COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE LABORATORY

The Computer Science and Artificial Intelligence Laboratory (CSAIL) (*http://www.csail.mit.edu*) pursues fundamental research across the entire breadth of computer science and artificial intelligence. CSAIL is committed to leading the field both in new theoretical approaches and in the creation of applications that have broad societal impact.

CSAIL's current research activities span three principal areas:

- **Artificial Intelligence (AI).** This area of research aims to understand and develop systems—living and artificial—capable of intelligent reasoning, perception, and behavior. Specific research includes core AI computational biology, computer graphics, computer vision, human language technology, machine learning, medical informatics, robotics, and the semantic web.
- **Systems.** This area of research aims to discover common principles, models, metrics, and tools of computer systems, both hardware and software. Specific research includes compilers, computer architecture and chip design, operating systems, programming languages, and computer networks.
- **Theory.** This area of research studies the mathematics of computation and its consequences. Specific research includes algorithms, complexity theory, computations geometry, cryptography, distrusted computing, information security, and quantum computing.

CSAIL encourages student participation in its research projects. Undergraduates may become involved through the Undergraduate Research Opportunities Program (UROP) (*http://catalog.mit.edu/ mit/undergraduate-education/academic-research-options/ undergraduate-research-opportunities-program*), and research assistantships are available to graduate students. CSAIL graduate students are typically enrolled in the departments of Electrical Engineering and Computer Science, Mathematics, Aeronautics and Astronautics, Brain and Cognitive Sciences, and Mechanical Engineering, and the MIT-Harvard Health Sciences and Technology Program.

Other related opportunities include:

- MIT App Inventor (*http://appinventor.mit.edu*), a visual programming environment aimed at allowing new coders to build apps for smartphones and tablets
- The Internet Policy Research Initiative (*http:// internetpolicy.mit.edu*), an effort to conduct research and engage with public policy leaders on key issues in cybersecurity and technology