Graduate School of Operational and Information Sciences   Sponsored Research Annual Reports

2008

Sponsored Programs Annual Report / Graduate School of Operational and Information Sciences, Fiscal Year 2008

Monterey, California. Naval Postgraduate School, Research and Sponsored Programs Office

http://hdl.handle.net/10945/27449

Program Information

The Graduate School of Operational and Information Sciences (GSOIS) includes graduate resident programs consisting of sixteen technical curricula and awards masters of science and doctoral degrees in four academic departments.

Researcher working on CyberCEIGE, a network-defense training game developed in the computer-science department

In response to the needs of naval and military customers, GSOIS graduate education and cutting-edge research are focused in four nontraditional knowledge domains: information science and technology; military computer science; military operations analysis and research; and special operations and related defense analyses.

The emphasis of sponsored activities is on mathematical, scientific, and technical skills needed to understand the state of the art and foster improvements in military systems and operations, including integration of topics contained in classical academic disciplines in militarily relevant ways; and subject matter suited to the corporate university's military customer; and faculty expertise in new delivery methods such as distance learning. Our many sponsors value our ability as a department to combine military benefit with academic excellence.

Curricula sponsored in GSOIS include special operations, information warfare, electronic warfare, psy ops, joint C4I, computer science, information systems and operations, information-systems technology, software engineering, operations analysis, and operational logistics.
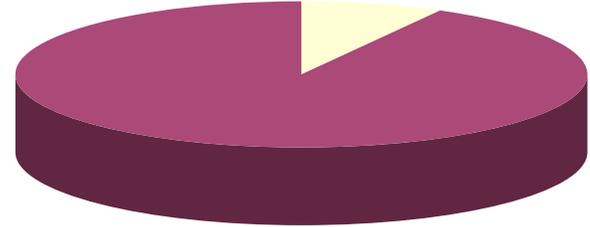

Operations Research student conducting experiments in the Human Systems Integration Laboratory.

Sponsored Program Expenditures

October 2007–30 September 2008
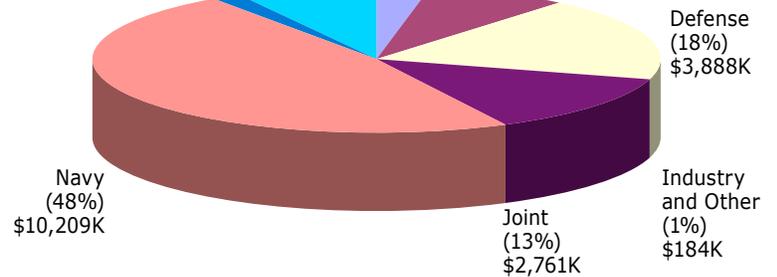Total Expenditures: $21.5M

By Type of Activity

Research (92%) $19,716K
Education (8%) $1,725K

By Sponsor

NSF (1%) $318K
Other Fed (8%) $1,725K
Air Force (3%) $648K
Army (8%) $1,733K
Defense (18%) $3,888K
Industry and Other (1%) $184K
Joint (13%) $2,761K
Navy (48%) $10,209K

By Department

Operations Research (20%) $4,306K
Computer Science (23%) $5,031K
Defense Analysis (10%) $2,117K
Information Sciences (47%) $10,306K

Dan Oliver, President
Leonard Ferarri, Executive Vice President and Provost
Dan Boger, Interim Vice President and Dean of Research
Peter Purdue, Dean, Graduate School of Operational & Information Sciences
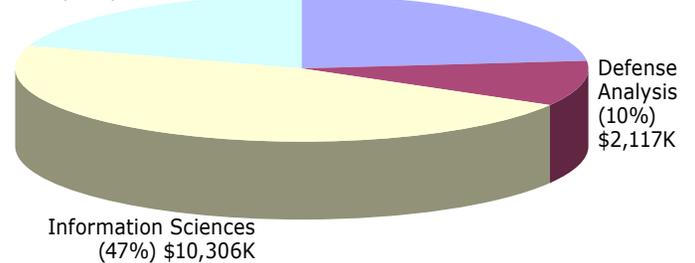
Computer Science

By Activity

Service (<1%) $20K
Education (14%) $685K
Research (86%) $4.3M

By Sponsor

Other Fed (35%) $1.7M
Air Force (2%) $96K
Army (13%) $677K
Industry (1%) $65K
Defense (9%) $456K
Joint (4%) $188K
Other (<1%) $22K
NSF (6%) $318K
Navy (30%) $1.5M
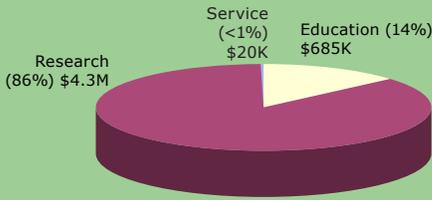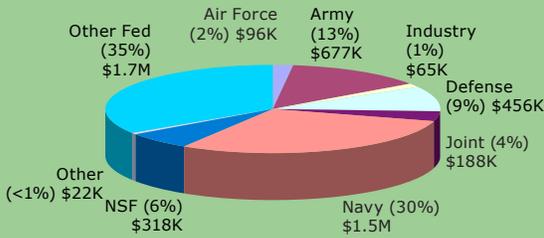
Size of Program: $5M

Defense Analysis

By Activity

Research (82%) $1.7M
Education (18%) $381K

By Sponsor

Navy (31%) $652K
Air Force (4%) $88K
Joint (3%) $65K
Defense (62%) $1.3M
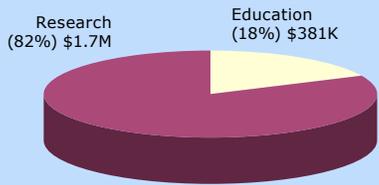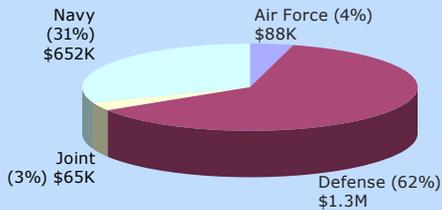
Size of Program: $2.1M

Information Sciences

By Activity

Education (4%) $446K
Research (96%) $9.6M

By Sponsor

Other (<1) $13K
Army (<1%) $29K
Defense (14%) $1.4M
Joint (24%) $2.4M
Navy (62%) $6.2M

Size of Program: $10M

Operations Research

By Activity

Education (5%) $241K
Research (95%) $4.1M

By Sponsor

Navy (43%) $1.9M
Air Force (11%) $464K
Army (24%) $1M
Industry (2%) $84K
Defense (17%) $712K
Joint (3%) $146K
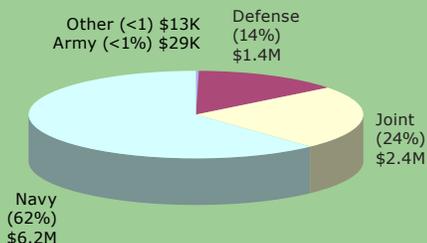
Size of Program: $4.3M

Computer Science (CS)

The Computer Science Department offers graduate education in the principles and practice of computing, with thesis options of military relevance. The curriculum is organized around the great principles of computing, and it provides concrete experience in the practices, skills, and habits of thought that mark the computing professional, including programming, systems, modeling, and innovation. Faculty researchers have founded major research centers in information security, software engineering, networking, mobile devices, and modeling, virtual environments, and simulation. The faculty and students also participate significantly with the Cebrowski Institute for Information Innovation and Superiority, the MOVES Institute, and the Meyer Institute for Systems Engineering.

Defense Analysis (DA)

With its roots in special operations, the Department of Defense Analysis is founded on the principle that human capital is the decisive element in modern warfare. The department offers a combined course of instruction in the soft and hard sciences to provide students with the rapid problem-solving skills needed to dominate the unconventional battlefields of the 21st century. Its principal focal areas are in terrorism, counter-insurgency, irregular warfare, and information operations. The result is policy-relevant thesis work and timely sponsored research that is duplicated nowhere. From the strategic level (National Security Council) to the tactical (battalion and company command), defense analysis graduates are planning and executing American strategy in the global war on terrorism.

Information Sciences (IS)

The Information Sciences Department provides in-residence graduate education, as well as a continuum of career-long learning opportunities, in support of defense requirements in the areas of information sciences, systems, and operations. The department maintains an internationally respected research program in selected areas of information sciences that are required to support graduate education and provide expertise and support to the Department of Defense in all areas of information sciences, systems, and operations. In addition to several laboratories focused on specific research areas, the department is a primary user of the Secret Internet Protocol Router Network (SIPRNET) and the Joint Worldwide Intelligence Communication System (JWICS) laboratories.
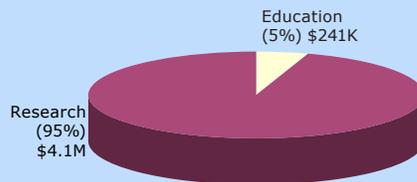
Operations Research (OR)

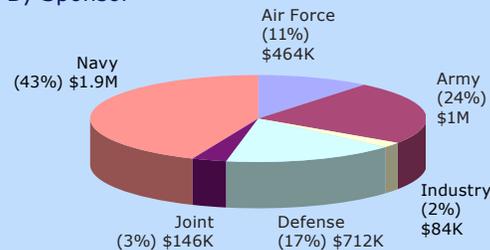The mission of the Operations Research Department is to prepare graduates to conduct independent analysis of DoD and national-security problems and to maintain an exemplary research program in operations-research theory and practice. Students and faculty use mathematical modeling, probability, statistics, and computer simulation to model, and thereby better understand, a wide range of critical, complex problems. Applications include national-policy analysis, resource allocation, force composition and modernization, logistics, human resources, battle planning, flight operations scheduling, intelligence, command and control, weapon selection, engagement tactics, maintenance and replenishment, and search and rescue.