Institute for Information Security & Privacy (IISP)

Mission
The Institute for Information Security & Privacy at the Georgia Institute of Technology (Georgia Tech) connects government, industry, and academia to solve the grand challenges of cybersecurity. As a coordinating body for nine units[1] dedicated to academic and solution-oriented applied research, the IISP leverages intellectual capital from across Georgia Tech and its external partners to address vital solutions for national security, economic continuity, and individual safety. The IISP educates and trains students and professionals through degree and life-long learning programs; it engages government, industry and the public as a hub for national collaboration, and it transfers research results into deployable technologies that close the innovation gap with immediate application in the real world.

Core Research Areas

Policy
How should the private sector use personal information? Should the government be able to access communication in transit or at rest?

Consumer-facing Privacy
How can consumers securely interact with technology? What are the best practices?

Attribution
How can we definitively know who is responsible for a cyber breach? What can be done when we cannot attribute the breach?

Risk Management
How do we quantify & assess risk in real time? Who do we watch? What do we look for?

Trust
How should people, machines, and networks establish trust in reliable ways? How does the trust relationship change over time?

Cyber Physical Systems
What inputs and outputs should be part of the most fortified embedded and physical systems?

Organizational Structure

More than 460 researchers are engaged in cybersecurity research across nine units, with the largest concentration within two Colleges at Georgia Tech and two applied research labs at the Georgia Tech Research Institute (GTRI). To guide and support interdisciplinary collaboration, the Institute for Information Security & Privacy is led by two co-directors who are a tenured professor from the Georgia Tech School of Computer Science (Dr. Wenke Lee) and, secondly, the deputy director for research at GTRI's Information & Cyber Sciences Directorate (Mr. Bo Rotoloni). Additionally, the IISP is guided by:

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[1] Cyber Technology & Information Security Laboratory (GTRI); Scheller College of Business; School of Computer Science (College of Computing); School of Computational Science & Engineering (College of Computing); School of Electrical & Computer Engineering (College of Engineering); Information & Communication Laboratory (GTRI); School of Interactive Computing (College of Computing); Office of Information Technology, and School of Public Policy (Ivan Allen College of Liberal Arts).

- seven Associate Directors, whose primary appointment is within a College or GTRI lab and who lead a single, core research area for the IISP;
- 21 faculty, who act as the IISP Faculty Advisory Council to guide cybersecurity educational activities and research directions, and
- 18 External Advisory Board members from leading organizations who may suggest research directions, guide tech transfer and start-up pursuits, and provide financial support for IISP events and activities.

Supporting this body are 10 staff members, who perform strategic and tactical functions either as a full-time responsibility or in addition to another full-time role at Georgia Tech/GTRI. Full-time staff include the following functions: financial management (1), IT management (1 FTE + 2 PTE students), marketing and communications (2 FTEs), and event coordination (1 FTE). Assisting the IISP in addition to other full-time roles at Georgia Tech/GTRI are the following staff functions: faculty relations (1), government relations (1), corporate relations (1), and administrative support (1).

Facilities & Resources

Space
The Institute for Information Security & Privacy (IISP) supports the interdisciplinary cybersecurity research and education that is collaboratively produced by seven broad areas at Georgia Tech, including four academic Colleges (College of Computing, College of Engineering, Ivan Allen College of Liberal Arts and Scheller College of Business), two applied research labs of the Georgia Tech Research Institute (Information & Communications Laboratory and the Cyber Technology & Information Security Laboratory), as well as Georgia Tech Professional Education and the Office of Information Technology. Physical facilities span six locations across Midtown Atlanta:
- Centennial Research Building
- Centergy One Building
- Klaus Advanced Computing Building
- Georgia Public Broadcasting Building
- Rich Building
- Wells Fargo Building

plus 12 field offices across the United States which are managed by GTRI and used to conduct applied research or to deliver hosted, professional education for public-sector and private-sector organizations. The Klaus Advanced Computing Building serves as the central administrative home for the IISP as well as the primary academic research space, while other participants are embedded in the classified and unclassified research spaces at GTRI.

Equipment
(See CoC, CoE, GTRI and OIT for a list of equipment)

Facilities
(See CoC, CoE, GTRI and OIT for facility detail)

Impact to Georgia Tech

Proposal, Award and Expenditure Data

The Internet and its applications are now essential to all aspects of society, including national security, economic exchange, and social and political communication. Correspondingly, bad actors – ranging from common criminals to nation states – abuse Internet technologies with increasing scale and sophistication. Georgia Tech expands its cybersecurity leadership to act across organizational boundaries as the Institute for Information Security & Privacy by coordinating large-scale academic and applied research projects, sharing support infrastructures (including experimental set-ups, proposal and project management), providing of-the-moment education, and acting as a central point of collaboration for government, industry and academia.

Long-standing and current research partners – such as the U.S. Armed Forces, British Petroleum, Defense Advanced Research Projects Agency, Intel Corp., Facebook, Google, National Science Foundation, Office of Naval Research and Rockwell Automation – turn to Georgia Tech for research and development, prototyping, reverse engineering, and more. Approximately $83 million in academic and applied cybersecurity research was conducted at Georgia Tech (FY16). The IISP directly assisted $24.1 million[2] of that research via proposal support, grant administration, public relations, and/or IT coordination and equipment purchases.

The vision of the Institute for Information Security & Privacy is to continue Georgia Tech's legacy as an international leader in researching, developing, and disseminating technical solutions and policies for better cybersecurity and privacy. We will be recognized for assembling strong, innovative, multi-disciplinary teams in support of contemporary and future security or privacy challenges that affect national security, the economy, and social and political functions. Our graduates will serve on the faculty of leading institutions and advanced industrial research laboratories, and become leaders in government agencies and industry, including at the helm of successful start-up companies. Security will be a leading consideration at the forefront of each technological innovation, and our nation and every individual will be more secure.

Other Accomplishments

For more than 17 years, Georgia Tech has been ranked among the top ten public universities in the United States,[3] as a top ten undergraduate and graduate program for computer science nationally, and fifth in the world.[4]

Georgia Tech's cybersecurity research work is regularly accepted into premier, peer-reviewed academic conferences and honored by independent organizations:

- 2015 Internet Defense Prize from USENIX and Facebook for identifying 11 previously unknown browser vulnerabilities
- 2015 Excellence in Counterintelligence Award from Defense Security Service
- One of just 14 universities nationwide to be a university affiliated research center (UARC) for the Department of Defense.

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[2] IISP Annual Report 2015-16, July 2016, page 15.
[3] http://www.gatech.edu/about/facts-and-figures
[4] *US News & World Report 2016* - #6 computer engineering (undergrad and grad); *Wall Street Journal* 2016 - #5

In addition to award-winning, internationally recognized cybersecurity research, the Institute for Information Security & Privacy produces five signature events each year as a public service to assist the greater community in understanding and mitigating cyberthreats. Annual events in FY16 attracted more than 1,100 individuals from across Georgia Tech and the South, leading universities, Boston, Philadelphia, Washington, D.C. and Silicon Valley.

ACCEPTABLE USE

First reference, formal name: "Institute for Information Security & Privacy at the Georgia Institute of Technology"
Second reference: "IISP at Georgia Tech" or "IISP"

DISCOUNTINUED USE

References to be avoided are:

"Georgia Tech Institute for Information Security & Privacy" or "GTIISP, GT-IISP"
"Georgia Tech Information Security Center" or "GTISC"