaskoski, Maiah. "The Subnational Politics of the Environmental Impact Assessment: Mining in Peru." Paper presented at the International Congress of the Latin American Studies Association, San Francisco, May 23–26, 2012.

Porch, D. (2012). "The Hunt for Martin Caballero." *Journal of Strategic Studies*, 35(2), 243-270.

OCEANOGRAPHY

Noble, M. A., Rosenberger, K. J., **Rosenfeld, L. K.**, & Robertson, G. L. (2012). "Temporal and Spatial Patterns in Wind Stress and Wind Stress Curl Over the Central Southern California Bight." *Continental Shelf Research*, 38, 98-109.

OPERATIONS RESEARCH

Golany, B., **Kress, M.**, Penn, M., & Rothblum, U. G. (2012). "Resource Allocation in an Asymmetric Technology Race with Temporary Advantages." *Naval Research Logistics*, 59(2), 128-145.

Katz, J. M., Winter, C. K., **Buttrey, S. E.**, & Fadel, J. G. (2012). "Comparison of Acrylamide Intake from Western and Guideline Based Diets Using Probabilistic Techniques and Linear Programming." *Food and Chemical Toxicology*, 50(3-4), 877-883.



McDonald receives award from Assistant Secretary of Defense Zachary Lemnios

Research Associate Mary McDonald was awarded the Technical Cooperation Program (TTCP) award for research and development enhancing security in the maritime domain. This award is made to Maritime Group, Action Group 10 members for development and use of analytical

tools and models for the evaluation and improvement of maritime-force protection, maritime security, and counter-piracy operations conducted by TTCP naval forces against asymmetrical threats.

A member of the SEED Center for Data Farming, McDonald developed a maritime-force protection simulation scenario and designed and analyzed computer experiments based on the goals of the analysis.

Kress, M., Royset, J. O., & Rozen, N. (2012). "The Eye and the Fist: Optimizing Search and Interdiction." *European Journal of Operational Research*, 220(2), 550-558.

Kress, M. (2012). "Modeling Armed Conflicts." *Science*, 336(6083), 865-869.

Scarpino, S. V., **Dimitrov, N. B.**, & Meyers, L. A. (2012). "Optimizing Provider Recruitment for Influenza Surveillance Networks" *PLOS Computational Biology*, 8(4), e1002472.

PHYSICS

Alves, F., Kearney, B., Grbovic, D., Lavrik, N. V., & **Karunasiri, G.** (2012). "Strong terahertz absorption using SiO₂/Al based metamaterial structures." *Applied Physics Letters*, 100(11), 111104.

Wang, L., **Cheney, M.**, & **Borden, B.** (2012). "Multistatic Radar Imaging of Moving Targets." *IEEE Transactions on Aerospace and Electronic Systems*, 48(1), 230-242.

Bachmann, C. M., Montes, M. J., Parrish, C. E., Fusina, R. A., Nichols, C. R., Li, R., **Jones, C. A.**, **Lee, K. R.**, et al. (2012). "A dual-spectrometer approach to reflectance measurements under sub-optimal sky conditions." *Optics Express*, 20(8), 8959-8973.

Kruse, F. A., Bedell, R. L., Taranik, J. V., Peppin, W. A., Weatherbee, O., & Calvin, W. M. (2012). "Mapping Alteration Minerals at Prospect, Outcrop and Drill Core Scales Using Imaging Spectrometry." *International Journal of Remote Sensing*, 33(6), 1780-1798.

Williams, K. S., **Hooper, J. P.**, Horn, J. M., Lightstone, J. M., Wang, H., Ko, Y. J., et al. (2012). "Magnetic Structure Variation in Manganese-Oxide Clusters." *Journal of Chemical Physics*, 136(13), 134315.

Will Freeman and **Gamani Karunasiri**, "Nonequilibrium Electron Leakage in Terahertz Quantum Cascade Structures," *Phys. Rev. B* 85, 195326 (2012).

SYSTEMS ENGINEERING

R. Evins, S. Joyce, P. Pointer, S. Sharma, **R. Vaidyanathan**, and C. Williams, "Multi-Objective Optimisation: Getting More for Less by Design," *Civil Engineering, Proceedings of Institute of Civil Engineers (ICE)*, 165, ICE5, pp 5-10, 2012.

Vaidyanathan R., Chen C., Jeong C.D., Williams C., Ritzmann R.E., Quinn R.D., "A Reflexive Control Architecture based on a Neural Model of the Cockroach Escape Response," *Journal of Systems and Control Engineering* (Proceedings of the Institute of Mechanical Engineers (IMECHE) Part I), 226, 5, pp 699-718, 2012 (IF: 0.374, 2010).

R. Evins, P. Pointer, **R. Vaidyanathan**, and S. Burgess, "A Case Study Exploring Regulated Energy Use in Domestic Buildings Using Design-of-experiments and Multi-objective Optimisation," *Building and Environment*, 54, pp 126-136, 2012 (IF: 2.129, 2012).

K. A. Mamun, M. Mace, L. Gupta, C. A. Verschuur, M. E. Lutman, M. Stokes, **R. Vaidyanathan**, S. Wang, "Robust Real-time Identification of Tongue Movement Commands from Interferences," *Neurocomputing*, 80, pp 83-92, 2012.

LIMITED-PURPOSE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT (LP-CRADA)

Title: : Silvus Equipment Loan

Partner: Silvus Technologies, Inc.

PI: Alex Bordetsky, Department of Information Sciences

Summary: Multiple-input, Multiple-output (MIMO) radios will be used for tested and evaluated the performance during Maritime Interdiction Operations field experimentation events and research activities.

MEMORANDUM OF AGREEMENT (MOA)

Title: Memorandum of Agreement with Fleet Numerical Meteorology and Oceanography Center for Multi-Disciplinary Technical Support

Partner: Fleet Numerical METOC Center

NPS Contact: Douglas Fouts, Interim VP and Dean of Research

Summary: The MOA formalizes the relationship between NPS and FLENUMMETOCEN for the provision of multidisciplinary technical support services on a reimbursable, as needed.

TECHNICAL REPORTS PUBLISHED

NPS-DA-12-001	The NATO Special Operations Headquarters Air Warfare Center: A Smart Defense Approach	A. D. Davis and K. D. Yoho.
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Technical reports may be obtained at <http://www.nps.edu/Research/TechReports.html>

DEAN OF RESEARCH, *continued from page 1*

at once.

“First and foremost, I believe that the we must agree on the nature of job of the dean of research. The published job description does a good job of listing the many ways that the dean of research contributes. I would highlight, however, bullet number two: “Serve as an advocate for NPS researchers in discussions dealing with the conduct and execution of research at NPS.” To me this encapsulates the essential characteristic of what is needed. On my first day as dean, I would ask all of my colleagues to read this bullet and recognize that my job was to be advocate-in-chief for research at NPS.

“What about the major changes that are being imposed on NPS by the Navy? In addition to complying with these mandates, I believe that we must recognize that some of them may rise to a level that calls into question the long-term viability of research at NPS. The Department of Commerce, for example, has specific legislation that allows NOAA to participate in cooperative institutes with university partners. We need such authority. We need to ensure that NPS faculty remain competitive with respect to their peers at other universities. If rule changes are needed to make that possible, I am confident that we have the support at the highest levels of the Navy and the Department of Defense to bring them about.

“Although some of the necessary changes must involve working with our sponsors around the country, the primary activities of the next dean of research must be internal. Research represents two thirds of our campus activity; it cannot be managed as a minor component of the teaching mission. I firmly believe that state-of-the-art research on the NPS campus is part of the teaching mission. It makes the educational programs unique and worthwhile.

“As dean of research, I would bring this viewpoint to the table and, most importantly, I would insist that I be at the table when critical decisions affecting NPS research are discussed and decided upon. I am equally sure that I would need to learn a great deal on the job and to enlist the advice of our seasoned faculty. Yet I am confident that I can have a positive impact and I am unwilling to stay on the sidelines when monumental changes are taking place that will affect all of us.”

WELCOME JEFF!

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SPRING AWARDEES

The following faculty were recognized for outstanding achievements at the Spring Quarter Awards Ceremony.



Alice Lyman Miller

- Rear Admiral John Jay Schieffelin Award for Excellence in Teaching: **Senior Lecturer Alice Lyman Miller (NSA)**
- Lieutenant Commander David L. Williams Outstanding Professor Award: **Senior Lecturer Alice Lyman Miller (NSA)**
- Louis D. Liskin Award

for Teaching Excellence in the Graduate School of Business and Public Policy: **Professor Douglas A. Brook (GSBPP)**

- Wayne E. Meyer Award Faculty Award for Excellence in Systems Engineering (Integrated Projects): **Professor Gene Paulo and Professor Gary Langford (SE)**
- Northrup Grumman Faculty Award for Excellence in Systems Engineering and Analysis: **Professor Gary Langford (SE)**
- Wayne E. Meyer Award for Teaching Excellence in Systems Engineering (Distance Learning): **Professor of Practice Donald S. Muehlbach, Jr. (SE)**



Gary Langford