The personnel in the support group that forms the research office have changed in recent months. Most significantly, Ms. Danielle Kuska has retired effective 3 January 2013. The importance of Danielle’s contributions to the NPS research enterprise during her tenure cannot be overstated. Even more unique, was the never flinching support that she gave to NPS faculty. Danielle devoted herself to helping us do our jobs. Please join me in thanking her when you see her around Monterey in the future.

The research office has reorganized to both replace and distribute the many job functions that were previously handed by Danielle. Here are the key business lines and points of contact:

**Research Leadership**
- Dr. Jeffrey Paduan, Vice President and Dean of Research
- CAPT Rod Abbott, Military Associate Dean
- Distinguished Prof. Kevin Wood, Associate Dean of Research. Among his many duties, Prof. Wood is chairing the project to create an online research portal. Prof. Wood is also chairing the non-tenure track sub committee of the Research Board.

*continued on page 7*
Projects funded in December through February:

- Evaluation of National Technical Means Satellite Resources, Philip Durkee, GSEAS Dean (NRL)
- Advanced Power Systems Model and Design Methods for Electrical Distribution Studies, Robert Ashton, EC (NAVSEA)
- Ohio Replacement Program Power Electronics Performance Evaluation, Robert Ashton, EC (NAVSEA)
- Detection and Demodulation of a Signal in the Presence of a Strong Co-Channel Interferer, Roberto Cristi, EC (NRO)
- Methods and Techniques for Reverse Engineering of Digital Systems, Douglas Fouts, EC (DIA)
- Cyberspace ISR Framework for Learning, Classification, & Prediction of Hidden Hypercube Cyber Behaviors, Deborah Gosborn, EC (ONR)
- (U//FOUO) Information Theory-Approach to Collection, Deborah Gosborn, EC (NRO)
- Configurable Fault-Tolerant Architectures and Algorithms for Reliable Space-Based Computing (CFTP) - Gusty Oriole, Herschel Loomis, EC (SAF)
- Space-Based Software Defined Radio, Herschel Loomis, EC (SAF)
- Field Precision Geolocation of 4G Mobile Devices, John McEachen, EC (SAF)
- Advanced Technical Exploration Program, John McEachen, EC (NSA)
- Development of a Large Software Repository of Known Provenance for Verification and Validation, John McEachen, EC (DARPA)
- Geolocation and Tracking in Cognitive Radio Networks, John McEachen, EC (NRO)
- Simultaneous Locating and Tracking of Large Numbers of 4G Mobile Devices, John McEachen, EC (NRO)
- Automated Program Analysis for Cybersecurity Control Team Support, John McEachen, EC (DARPA)
- Antennas for Directed Energy Systems, Michael Morgan, EC (ONR)
- Advanced Power Converters for Renewable Energy Interface, Giovanna Oriti, EC (ONR)
- Electronic Warfare Study to Support Surface Electronic Warfare Improvement Program Block III and Above Ocean Electronic Warfare Test and Evaluation, Pillip Pace, EC (NAVSEA)
- Navy’s Surface Threat Simulator Validation Working Group, Pillip Pace, EC (NRL)
- Signal Processing Algorithms for Surface Electronic Warfare Improvement (SEWIP) Block III Test and Evaluation, Pillip Pace, EC (NAVSEA)
- Estimation of Atmospheric Parameters in SAR Imaging, Ric Romero, EC (NRO)
- Interference Mitigation in 4G Communications, Ric Romero, EC (NRO)
- Active Authentication Phase 1A, James Sirofani, EC (DARPA)
- Source Localization in Cognitive Radio Networks, Murali Tummala, EC (SAF/FMBIB-AFOY)
- Component Level Reliability Study of Commercial Inverters for Use in PV Systems, Todd Weatherford, EC (NAVSEA)
- Electical and Defect Analysis of Carbon Nanotube Coax, Todd Weatherford, EC (NRO)
- Spacecraft Systems, Brij Agrawal, MAE (NRO)
- Adaptive Optics Center of Excellence for National Security, Brij Agrawal, MAE (NRO)
- Office of Naval Research Program Officer for the Counter Directed Energy Warfare, Directed Energy and Applied Electromagnetics Program, Brij Agrawal, MAE (ONR)
- Adaptive Optics Center of Excellence for National Security 6.1, Brij Agrawal, MAE (ONR)
- Adaptive Optics Center of Excellence for National Security 6.2, Brij Agrawal, MAE (ONR)
- Field Base Residual Stress Measurements for Predicting Stress Corrosion Cracking, Luke Brewer, MAE (OSD)
- Evaluation of Low Pressure Cold Spray Deposition for Repair of Corrosion Damage and Cracking in Steel Structures, Luke Brewer, MAE (OSD)
- Characterization of Fuel Nozzle Atomization Properties, Christopher Brophy, MAE (NAVSEA)
- A Study of Boundary Layer Physics to Successfully Influence Synthetic Jet Actuator Flow Control, Murali Chandrasekhara, MAE (US Army Aero-Flight Dynamics Directorate)
• Wind–Turbine Powered Cooling System With Thermal Storage, Anthony Cannon, MAE (ONR)
• Understanding and Mitigating Vortex-Dominated, Tip-Leakage and End-Wall Losses in a Transonic Splittered, Garth Hobson, MAE (ARO)
• Autonomous USV Navigation in Riverine Environments, Douglas Horner, MAE (ONR)
• Harbor Surveillance for Mine Reconnaissance, Douglas Horner, MAE (ONR)
• Flight Test of TIC3 System Using NPS UAV’s, Isaac Kaminer, MAE (ONR)
• Research of Composite Materials and Structures to Naval Applications, Young Kwon, MAE (NSWC–Carderock Division)
• Nanomaterial Architectures for Personal Protection Applications, Claudia Labro, MAE (ONR)
• Fundamental Combustion Studies of Bio/Synthetic Fuels and Blends, Characterization/Enhancement in Diesel Engines, Knox Millsaps, MAE (ONR)
• Energy Saving Technologies on Surface Ship Power and Propulsion Systems, Knox Millsaps, MAE (ONR)
• Modeling and GNC of Spacecraft Attitude Motion Using Analytic Solutions of the Rigid Body Mechanics, Marcello Romano, MAE (AFRL)
• Analysis, Simulation & Lab Experimentation of Guidance & Control of a Spacecraft with Robotic Manipulators for Physical Interaction with a Resident, Marcello Romano, MAE (NRO)
• Smart CMG Control Electronics for Enhancing Spacecraft Performance, I. Michael Ras, MAE (SAF)
• Control Moment Gyroscopes Duty Cycle for Analysis for Agile Spacecraft, I. Michael Ras, MAE (NRO)
• Advanced Missile Guidance, I. Michael Ras, MAE (NAWC–China Lake)
• Improvement of NRL’s COAMP Model by Improving the Radar Data Assimilation System and Model Physics, Chih-Pei Chang, MR (NRL)
• Transition of the 32-Day and 15-Day Forecasts of Tropical Cyclone Events to Operations in the Western North Pacific and Extension to Other Global Basin, Russell Elsverry, MR (ONR)
• Quantifying the Role of Atmospheric Forcing in Ice Edge Retreat and Advance Including Wind-Wave Coupling, Peter Guest, MR (ONR)
• State-Space Analysis of Model Error: A Probabilistic Parameter Estimation Framework with Spatial Analysis of Variance, Joshua Hacker, MR (ONR)
• Mountainous Terrain Atmospheric Modeling and Observations Program, Joshua Hacker, MR (ONR)
• The Probabilistic Nature of Extended-Range Predictions of Tropical Cyclone Activity and Tracks as a Factor in Forecasts of Tropical-Extratropical Interactions, Patrick Harr, MR (ONR)
• Tropical Cyclone Intensity and Structure Changes in Relation to Vertical Structure and Upper-Level Outflow, Patrick Harr, MR (ONR)
• A Multiscale Study of Tropical Cyclone Formation, Structure Change, & Predictability in the Western North Pacific Region & TCS08 Experiment Support, Michael Montgomery, MR (ONR)
• Exploiting Advanced Environmental Intelligence to Optimize the Effectiveness of Missions Involving Persistent Surveillance Monitoring of Known Threats, Tom Murphree, MR (NRO)
• Development of Precision Mine Detecting Capability Through Analysis of Rapid, Airborne, Reconnaissance (ROAR) Data, Peter Chu, OC (ONR)
• Characterization and Classification of Marine Mammal Vocalizations, Curtis Collins, OC (CNO)
• Reduced Physics Modeling of Acoustic Field Statistics for Deep & Shallow Water Environments: Simulation & Observational Validation, John Colais, OC (ONR)
• Modeling Wind Wave Evolution from Deep to Shallow Water, Thomas Herbers, OC (ONR)
• Wave-Current Interactions in Coastal Inlets and River Mouths, Thomas Herbers, OC (ONR)
• Physically Consistent Eddy-Resolving State Estimation & Prediction of the Coupled Pan-Artic Climate System at Daily to Interannual Time Scales Using the Regional Arctic Climate Model (RACM), Wieslaw Maslowski, OC (ONR)
• Relationship Between Morphology and Hydrodynamics Below Arctic Sea Ice in the Vicinity of a Pressure Ridge Keel, Timothy Stanton, OC (ONR)
• Investigation of the Effect of Detonation Convergence on Shaped Charged Jet Formation and Flow Stability, Ronald Brown, PH (ONR)
• Feasibility of High-Energy Fiber Lasers On-Board USMC Helicopters, Keith Cohn, PH (DOT&E)
• Office of Naval Research Directed-Energy Free Electron Laser Modeling and Ship Integration Research, William Colson, PH (ONR)
• Theory/Simulation to Understand Possible Destructive Short Wavelength Energy Coupling Into Nano-Structure Filled Composites, Dragoslav Grbovic, PH (ONR)
• Atomistic Simulations of Organomettalic Clusters for Energetic Materials, Joseph Hooper, PH (ONR)
• Modeling Environmental Effects on Energetic Signatures, Joseph Hooper, PH (ONR)
• Program Executive Office Integrated Warfare Systems (PEO-IWS), Theses and Curriculum Support, Andres Larraza, PH (NAVSEA)
• Support for Persistence and Activity Based Intelligence at NPS, Richard Olsen, PH (NGA)
• High Altitude Low-Earth Observatory (HALO) Mission Support, Richard Olsen, PH (US Army Geospatial Center)
• Multi-Int Expertise: Technical Support for Ground Systems 2013, Richard Olsen, PH (NRO)
• Space Superiority Systems Directorate Support, Richard Olsen, PH (USAF)
• Advanced Communications, Computing, and ISR Support, Richard Olsen, PH (NAVAIR)
• Nanocarbon-Reinforced Metal Armors, Sebastian Osswald, PH (ONR)
• Deep Seaweb Acoustic Communications and Underwater Networking, Joseph Riso, PH (SSC-Pacific)
• Advanced Reactor Concept (ARC) Program, Craig Smith, PH (DOE)
• Acoustic Sensing and Tracking from Autonomous Gliders, Kevin Smith, PH (ONR)
• Investigation of Beam Source and Collective Effects and Instabilities Relevant to High-Power Free-Electron Laser Performance, Richard Swent, PH (HEL Joint Tech Office)

continued on page 4
SPONSORED PROGRAM STATISTICS

GSEAS PROJECTS continued from page 3
- National Consortium for MASINT Research Support Project, David Trask, PH (DIA)
- Naval Chair of Systems Engineering and Systems Engineering Research Program, Daniel Burns, SE (Strategic Systems Program)
- Exploration of System Definition-Enabled Acquisition (SDEA) Methods and Practices, Ronald Carlson, SE (NAVAIR)
- Hybrid Centralized and Decentralized Algorithms for Resource Optimization in Stochastic Environments, Timothy Chung, SE (ONR)
- Peace Support Operations Module (PSOM) SFA/CT Development, Alejandro Hernandez, SE (Joint Chief of Staff)
- Iliciencies Tradespace and Affordability Program, Raymond Madachy, SE (DASA)
- Demonstration of Exterior Insulation and Finishing Demonstration of Aerosol Duct Sealing Technology at the Department of Navy Facilities, Fernand Marquis, SE (NAVFAC)
- Improved Wind Resistance Rooftop Photovoltaic Systems, Fernand Marquis, SE (ONR)
- Maintenance of Body of Knowledge and Curriculum to Advance Systems Engineering, David Olwell, SE (OSD)
- Master Of Science Systems Engineering Development, Walter Owen, SE (NSWC-Panama City)
- Master of Science Systems Engineering, Walter Owen, SE (Various)
- Feasibility Study of Just in Time Magnetic Silencing, Fotis Papoulias, SE (ONR)
- Naval SE Guide Technical Writing Project, Clifford Whitcomb, SE (NSWC-Carderock Division)
- Space Situational Awareness: CubeSat Integration, Test, and Operations, Jim Newman, SP (Lawrence Livermore National Laboratory)
- GEMSat: NPS CubeSat Launcher (NPSCUL) Flight Structure, Flight Documentation and Integration Activities, Jim Newman, SP (NRO)
- Mobile CubeSat Command and Control (MC3) Development and Support, Jim Newman, SP (NRO)
- NPSCUL and Sequence Upgrade and Development Support, Jim Newman, SP (NRO)
- Military Satellite Communications Short Course, Rudolf Panholzer, SP (SAF)
- Space Systems Engineering Experience Tour and Space Systems Engineering Support, Rudolf Panholzer, SP (NRO)
- Future Submarines and Unmanned Systems Study, Jerry Ellis, UW (General Dynamics)

School of International Graduate Studies
New funds available: $7.7M*

By Department

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<th>Department</th>
<th>Amount</th>
<th>Percentage</th>
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<tr>
<td>National Security Affairs</td>
<td>$7.4M</td>
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By Sponsor

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<td>Army</td>
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<tr>
<td>Joint</td>
<td>$62K</td>
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Projects funded in December through February:
- Consequences of Failure in Afghanistan, Thomas Johnson, NS (ODNI)
- Project on Advanced Systems and Concepts for Countering WMD PASC FY 13 Research, Clay Moltz, NS (DTRA)
- Military Innovation, Organizational Learning, and Performance in Irregular Warfare in Afghanistan, Daniel Moran, NS

Graduate School of Business and Public Policy
New funds available: $3.7M*

Projects funded in December through February:
- Advanced Acquisition Program: Phase 1 Only (Aap 53-33), John Dillard, GSBPP (USMC - MARCORSYSCOM)
- PEO Ships - Acquisition Research Program Support, Keith Snider, GSBPP (PEO SHIPS)
- Support for Energy Systems Technology Evaluation Program, Keith Snider, GSBPP (ONR)
- DSCA - Forecast Modeling in Foreign Military Sales Program, Keith Snider, GSBPP (DSCA)

By Sponsor

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<tr>
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<th>Amount</th>
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<tr>
<td>Air Force</td>
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<td>Navy</td>
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<tr>
<td>Joint</td>
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</table>
**Graduate School of Operational and Information Sciences**

New funds available: $9.9M*

### By Department

- **Defense Analysis**
  - $1.2M
  - 12%
- **Computer Science**
  - $3.2M
  - 32%
- **Information Sciences**
  - $3.2M
  - 33%
- **Operations Research**
  - $2.3M
  - 23%

### By Sponsor

- **DoD**
  - $3.7M
  - 37%
- **CRADA**
  - $155K
  - 2%
- **Air Force**
  - $250K
  - 3%
- **Other-Fed**
  - $389K
  - 4%
- **Other**
  - $18K
  - <1%
- **NSF**
  - $200K
  - 2%
- **DHS**
  - $500K
  - 5%
- **Joint**
  - $477K
  - 5%
- **Navy**
  - $3.6M
  - 36%

Projects funded in December through February:

- Navy Certifier Special Offering, Karen Burke, CS (NSWC-Car-derock Division)
- Secure Mobile Devices Analysis, George Dinolt, CS (SPAWAR)
- Monitoring and Detection for Self Aware Computing, Doran Drusinsky, CS (ONR)
- IARPA Stonerosp Expert Advisory Group, Christopher Eagle, CS (IARPA)
- Establish/Maintain Software Engineering Test Lab (SETL), Luigi, CS (JIOWC)
- XPlane, Dennis Valpano, CS (ONR)
- Special Operations Technology, Nancy Ann Budden, DA (OSD)
- Development of a Social Network Analysis Training Program for SOCSOUTH, Sean Eiverton, DA (NELO)
- 2013 Long Term Strategy Seminar NPS, Anna Simons, DA (ONA)
- Lighthouse Collection and Methodological Support to Salinas Police Department, Dan Boger, IS (DHS)
- NPS Support to NGA/NEA for Global Cloud Computing (FY13), Dan Boger, IS (NGIA)
- Naval Tactical Cloud, Dan Boger, IS (USMC - Intelligence Headquarters)
- Expeditionary Cloud Computing Architecture in Support of Logistical Decision Making Platform, Dan Boger, IS (HQMC Installations Command)
- Disaster Risk Reduction and Resilience and Communication Capabilities (DR3C2), Dan Boger, IS (DHS)
- Emergency Operations Center in a Box for First Responders, Dan Boger, IS (DHS)
- Detector Low Visibility Networking, Alex Bordeltsky, IS (DTRA)
- Technical Support to SPAWARSYSCEN/Joint Staff Secure Web Integration Framework (SWIF) Project, Raymond Buettner, IS (Joint Staff Directorate for Global Operations)
- Joint Staff Chair of Technical Operations, Raymond Buettner, IS (Joint Staff Directorate for Global Operations)
- Trident Warrior FY13, Shelley Gallup, IS (U.S. Fleet Forces Command)

- Information Dominance Center of Excellence (IDCOE), Jennith Hoyt, IS (ONI)
- Cyber Security and Emergency Preparedness Studies, Alan Jaeger, IS (City of San Diego)
- Assessment of Technologies and Capabilities Impacting Maritime Security, John Osmundson, IS (NMIO)
- The Human Social Cultural Behavior Modeling Initiative at the Naval Postgraduate School, Jeffrey Appleget, OR (ONR)
- Joint Warfare Analysis Center Research Program at the Naval Postgraduate School, Jeffrey Appleget, OR (JWAC)
- Seminar on Trans-Atlantic Civil Security Course, Andrew Bellenkes, OR (George C. Marshall Center)
- Analysis Support for Comprehensive Soldier Fitness, Samuel Buttrey OR (TRAC - Monterey)
- Army Study to Assess Risk and Resiliency in Soldiers (STARRS) Validation and Analysis, Samuel Buttrey, OR (TRAC - Monterey)
- Right Size Virologic Surveillance Project, Ned Dimitron, OR (UT, Austin)
- Capability Portfolio Analysis Tool Technical Verification, Paul Ewing, OR (PEO GCS)
- Marine Corps Combat Development Command Survey Research Methods Short Course, Ronald Frieder, OR (MCCDC)
- Understanding Optimal Decision Making in Wargaming Using Neuropsychological Measures, Meghan Kennedy, OR (TRAC - Monterey)
- Chair of Warfare Innovation - Naval Warfare Development Command, Deidre McLa, OR (NWDC)
- Implementation of an Alternative Watchstanding Schedule on United States Navy Surface Combatants, Nita Shattuck, OR (Naval Medical Research Center)
- Analysis of Alternative Watchstanding Studies, Nita Shattuck, OR (ONR)
- Science of Test: Advanced Test and Evaluation in Support of DoD Test and Evaluation Enterprise, Rachel Silvestrini, OR (AFIT)

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

New funds available: $10.6M*

(* No Carryover Funds included)

By Department

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<th>Department</th>
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<tbody>
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<td>NPS-SOCCOM FX Program</td>
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<td>MOVES</td>
<td>$3.0M</td>
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<td>Cebrowski</td>
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<td>DRCSI</td>
<td>$522K</td>
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<tr>
<td>Other</td>
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<tr>
<td>Other-Fed</td>
<td>$4.9M</td>
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By Sponsor

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<th>Sponsor</th>
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<tr>
<td>DoD</td>
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<tr>
<td>CRADA</td>
<td>$23K</td>
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<tr>
<td>Army</td>
<td>$1.2M</td>
<td>11%</td>
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<td>Navy</td>
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<tr>
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<tr>
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<td>$265K</td>
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Projects funded in December through February:

- Strategic Communication Workshop, Winli McAnally, CEE (Various)
- Tajikistan Peacekeeping Operations Legislative Workshop, Alan Howard, USPTC (NETSAFA)
- Women, Peace and Security - Program Assessment (CECO-PAC, Chile), Alan Howard, USPTC (USOUTHCOM)
- Business Innovation Initiative (BII) Project Support Using Massive Multiplayer Online War Game Leveraging the Internet (MMOWGLI), Donald Brutzman, MOVES (NAVSEA)
- Electromagnetic Maneuver (EM2) Project Support Using Massive Multiplayer Online War Game Leveraging the Internet (MMOWGLI), Donald Brutzman, MOVES (NWDC)
- MMOWGLI Fixed-Cost Game Deployment Support and Community Launch, Donald Brutzman, MOVES (ONR)
- Developing a Distributed MOCAP, Teledirection and Streaming Media Testbed and Technology Demonstration for NUWC Stem Efforts, Donald Brutzman, MOVES (NUWC-Newport Division)
- Advanced Distance Learning (ADL) Initiative (ADLI) Research and Technical Support, Paul Chatelier, MOVES (DHRA)
- Science and Technology Support for Office of Naval Research Code 341, Paul Chatelier, MOVES (ONR)
- Moving Target Engagement Training (MTET) Development and Refinement, Rudolph Darken, MOVES (USMC - Warfighting Lab)
- Simulation Support for Engineering Resilient Systems Program, Joseph Sullivan, MOVES (USAERDIC, Waterways)
- Technical Support and Operational Analysis and Related Field Experimentation Phase 1, Raymond Buettner, NPS-SOCCOM (ARL)
- Joint Interagency Field Exploration (JIFX) Project Homeland Security Focus, Raymond Buettner, NPS-SOCCOM (DHS)
- Naval Special Warfare Group Ten Training Support, Robert Bluth, CIRPAS (NSWG10)
- Marine Corps Warfighting Laboratory Field Experimentation, Robert Bluth, CIRPAS (USMC - Warfighting Lab)
- United States Marine Corps Ground/Air Task-Orientated Radar Demonstration Test, Robert Bluth, CIRPAS (NSWC-Port Hueneme Division)
- Marine Corps Warfighting Laboratory Field Experimentation, Robert Bluth, CIRPAS (USMC - MCWL)
- Arrow Light Flight Test, Robert Bluth, CIRPAS (Stark Aerospace, Inc.)
- Radiobots: Autonomous Cognitive Radios for Jammer Resistant SATCOM and SIGINT, Sivaguru Sridharan, DRCSI (NRO)
- Stochastic Analysis and Control Multiple Moving/Rotating Aerodynamic Bodies with Application to Autonomous Unmanned Systems/Helicopters, Sivaguru Sridharan, DRCSI (ARO)

COMING SOON:

Changes in DoD Policy have led to the need to discontinue use of Survey Monkey and other similar systems not under DoD control. In response to this, the Research Office, Institutional Research, and ITACS have teamed up to bring you LimeSurvey. Your survey(s) and data will now be kept private and secure on NPS web servers. We are nearing completion of the testing phase and will soon be hosting training sessions on how to use this software. In the meantime, please visit the LimeSurvey site NPS LimeSurvey Wiki, and the Institutional Review Board (IRB) for more information.

- Lime Survey Website: http://www.limesurvey.org/
- Online Documentation: http://docs.limesurvey.org/tiki-index.php
- NPS IRB Website: http://www.nps.edu/research/IRB.htm
Research and Sponsored Programs (RSPO)
• Dr. Jeffrey Paduan, Vice President and Dean of Research
  This area includes the bulk of the tasks previously under Danielle. Dr. Paduan will be leading this section of the office until a new director can be recruited.

Compliance, Analysis, and Systems
• Prof. Ira Lewis, Director
  This area includes the Human Research Protection Program and aspires to include support for identifying new research opportunities. Prof. Lewis will also be a primary analyst reviewing new systems going forward.

Research Safety & Export Control
• Mr. Terry Wichert, Acting Director
  This area includes the technical safety experts dedicated to facilitating NPS research and an overall culture of safety. Military Associate Dean CAPT Rod Abbott works closely with this group and with faculty on export control among his other duties.

Graduate Writing Center/Thesis Support Center
• Dr. Sandi Leavitt, Director
  This area supports thesis processing and is developing the parameters for the new NPS writing support center in concert with two faculty committees.

Research Board
• Each department and institute has a member of the Research Board. The Board meets monthly; it is a primary conduit for information to the department level.

Research Web Sites
• The research office posts information on both the Intranet and the .edu web:
  •  http://intranet.nps.edu/Research.htm
  •  http://www.nps.edu/research/
• There is a good deal of relevant information and up-to-date forms on these web sites. There is also a desperate need to update the sites. We are planning for a major rewrite of the web services in conjunction with ITACS’ new content management system, as well as a major integration of the new web services with the research portal and future proposal tracking systems. We are looking for input on how to better serve the research community. If you have any ideas on how to re-focus our website or communications/publications, please pass the word though your Research Board member, or though the Dean of Research Suggestion Box located on the external Research homepage.

If you any questions or need reimbursable program assistance, please contact the Dean of Research or the appropriate lead in the research office.

NPS RESEARCH INFORMATION:
• Past editions of “Research News” are available at: http://www.nps.edu/research/Newsletters.html
• The Annual Summary of Faculty Research is available at: http://www.nps.edu/research/SummaryRes.html
• The Faculty Expertise Directory is available at: http://faculty.nps.edu/vitae/cgi-bin/vita.cgi

INTERIM PUBLIC RELEASE POLICY

Effective 25 March 2013, NPS is in the process of revising and expanding its public release procedures for publications and presentations authored by its faculty, staff, and students. The process is being coordinated by the Dean of Research with broad input from the many stakeholders.

In the interim period while the final policy is being developed and implemented, NPS has established a review and acknowledgment procedure for ALL MANUSCRIPTS OR TECHNICAL REPORTS SUBMITTED FOR EXTERNAL PUBLICATION. Note: this is an expanded requirement all publications, not just those publications seeking payment for page charges. In the latter case, the Research Office will notify Navy contracting that the document to be published has been cleared for public release once the required form is received. (A flow chart for the process can be downloaded at http://intranet.nps.edu/ResAdmin/templates/DoR_Interim_Release_Process.pdf)

Until further notice, authors seeking payment of publication page charges must take the following actions:

2. Request review and signature of the Department Chair, Associate Chair for Research, or Dean of Research as the second level reviewer, and
3. Return the signed form to the Dean of Research at research@ nps.edu

This interim release form has been based on the long-standing thesis release form. It is designed to establish the primary distribution characteristic of the document as determined by the subject matter expert, namely the primary author or advisor.

The Interim Public Release Policy webpage can be found at: http://intranet.nps.edu/ResAdmin/PublicRelease.htm. Future updates to this policy will be posted here. Please check back often for any changes in forms and procedures.
APPLIED MATHEMATICS

CEBROWSKI INSTITUTE

CENTER FOR HOMELAND SECURITY AND DEFENSE (CHDS)

CENTER FOR INTERDISCIPLINARY REMOTELY-PILOTED AIRCRAFT STUDIES (CIRPAS)

COMPUTER SCIENCE

CYBER ACADEMIC GROUP

DEFENSE RESOURCES MANAGEMENT INSTITUTE

ELECTRICAL & COMPUTER ENGINEERING

GLOBAL PUBLIC POLICY ACADEMIC GROUP

GRADUATE SCHOOL OF BUSINESS AND PUBLIC POLICY

INFORMATION SCIENCES


MECHANICAL AND AEROSPACE ENGINEERING


Wacey, D., Menon, S., Green, L., Gerstmann, D., Gong, C., Mcloughlin, N., et al. (2012). Taphonomy of very ancient microfossils from the similar to 3400 ma strelley pool formation and similar to 1900 ma gunflint formation: New insights using a focused ion beam. Precambrian Research, 220, 234-250.

Weather and Forecasting


METEOROLOGY


**MODELING, VIRTUAL Environments, AND SIMULATION (MOVES) INSTITUTE**


**NATIONAL SECURITY AFFAIRS**


**OCEANOGRAPHY**


**OPERATIONS RESEARCH**


FACULTY NEWS


**PHYSICS**

**SYSTEMS ENGINEERING**

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http://www.nps.edu/research/SummaryRes.html

Research at the Naval Postgraduate School is carried out by faculty in the School’s eleven academic departments, seven interdisciplinary groups, and the School of Aviation Safety. This site contains research summaries for the projects undertaken by faculty, an overview of the department, faculty listing, a compilation of publications/presentations, and abstracts from theses directed by the department faculty.

**TECHNOLOGY TRANSFER/AGREEMENTS**

**COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA)**
Title: Comparing Failed, Foiled, Completed, and Successful Terrorist Attacks
Partner: University of Maryland
PI: Erik Dahl, National Security Affairs
Summary: Naval Postgraduate School and University of Maryland will compile structured data on all failed, foiled, completed, and successful attacks by Al Qaeda and affiliated organizations. The critical distinctions among failed, foiled, and successful attacks will be the foundation for systematic comparative analysis to determine which variables lead to which outcomes. Researchers will employ a novel comparative analytical framework using non-metric multi-dimensional scaling techniques as well as organizational theory in order to generate crucial in sights on what types of attacks by what types of actors are likely to produce damage.

**SPACE SYSTEMS ACADEMIC GROUP**

**UNDERSEA WARFARE ACADEMIC GROUP**

**OTHER NPS DEPARTMENTS**


**PHYSICS**

**SYSTEMS ENGINEERING**

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**SPACE SYSTEMS ACADEMIC GROUP**

**UNDERSEA WARFARE ACADEMIC GROUP**

**OTHER NPS DEPARTMENTS**

Title: Cross Domain Multi-Intelligence Data Fusion Techniques
Partner: The MITRE Corporation
PI: Jim Scrofani, Electrical and Computer Engineering
Summary: Both the Naval Postgraduate School and the National Security Engineering Center (NSEC), a MITRE managed Federally Funded Research and Development Center, have extensive expertise for developing CDMI data fusion techniques and technologies and can contribute with solutions for this challenge.

Title: Future Submarines and Unmanned Systems Study
Partner: Electric Boat Corporation
PI: Jerry Ellis, Undersea Warfare Academic Group and Deidre McLay, Chair of Warfare Innovation
Summary: Naval Postgraduate School and Electric Boat Corporation will explore the capabilities of current and future submarines and unmanned systems. Collaborators will design and test a scenario employing submarines and unmanned systems to counter a proposed and plausible threat. The research effort will explore key capabilities, assess real world relevance of emerging concepts, and identify areas where future developments may be warranted.

Title: Collaboration Information Infrastructure for Planning Operations and Evaluation
Partner: Perceptronics, Inc.
P1: Alan Jaeger, Center for Asymmetric Warfare
Summary: The goal of this collaboration is to develop a new type of system for planning, operations and evaluation that helps meet these important needs. The Collaborative Information Infrastructure for Planning, Operations, and Evaluation (CIIPOE) will include capabilities for critical information integration, collaborative course of action develop and evaluation, operations planning, after action review, and training. This research will leverage a functional fields test environment in order to evaluate the CIIPOE methodology and further refine the development and concept of operations.

Title: Right Size Virologic Surveillance Project
Partner: University of Texas at Austin
PI: Ned Dimitrov
Summary: The collaborators will evaluate the representativeness of CDC influenza laboratory surveillance data, develop a statistical tool to guide state-level laboratory sampling strategies and develop recommendations for modifying the national laboratory-based influenza surveillance system to improve the power and representativeness of lab surveillance data.

Title: Equipment Loan
Partner: Quinetiq North America, Inc. Technology Solutions Group
PI: Oleg Yakimenko, Systems Engineering
Summary: Equipment will be used for testing the capability to utilize wind measurements provided by a balloon or dropsonde in order to improve touchdown accuracy of the Parafoil-based delivery system, Snowflake.

Title: Loan Agreement
Partner: RnR Products, Inc.
PI: Kevin Jones, Mechanical and Aerospace Engineering
Summary: Naval Postgraduate School will loan material to RnR Products, Inc. for the testing of integrating high efficiency solar cells into a high-efficiency airplane frame.

Title: Loan Agreement
Partner: ReconRobotics, Inc.
P1: Oleg Yakimenko, Systems Engineering
Summary: ReconRobotics, Inc will loan equipment to Naval Postgraduate School for the testing of capability of safely deploying a ground robot utilizing a guided aerial parafoil-based delivery system Snowflake as part of the Joint Interagency Field Exploration/Research & Experimentation for Local & International Emergency & First-Responders (JIFX/RELIEF) field studies.

Title: Loan Agreement
Partner: NexGen Communications, LLC.
P1: Brian Steckler, Information Sciences
Summary: NexGen Communications, LLC will loan equipment to Naval Postgraduate School for testing and evaluation beyond line of sight netted satellite communications and handheld situation awareness with tactical radios.

Title: Equipment Loan
Partner: Infinite Z, Inc.
P1: Don Brutzman and Amela Sadagic, MOVES Institute
Summary: Naval Postgraduate School will use equipment solely for the testing and evaluation of the zSpace Haptic 3D Interactive Display applicability to Web3D Visualization, Human-Computer Interaction Education, and Virtual Reality Training Applications using Medical and Computer Aided Design models built with ISO-Standard Extensible 3D Graphics.

Title: Equipment Loan
Partner: NTT IT Corporation
P1: Don Brutzman, MOVES Institute
Summary: Naval Postgraduate School will use equipment solely for the testing and evaluating of the capabilities of the NTT XMAS System with “Meeting Plaza” server-based software for multi-user video-based web meetings and legacy VTC systems, for support of advanced VTC and Remote Collaboration in a mixed VTC and network environment.
MEMORANDUM OF UNDERSTANDING (MOU)
Title: Memorandum of Understanding between the Joint Staff, Force Structure, Resources and Assessment and Naval Postgraduate School
Partner: Joint Staff Force Structure, Resources, and Assessment (J-8)
PI: Alejandro Hernandez, Systems Engineering
Summary: The purpose of this Agreement is to document the specific support Naval Postgraduate School (NPS) will receive from Joint Staff Force Structure, Resources, and Assessment (J-8) in order to support the proposal, “Peace Support Operations Module (PSOM) SFA/CT Development.”

MEMORANDUM OF AGREEMENT (MOA)
Title: Memorandum of Agreement among Officer of the Under Secretary of Defense for Policy, Chief of Staff and Principal Deputy, Deputy Assistant Secretary of Defense Rapid Fielding and Naval Postgraduate School for Special Operations Technology Support
Partner: Office of the Under Secretary of Defense for Policy, Chief of Staff and Principal Deputy, Deputy Assistant Secretary of Defense Rapid Fielding
PI: Nancy Ann Budden, Defense Analysis
Summary: The purpose of this Memorandum of Agreement (MOA) is to promote and support the development, demonstration, and rapid transition of special operations and counter terrorism technologies in response to critical Department of Defense (DoD) policy directive and warfighter requirements. The Naval Postgraduate School will provide a term civil service position to act as the Director for Special Operations Technology (DSOT) under the Rapid Fielding Office within OASD R&E and DUSD POL CoS. This position will provide a key interface between OUSD Policy (POL) and OASD R&E, AT&L, with additional interfaces to the Unified Combatant Commands, intelligence community, Special Operations Commands, JSOC, and other specific customers, for DoD Counter Terrorism Technology and focused technology development.

PATENT APPLICATIONS AND FILINGS
“Dipole With an Unbalanced Microstrip Feed,” Navy Case No. 10120001
Inventors: Professor David Jenn

“Agile Attitude Control System for Small Spacecraft,” Navy Case No. 20090004
Inventors: Professor Marcello Romano and Dr. Paul Oppenheimer

TECHNICAL REPORTS PUBLISHED

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<tr>
<th>Report Number</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>NPS-CS-12-005</td>
<td>Transport Traffic Analysis for Abusive Infrastructure Characterization</td>
<td>L. Nolan, R. Beverly, G. Xie</td>
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<tr>
<td>NPS-MR-13-001</td>
<td>Validation of the Voice of America Coverage Analysis Program (VOACAP)</td>
<td>P.S. Guest, A.A. Guest</td>
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<tr>
<td>NPS-OR-13-001</td>
<td>Capability Portfolio Analysis Tool (CPAT) Verification and Validation Report</td>
<td>L. Ewing, R. Dell, M. MacCalman, L. Whitney</td>
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