
DEPARTMENT SUMMARY

The research program in the Department of Operations Research seeks to advance the state of knowledge in key technology areas important to the Department of the Navy, Department of Defense, and military planning.

- Research is evaluated by three criteria: scholarship, relevance, and education.
- Scholarship is traditionally demonstrated by written research papers that appear in the open literature after peer review by experts in the field. Products of scholarship also include technical reports, student theses, reports to sponsors, and conference presentations.
- Relevance is evident when sponsors are willing to underwrite the cost of research. When sponsors or their clients use research results, the research gains importance.

Education is our primary mission. Research directly supports graduate instruction. Each graduate faculty member is required to have an earned doctorate degree, or equivalent, and is expected to conduct and to publish original scholarly research in his or her fields of graduate instruction. Research and publication are the hallmarks of demonstrated expertise and the foundations of a graduate academic department.

Research Mission Statement of the Operations Research Department

Traditional basic research areas in the Operations Research Department include: Optimization; Probability and Stochastic Models; and Statistics and Data Analysis. In addition, related topics are also pursued such as Human Systems Integration; Search, Detection, and Evasion; Games, Tactics, and Strategy; and War Gaming and Simulation.

The Operations Research Department operates a number of research laboratories:

- Human Systems Integration Lab, GI 221 (3,080sf):
Computers, psychometric experimental equipment.
- Learning Research Centers:
GI-128 (952sf), GI-203 (1,080sf), GI-318 (960sf);
Networked PCs and servers;
Video display projectors;
OR Departmental licensed software suite.
- Optimization Lab, GI-206 (288sf):
IBM RS-6000s, various computers and support hardware;
Commercial optimization software suite for DoD internet access;
Topical thesis and publication library.
- Operational Logistics Lab, GI 274 (160sf):
Development and use of TACLOG models, logistics exercises;
NAVY TAC 3 computer;
Topical thesis and publication library.
- Statistics Lab, GI 221 (shared space):
Computers, exploratory data analysis software.
- Analysis and Simulation Lab , GI 286 (600sf):
Unix computers, visual displays, software.
- Secure Computing and Simulation Lab, In 157 (3,400sf):
Classified wargame facility;
Sun SPARCstations, Silicon Graphics Indigo R4000, PC network.

The Operations Research Department also uses other research laboratories and equipment on campus by agreement with their managers, and uses classified research spaces.

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Operational problems are challenging and interdisciplinary, and our research results often suggest applications. Some results are widely applicable and are generalized for a broader recognition.

The following summaries demonstrate the breadth and depth of the Department of Operations Research unclassified research program. Summaries of the classified research programs are available via appropriate authority.

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