

## **2008 Pilot Dissertation Grants Proposal**

The DHS/Science and Technology Directorate's Office of University Programs announces a Pilot Dissertation Grants competition, to award up to 10 grants of \$10,000/year, payable to students as 12 monthly stipends of \$833 each, starting September 2008. Recipients will receive monthly stipends through August 2009, graduation, or until you are no longer enrolled, whichever occurs first. Applicants may not apply for additional years of funding.

### Eligibility

- DHS graduate Fellows who have successfully completed 3 years of participation in the DHS Scholarship and Fellowship Program
- Ph.D. students from DHS Centers of Excellence and its university partners who have completed 2 years in residence as research associates at the COE
- Applicants must have taken their department/institution qualifying exams and/or have defended their dissertation topic. Applicants must be admitted to candidacy (PhD candidate) by August 31, 2008.
- Cumulative graduate GPA of 3.50 or higher on a 4.00 scale

### Application Requirements

- An Executive Summary of the research proposal that summarizes the research problem, including its relevancy to one of the 16 HS-STEM research areas (see below); description of the methodology and expected outcomes; and the importance of findings to the short and long term objectives of DHS (no more than 3 pages, 12-point font, double-spaced, 1" margins)
- Current Curriculum Vitae
- Two Letters of Support: One letter must be from the faculty dissertation advisor addressing the student's progress towards a degree and promise for future HS-STEM research, a statement regarding the reasonableness of timeline, and expected date of completion. The second letter must be from a faculty member with personal knowledge of the student's graduate academic and research performance and potential to successfully complete the degree

As a condition of the grant, recipients are required to provide the following deliverables to DHS:

- Copies of the student's dissertation and abstracts of presentations and publications resulting from the research funded by this grant and the DHS Scholarship and Fellowship Program (as applicable)
- A semi-annual progress report on the status of the dissertation (e.g. how did you get to where you are) to help DHS understand your efforts due six months after your award begins
- Either a copy of your dissertation or a final report due at the end of your award period
- Recognition of the DHS/Science and Technology Directorate, this grant, and the DHS Scholarship and Fellowship Program (as applicable) on any presentations and publications
- Attendance at the Scholars and Fellows Orientation in the Fall 2008

Applications will be reviewed by a DHS panel of experts. DHS makes the final selection.

Calls for proposals will be sent to all 2005 Fellows completing their third year of participation in the Scholarship and Fellowship program and to all students at the DHS Centers of Excellence and its university partners.

Executive summaries and curriculum vitae should be sent via an e-mail attachment (Word document or PDF file) to [dhsed@orau.org](mailto:dhsed@orau.org) by 11:59pm Eastern Standard Time on January 20, 2008.

Letter of Support should be sent directly by the author via an e-mail attachment (Word document or PDF file) to [dhsed@orau.org](mailto:dhsed@orau.org) by 11:59pm Eastern Standard Time on January 20, 2008.

Awards are expected to be announced on or about February 29, 2008.

Questions? Contact: [dhsed@orau.org](mailto:dhsed@orau.org)

## **Summary of Homeland Security Research Areas**

- Explosives Detection, Mitigation and Response (e.g., the detection, mitigation, and response to explosives in a wide variety of contexts)
- Social, Behavioral and Economic Sciences (e.g., social and behavioral analyses of terrorist threats; community preparedness, response and recovery from catastrophic events; economic assessments of terrorism and catastrophic events; and economic and mathematical decision models of terrorist behavior)
- Risk and Decision Sciences (e.g., applications of advanced methods and techniques to support decision making; quantitative analysis)
- Human Factors (e.g., integration of human factors concerns into homeland security technologies to improve usability and operator safety; assessments of public acceptance of homeland security technologies)
- Chemical Threats and Countermeasures (e.g., assessment, characterization and prioritization of chemical-biological threats; detection and warning systems; agro-defense and food security; chemical countermeasures; and decontamination, restoration and medical response to chemical threat events)
- Biological Threats & Countermeasures (e.g., assessment, characterization and prioritization of chemical-biological threats; detection and warning systems; agro-defense and food security; biological countermeasures; and decontamination, restoration and medical response to biological threat events)
- Food and Agriculture Security (e.g., assessment, characterization and prioritization of chemical-biological threats; detection and warning systems; agro-defense and food security; biological or chemical countermeasures; and decontamination, restoration and medical response to biological or chemical threat events)
- Transportation Security (e.g., applications of advanced methods and techniques to support decision making; quantitative analysis; improving the Nation's preparedness in the event of a high consequence natural or man-made disaster, and developing best practices to alleviate the event's effects)
- Border Security (e.g., technologies and tools to monitor, survey and inspect cargo and people who cross our land and maritime borders and ports of entry; evaluation of the policies and procedures designed to secure the border while welcoming legitimate visitors and trade; studies of the incorporation of new immigrants into U.S. society and the consequences of successful/failed incorporation)
- Immigration Studies (e.g., technologies and tools to monitor, survey and inspect cargo and people who cross our land and maritime borders and ports of entry; evaluation of the policies and procedures designed to secure the border while welcoming legitimate visitors and trade; studies of the incorporation of new immigrants into U.S. society and the consequences of successful/failed incorporation)
- Maritime and Port Security (e.g., technologies and tools to secure national maritime borders and U.S. maritime interests, support global maritime awareness, defend maritime commerce and global supply

chains, minimize damage and expedite recovery from attacks or catastrophic events impacting maritime interests, and protect coastal population centers)

- Infrastructure Protection (e.g., assessment of relative threats and vulnerabilities of critical infrastructure; estimation of consequences of natural disasters or terrorist attacks to critical infrastructure; application of engineering technologies or tools to enhance DHS' ability to prepare for, predict, and minimize or prevent damage to critical infrastructure from natural hazards)
- Natural Disasters and Related Geophysical Studies (e.g., assessment of relative threats and vulnerabilities of critical infrastructure; estimation of consequences of natural disasters or terrorist attacks to critical infrastructure; application of engineering technologies or tools to enhance DHS' ability to prepare for, predict, and minimize or prevent damage to critical infrastructure from natural hazards)
- Emergency Preparedness and Response (e.g., decision support tools to aid in the preparation or response to catastrophic events; studies of public risk communication; training of first-responders to enhance capability to respond to mass casualty events)
- Communications and Interoperability (e.g., interoperable communication for emergency responders; cyber security)
- Advanced Data Analysis and Visualization (e.g., information extraction, knowledge management, and visualization of large quantities of data to enhance data fusion, situational awareness, and threat detection)