

**Operations Research Department
Naval Postgraduate School
Monterey, CA 93943**



**The Military Operations Research Society
Stephen A. Tisdale
Thesis Award Presentations**



26 February 1998

THE MILITARY OPERATIONS RESEARCH SOCIETY

The purpose of the Military Operations Research Society (MORS) is to enhance the quality and effectiveness of classified and unclassified military operations research. The Society provides media for professional exchange and peer review among students, theoreticians, practitioners and users of military operations research. These media include the annual MORS symposium (the next one will be held at the Naval Postgraduate School in June of 1998), the journal *Military Operations Research*, the newsletter *Phalanx*, and a variety of books, workshops, mini-symposia, and special purpose monographs. MORS is the sponsor of the MORS/Tisdale award for outstanding thesis work in the NPS OR Department. All U.S. officers are eligible for the award, which recognizes high quality research of immediate or near-term value to the Department of Defense. MORS is sponsored by:

- Deputy Under Secretary of the Army (Operations Research)
- Director of the Assessment Division, Office of the Chief of Naval Operations
- Director of Modeling, Simulation and Analysis, Deputy Chief of Staff, Plans and Operations, US Air Force
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- Director of Force Structure, Resource and Assessment, The Joint Staff
- Director of Program Analysis and Evaluation, Office of the Secretary of Defense.



LCDR STEPHEN A. TISDALE

LCDR Stephen A. Tisdale graduated from the Naval Postgraduate School in 1989 with two masters degrees: an M.S. in operations research and an M.S. in space systems operations. His outstanding and influential thesis, *Assessing Optimal Utilization of Potential Anti-Satellite Architectures*, won the MORS prize, and he also won the prize for top all-around student in the space systems operations curriculum. Steve had unbounded intellectual curiosity, an unflagging desire to solve existing problems and to formulate new ones, and a complete lack of concern for grades. The MORS prize was renamed in honor of this outstanding officer-scholar after his tragic death in the collision of two P-3 Orions conducting a submarine tracking exercise at low altitude off the California coast on 21 March 1991.

MORS/TISDALE AWARD FINALISTS



MATTHEW J. HARRISON, LT, USN

Surface Ship Sensor Employment Against Diesel Submarines

Advisor: CAPT W. P. Hughes, USN (Ret)

Second Reader: Professor D. Brutzman

JOHN J. JACKLICH, LT, USN

*Minimizing Drug Related Attrition Costs
for Incoming Naval Recruits*

Advisor: Assistant Professor S. E. Buttrey

Second Reader: Professor R. E. Rosenthal

SCOTT D. KUYKENDALL, LT, USN

Optimizing the Selection of Tomahawk Cruise Missiles

Advisor: Professor R. E. Rosenthal

Second Reader: CAPT G. Conner, USN (Ret)

SCOTT SWORDS, LT, USN

*A Monthly Sortie Scheduling Model for Improved
EA-6B Prowler Combat Readiness*

Advisor: Dr. J. F. Raffensperger

Second Reader: CAPT G. Conner, USN (Ret)

BRIAN L. WIDDOWSON, Capt, USMC

*A Joint Service Optimization of the Time-Phased
Threat Distribution*

Advisor: Professor R. E. Rosenthal

Second Reader: LtCol K. Yost, USAF

OPERATIONS RESEARCH AT THE NAVAL POSTGRADUATE SCHOOL

Operations research is the development and application of mathematical models, statistical analyses, simulations, analytical reasoning and common sense to the understanding and improvement of real-world operations. Improvement can be measured by the minimization of cost, maximization of efficiency, or optimization of other relevant measures of effectiveness. Operations researchers are called upon frequently to advise military and civilian decision makers on the allocation of scarce resources, the selection of new equipment and processes, and the optimal deployment of given resources to achieve required missions.

The Naval Postgraduate School's Operations Research Department offers M.S. and Ph.D. degrees. It is one of the oldest, largest, and highest ranking OR departments in the US. It is without peer in terms of the extent to which graduate education is integrated with a commitment to solving real military problems. Operations research is suggested as a discipline of study for those students who enjoy using mathematical ideas and computers to penetrate deeply into the analysis of important real-world problems. *Analysis* is a key word; NPS operations researchers use modeling, simulation and computing to influence decisions, and to serve as an agent for change.

Faculty and students of the Operations Research Department frequently perform research for the Department of Defense as part of the educational program and under formal research agreements. The MORS/Tisdale Thesis Award Presentation is but one of the many research-oriented activities conducted in the NPS OR Department. The department's home page on the World Wide Web provides up-to-date information on research products and seminars.

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