

THE INSTITUTE FOR SECURITY, TECHNOLOGY, AND SOCIETY

DARTMOUTH COLLEGE

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The Institute for Security, Technology, and Society (ISTS) at Dartmouth College is dedicated to pursuing research and education to advance information security and privacy throughout society.

ISTS engages in interdisciplinary research, education and outreach programs that focus on information technology (IT) and its role in society, particularly the impact of IT in security and privacy broadly conceived. ISTS nurtures leaders and scholars, educates students and the community, and collaborates with its partners to develop and deploy IT, and to better understand how IT relates to socio-economic forces, cultural values and political influences. ISTS research improves our ability to:

- Design and deploy secure, usable computer systems and protect them from tampering, disruption and attack
- Enable people and organizations to communicate and exchange information securely and privately across networked computing devices
- Address social, economic and policy issues that arise in the development, deployment and regulation of such information technology

Goals of ISTS

- RESEARCH, to extend knowledge and provide insight and innovation in the area of information security
- EDUCATION, to increase the number of students and faculty involved in technology research, and to increase community awareness of privacy and security challenges and solutions related to IT
- OUTREACH, through collaborations that deploy technology and encourage knowledge transfer for both public and private benefit

ISTS is also a member of the Institute for Information Infrastructure Protection (www.thei3p.org), which is a nationwide consortium of leading cyber security research and development organizations including universities, federally funded labs and non-profit organizations.

Current and Recent Projects

- Data Assurance in Medical Sensor Applications
- Digital Video Forensics
- Dartmouth Internet Security Testbed
- Foundations for Practical Autonomic Computing
- Hardware-Based Security Laboratory
- Information Risk in Data-Oriented Enterprises
- MetroSense: Scalable Secure Sensor Systems
- NetSANI: Dartmouth Trace Sanitization Framework
- Secure Information Systems Mentoring and Training
- Sun/Dartmouth OpenSolaris Security Collaboration
- Trustworthy Cyber Infrastructure for the Power Grid
- Trustworthy Information Systems for Healthcare

The Institute has sponsored many projects over its eight-year history, including emergency-response technologies, bio/chem terrorism, law enforcement, and large-scale cyber exercises. More information on all ISTS projects, past and present, is available on our web site.

ISTS At-A-Glance

- Founded at Dartmouth in 2000.
- In 2008-2009, 15 faculty members, 13 fellows and post-docs, 17 researchers, 27 graduate and 12 undergraduate students were involved in 24 research projects.
- Published over 300 papers, articles and reports, and two books, *Trusted Computing Platforms: Design and Application* and *The Craft of System Security*.
- Created several new courses for the Dartmouth curriculum, and sponsored numerous workshops and invited speakers.
- Funded largely through the Department of Homeland Security, the National Institute for Standards and Technology, and the Department of Justice.
- Leveraged appropriated funding into \$20M in additional competitive grants from federal agencies, foundations, and corporations including Adobe Systems, Inc., DARPA, CIA, Microsoft Corp., The MITRE Corp, NSF, the Air Force Research Labs, Mellon Foundation, Alfred P. Sloan Foundation, Sun Microsystems and Intel.
- Engaged over 20 corporations in research projects or collaborative discussions.
- Built and operated HEBCA (the Higher-Ed Bridge Certificate Authority), which will be the world's largest bridge CA.
- Developed the leading PKI research lab in academia.
- Conducted a national-scale Livewire cyber-exercise, involving 200 participants from 20 private-sector organizations and 14 federal agencies and 15 state and local governments in a week-long simulation of a sustained cyber attack against critical infrastructure in the United States.
- Launched a research group on Emergency Readiness and Response Research, an independent group as of January 2007.
- In 2008, designated a Center of Academic Excellence in Information Assurance Research by the NSA and Department of Homeland Security.

ISTS Faculty Affiliates (all affiliates are at Dartmouth College unless otherwise noted.)

Denise Anthony, Ph.D.

Research Director , Institute for Security, Technology, and Society;
Associate Professor of Sociology; Adjunct Associate Professor of
Community and Family Medicine.

Andrew Campbell, Ph.D.

Professor of Computer Science.

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Professor of Computer Science; Director, Neukom Institute for
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System Administrator/Programmer, Brain Imaging Lab.

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George Cybenko, Ph.D.

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