Welcome back to Research at NPS. This publication will be produced monthly and initially focus on providing statistical data and information on recently funded projects and other activities which support the research mission at NPS. There are plans to evolve the format to bring “more news” to the NPS customer... our faculty, students and sponsors.

The Research and Sponsored Programs Office (RSPO) will begin monthly “brown bag” seminars on topics of importance to the research community. Subjects for future sessions are welcome. The initial schedule includes topics of frequent inquiries to the RSPO.

The RSPO is forwarding research opportunities to the appropriate departments as they are announced. A website of “opportunities” will be on-line shortly. Assistance is available in the RSPO for electronic submission of proposals. A resource is being developed to assist faculty with “proposal packaging.” This will include budget development, formatting of proposal, and coordination with collaborators. This support will be increasingly important as many sponsors are looking for “joint” proposal submissions.

**IMPORTANT DATES**

**Brown-Bag Seminar Series**
- Use of Human Subjects in Research, Wednesday, 22 July, 1200–1300, SP 101A
- Research Initiation Program, Wednesday, 12 August, 1200–1300, SP 101A
- Working with Industry, Wednesday, 23 September, 1130–1230, SP 101A

**Call for Proposals/White Papers**
- National Security Science and Engineering Faculty Fellowship Director, Defense Research and Engineering Intent to Nominate: 23 June White Paper Deadline: 7 July Proposal: By invitation only
- Young Investigator Program Air Force Office of Scientific Research Proposal Deadline: 29 July
- Major Research Instrumentation Program (MRI-R²) National Science Foundation NPS White Paper Deadline: 15 July Proposal Deadline: 10 August
- SPAWAR Student Fellowship Program Proposals Due: 30 July

**Research Board Meetings**

The Research Board meets the fourth Thursday of each month at 1500. The Board consists of representatives from each academic unit on campus as well as Faculty Council representation. The Vice President and Dean of Research chairs the Research Board.
Projects funded in May:

- Support for Joint Aircraft Survivability and Center for Survivability, Christopher Adams, MAE (JASPO)
- U.S. DoE Regional Modeling Panel Review, Wieslaw Maslowski, Oceanography (DOE/ORISE)
- Feasibility Study for Understanding Climate Uncertainty with Ocean Focus, Robin Tokmakian, Oceanography (NSF)
- Free-Electron-Laser Program, Bill Colson, Physics (Raytheon)

Projects funded in May:


NPS can work with industry through a Cooperative Research and Development Agreement or a “Work for Others” arrangement. The following agreements were executed in May 2009.

Cooperative Research and Development Agreements (CRADAs)
- Free Electron Laser Program, Raytheon Company, William Colson, Physics
- Development and Evaluation of Collaborative and Rapid Team Optimization System, Perceptronics Solutions, Inc., David Banks, Center for Asymmetric Warfare

Technical Services Agreements (TSAs)
- Lockheed Martin SUAV Flight Range Use, Lockheed Martin, Robert Bluth, CIRPAS
- TOYON Unicorn UAV Flight Testing, TOYON Research Corp., Robert Bluth, CIRPAS
- SUAV Flight Range Use, AeroVironment, Inc., Robert Bluth, CIRPAS

Student Rideshare Payload Model, California Space Education & Workforce Institute, James Newman and Rudolf Panholzer, Space Systems Academic Group
Graduate School of Business and Public Policy

Funds received to date: $7.7M

By Sponsor

- Navy (38%) $2.9M
- Defense (29%) $2.2M
- Air Force (6%) $500K
- Other (1%) $120K
- Joint (3%) $200K
- Other-Fed (3%) $500K
- Army (23%) $1.7M
- Defense (29%) $2.2M

Projects funded in May:
- Innovation Chair Funding, CAPT Terry Rea, USN, GSBPP (ONR)

School of International Graduate Studies (National Security Affairs only)

Funds received to date: $29.3M

By Sponsor

- DHS (24%) $21.7M
- Others (1%) $4K
- Other-Fed (1%) $11K
- Navy (1%) $448K
- Joint (4%) $1M
- Other-Fed (8%) $2.2M
- Defense (13%) $3.8M
- Air Force (1%) $273K
- CRADA (2%) $443K
- Other-Fed (3%) $560K
- Army (5%) $1.1M
- NSF (5%) $1.1M
- DHS (7%) $1.5M
- Defense (12%) $2.6M
- Joint (26%) $5.5M

Projects funded in May:
- Public Policy and Nuclear Threats Training Program/Proliferation Pathways in Asia Conference, Zach Davis, National Security Affairs (DTRA)
- US Pakistan Strategic Partnership: A Track II Dialogue for Long-Term Security Cooperation, Zach Davis, National Security Affairs (DTRA)
- Towards Effective Emerging Infectious Diseases Surveillance: Cambodia and Indonesia and the Experience of NAMRU-2, Sophal Ear, National Security Affairs (DTRA)
- Capturing the Narrative: the 1991 Uprising in Iraq, Abbas Kadhim, National Security Affairs (TAARI)
- US India Strategic Partnership IV, Samir Kapur, National Security Affairs (DTRA)
- Assurance Strategies and National Security, Jeffrey Knopf, National Security Affairs (DTRA)
- Preparing for Nuclear Expansion in Southeast Asia: Framework for Effective Cooperation and Enhanced Security, Michael Malley, National Security Affairs (DTRA)
- Understanding and Responding to Conflict in Africa: Implication of Focusing on Root Causes Versus Complex End-States, Jessica Piombo, National Security Affairs (DTRA)
- Nuclear Proliferation in the Middle East, James Russell, National Security Affairs (DTRA)
- 2009 Proliferation Seminar, James Russell, National Security Affairs (DTRA)
- US China Strategic Dialogue, Christopher Twomey, National Security Affairs (DTRA)
- NPS Asia Conference, Christopher Twomey, National Security Affairs (OSD)

Research and Education Institutes and Centers

Funds received to date: $21.9M

By Sponsor

- National Security Institute (29%) $6.3M
- CIRPAS (12%) $2.7M
- Center for Asymmetric Warfare (8%) $1.8M
- Meyer Institute (9%) $1.9M
- Cebrowski Institute (17%) $3.7M
- MOVES (17%) $3.8M
- Center for Nonproliferation Studies (17%) $3.7M
- National Security Institute (19%) $5.6M
- Defense (38%) $8.4
- Army (29%) $2.2M
- Other (1%) $254K
- Air Force (1%) $273K
- Defense (7%) $1.5M
- NSF (5%) $1.1M
- DHS (5%) $5.5M

Projects funded in May:
- Sean Eagle Operations at Camp Roberts, Bob Bluth, CIRPAS (NAVSPCENWGRU ONE)
- MWR Support for LPTO PAC-3 Testing at WSMR, Bob Bluth, CIRPAS, (SMDC)
- Lockheed Martin SUAV Flight Range Use, Bob Bluth
- EXI, JAS, AVCL and XML Support for Autonomous Robot Control, Don Brutzman, MOVES (TARDEC)
- Development and Evaluation of Collaborative and Rapid Team Optimization System, David Banks, CAF (Perceptronics Solutions, Inc.)

Congratulations to New Distinguished Professors

Dorothy Denning, DA
Nancy Haegel, PH
Robert Looney, NSA

Michael Morgan, ECE
Kevin Wood, OR

Volume 1, No. 1

May 2009
THE RSPO IS STRIVING TO IMPROVE INFRASTRUCTURE SUPPORT FOR RESEARCH ENDEAVORS AT NPS. THIS IS ESSENTIAL TO ACHIEVE THE GOALS OF THE NPS STRATEGIC PLAN. TWO RECENT HIRES TO THE NPS TEAM, FOCUSING ON PATENTS/INTELLECTUAL PROPERTY AND THE USE OF HUMAN SUBJECTS IN RESEARCH, ARE VITAL TO A HEALTHY RESEARCH ENTERPRISE.

CHAIRMAN, INSTITUTIONAL REVIEW BOARD: ANGELA O’DEA

Angela O’Dea has joined NPS as chairman of the Institutional Review Board (IRB), with oversight of the Human Research Protection Program (HRPP). A native of Ireland, O’Dea received a B.A. in psychology from the University of Glamorgan, Wales, and an M.Sc. in industrial and organizational psychology from the University of Manchester Institute of Science and Technology. Her interest in the role of human factors in accident prevention led to related research while completing her Ph.D in psychology from the University of Aberdeen, Scotland, where her doctoral research concerned the role of leadership in establishing a safety- and accident-prevention culture in the offshore oil and gas industry. She has designed and taught classroom and web-based human-factors courses to postgraduate engineering students.

PATENT ATTORNEY: LISA NORRIS

NPS’s new patent attorney, Lisa Norris, holds a B.S. in chemistry from the University of Texas, San Antonio, an M.S. in systems technology from NPS, and a J.D. from California Western School of Law. She served in the USAF as a communications-electronics officer. In her years as a patent and trademark lawyer, Norris has prepared and prosecuted patent applications in fields as diverse as electrical-component connectors, agricultural implements, chemical-treatment systems, medical devices, and bicycle inner-tube construction. Her specialties are computer-security methods and devices, integrated-circuit fabrication, gaming-machine technology, and database systems. Norris’s presence has already produced results for NPS—see patent applications listed below. In her short time with the Office of General Counsel at NPS, her work has already profited the research mission. Contact: lnorris@nps.edu

FY09 Patent Applications Filed

- Nonvolatile Storage of Secret Protected, Encrypted Data. Tim Levin, CS
- Hyperphase Shift Keying. Capt James Caldwell, USAF, MAE
- Electric-Current-Induced Liquid Metal Flow and Metallic Conformal Coating of Conductive Templates. Indranath Dutta, MAE
- Spacecraft Docking-Interface Mechanism. Marcello Romano (MAE) and Paul Oppenheimer (NRL)
- A Method to Reduce Fuel Consumption by Naval Vessels that Operate in Mixed Propulsion Modes. Gerald Brown, Jeff Kline, Richard Rosenthal, Alan Washburn, OR
- Active Feed-Forward Noise Vibration-Control System. Brij Agrawal, Suranthiran Sugathavin, MAE
- Triple Junction InGaP/GaAs/Ge Solar Cell. LCDR Michael H. Tsutagawa, USN, ECE
- Fullerene-Based Hydrogen Storage System. LT Charles Phillips, USN (MAE), Clyde Scandrett (MA), John Lloyd (MAE), Tengfei Luo
- Agile Attitude-Control System for Small Spacecraft. Marcello Romano (MAE) and Paul Oppenheimer (NRL)
- Miniature, Directional, Sound Sensor using Micro-Electromechanical System (MEMS). Gamani Karunasiri, Jose Sinibaldi, PH
- Method and Apparatus for Optimal Transmitter Placement in Wireless Mesh Networks. Capt Paul J. Niibolos, USMC, David Alderson, OR