

Draper's Education Activities



"To perform and contribute to the support and advancement of scientific research, technology, and development, and to initiate, maintain, and engage in educational activities in the sciences and allied subjects."



The Education Office administers such programs as:

- The Draper Fellow Program
- The Undergraduate Cooperative Program
- MIT-Draper Technology Development Partnership
- The Professional Summer Program
- Professional Development Training
- The Gordon Institute Program
- The University Research Program
- Conferences and Technical Symposia
- Publications
- Government Residents, Interns, and Associates Programs

This is a key tenet of Draper's mission, rooted in its articles of incorporation. Draper has strongly promoted and supported advanced technical education through numerous in-house, cooperative, and research programs with universities and colleges throughout the country. The Laboratory actively recruits graduate and undergraduate students to work on real, technical problems. Students have the opportunity to work on challenging projects from conception through development and implementation. During any month, there are typically 125 to 150 students employed.

The 29th Professional Summer Program, cosponsored by the MIT Ocean Engineering Department, was held at Draper. Enrollment exceeded 150 participants. Over 5000 students have attended these sessions. In addition, the Draper-Sponsored University Research Program continued with nearly \$2,000,000 of Draper-funded efforts being conducted at various universities. In May 2000, Draper, with the AIAA, the IEEE, and the Russian Academy of Navigation and Motion Control, cosponsored the 7th Saint Petersburg International Conference on Integrated Navigation Systems. Nearly 200 attendees from 60 organizations in 11 countries participated. This year's conference was dedicated to Dr. Draper, and Drs. S.A. Kharlamov and G.T. Schmidt gave remembrances of him.

During 2000, the Draper Fellow program consisted of approximately 60 students from MIT and other universities. Abstracts of graduate theses completed this year are available on the Draper web site at www.draper.com. The list of completed theses follows:





- Allred, C.L.
Nuclear Radiation-Induced Dimensional Changes in Borosilicate Glass Substrates Used for MEMS Oscillators
Master of Science Thesis, 9/2000
- Andersson, K.
Potential Benefits of Information Sharing during the Arrival Process at Hub Airports
Master of Science Thesis, 6/2000
- Bachelder, E.N.
Perception-Based Synthetic Cueing for Night-Vision Device Rotorcraft Hover Operations
Doctor of Philosophy Thesis, 9/2000
- Bailey, E.S.
Filter and Bounding Algorithm Development for a Helmet-Mounted Micromechanical Inertial Sensor Array
Master of Science Thesis, 9/2000
- Dukellis, J.N.
Applications of Auction Algorithms to Complex Problems with Constraints
Master of Science Thesis, 6/2000
- Ertan, S.
Comparison of Two Bandpass Delta-Sigma A/D Converter Architectures
Master of Science Thesis, 1/2000
- Evans, M.
Encapsulation of Electronic Components for a Retinal Prosthesis
Bachelor of Science and Master of Engineering Thesis, 5/22/2000
- Granholm, G.R.
Near-Real Time Atmospheric Density Model Correction Using Space Catalog Data
Master of Science Thesis, 6/2000
- Hague, T.N.
An Application of Robust H-2/H-Infinity Control Synthesis to Launch Vehicle Ascent
Master of Science Thesis, 6/2000
- Hartley, D.A.
System Shutdown Techniques for Energy-Efficient Real-Time Computation
Master of Engineering Thesis, 5/2000
- Jabs, J.L.
Very Low Power Wireless Protocol Performance
Master of Science Thesis, 6/2000
- Kessler, S.S.
Design and Manufacture of a High-g Unmanned Aerial Vehicle Structure
Master of Science Thesis, 2/2000
- McGovern, L.K.
Computational Analysis of Optimization for Control Systems
Doctor of Philosophy Thesis, 6/2000
- McKeever, S.D.
Path Planning for an Autonomous Vehicle
Master of Science Thesis, 6/2000
- Owens, M.M.
Preliminary Design of an Implantable Biosensor for the Detection and Differentiation of Acute Rejection, Vascular Occlusion, and Infection in the Liver or Kidney Transplant Graft
Master of Science Thesis, 6/2000
- Paskowitz, M.J.
An Approach to Planning and Control of Stochastic Network Flows
Bachelor of Science and Master of Engineering Thesis, 5/22/2000
- Santarelli, K.R.
A Low-Power Digitizer for Precision Carrier Band Measurements
Master of Science Thesis, 5/2000
- Shaghghi, Y.
Multicast Communication Among Autonomous Agents with Heterogeneous Receivers
Master of Arts Thesis, 8/2000
- Simmons, D.M.
Using Location Information to Improve Routing in Mobile Ad-Hoc Networks
Bachelor of Science and Master of Engineering Thesis, 6/2000
- St. Michael, N.A.
Force Multiplier in a Micromechanical Silicon Oscillating Accelerometer
Master of Science Thesis, 6/2000
- Stults, J.J.
Low-Power Ad-Hoc Network for Ground to Air Communication
Bachelor of Science and Master of Engineering Thesis, 5/22/2000
- Truong, B.C.
Real-Time Operating System with Non-Real-Time Simulation for the Power PC
Bachelor of Science and Master of Engineering Thesis, 6/2000
- Vanderson, W.W.
Improving Aircraft Departure Time Predictability
Master of Engineering Thesis, 6/2000

