

Empowering students to improve the world through faculty-directed research and graduate studies in computer science and interdisciplinary fields

Department of
Computer &
Information Sciences

**GRADUATE
STUDIES and
RESEARCH
OPPORTUNITIES**



Global Impact through Innovation

- Improve network connections for faster web browsing
- Provide blind individuals with full access to multimodal document content
- Enable retrieval of information graphics from digital libraries
- Increase communications throughout disaster regions
- Create next-generation digital imaging and display systems
- Facilitate new scientific discovery with software tools and applications
- Aid environmental monitoring by image analysis of polar regions
- Help diagnose computer network failures
- Coordinate electric vehicles to return and regulate power on the grid
- Ensure scientific software accuracy
- Develop communication aids for people with disabilities
- Strengthen the reliability of today's ubiquitous software
- Help software engineers maintain complex software systems
- Assist life science researchers in knowledge discovery
- Optimize performance and energy efficiency in autonomous network systems
- Help to explain and predict biological processes and medical outcomes
- Expand the range of mathematical models for scientists and engineers
- Automate intelligent decision-making procedures
- Teach robots to navigate in difficult terrain for science and defense
- Help people organize and understand terabytes of information
- Digitally archive historical artifacts using photo flash-based projector camera systems
- Assist medical diagnosis by characterizing tumors via image analysis
- Improve bioinformatics to advance health, agriculture, energy and environmental discovery

DEGREES

MS in Computer Science
PhD in Computer Science

INTERDISCIPLINARY PROGRAMS

MS in Software Engineering
MS in Bioinformatics &
Computational Biology
Certificate in Computational
Science and Engineering

Snapshot of CIS@UDEL

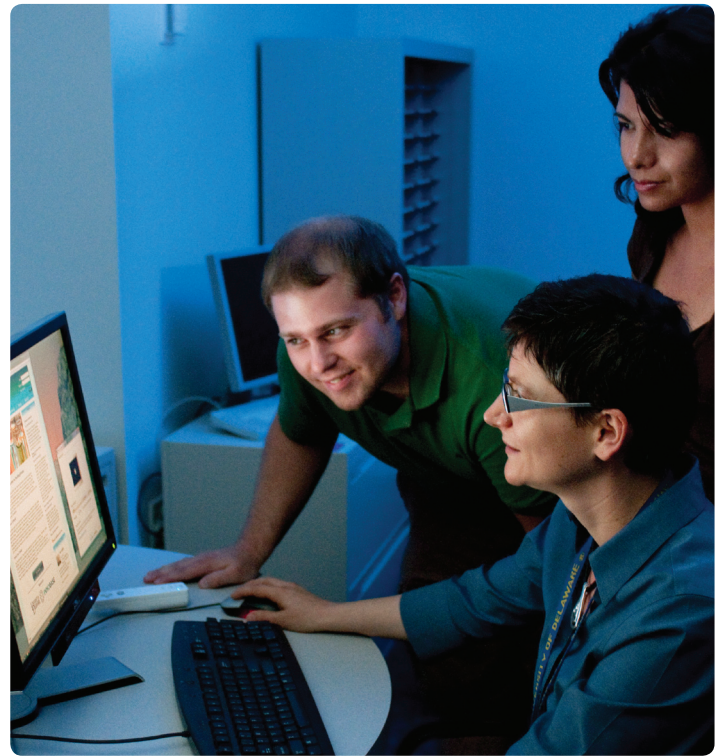
- 110 graduate students
- 25 MS and 6 PhD degrees awarded annually
- 250 undergraduate CS and INSY majors
- 12 full professors
- 6 associate professors
- 5 assistant professors
- 7 research professors
- 2 teaching assistant professors
- 1 in 4 tenure track professors are women (4 full, 1 associate, 1 assistant of 23)

An Engaged Research Environment

The CIS graduate program is centered around research. CIS faculty are internationally known as leaders in their research areas, publishing papers in premier international conferences and journals, winning awards, disseminating software for others to leverage their research, securing grants from major funding agencies, and training Ph.D. students who themselves become known as prominent researchers. Students have a wide range of research areas to choose from:

Artificial Intelligence
ASSISTIVE TECHNOLOGY
Bioinformatics
COMPUTER GRAPHICS
INFORMATION RETRIEVAL
MACHINE LEARNING
MOBILE ROBOTICS
Natural Language Processing
Networking
Parallel and Distributed Computing
SCIENTIFIC COMPUTATION
Software Engineering
THEORY OF COMPUTATION
VIDEO/IMAGE MODELING SYNTHESIS
VOLUNTEER AND CLOUD COMPUTING
Wireless Networking and Mobile Computing

MULTI-AGENT SYSTEMS
ALGORITHMS
COMPUTER VISION



FACULTY GRANTS & AWARDS

- 19 Editorial Board positions
- 6 National Science Foundation CAREER Award recipients
- 1 Air Force Office of Scientific Research Young Investigator Award
- 7 University Excellence in Teaching Awards
- 2004 E. A. Trabant Award for Women's Equity
- Two named professorships
- \$4.6 Million in 2010-11 in departmental grant expenditures

BEST PAPER AWARDS

- 2011 Applied Networking Research Prize
- 2011 Intl Conference on Software Testing, Verification and Validation
- 2010 Intl Conference on Automated Software Engineering
- 2009 IEEE Conference on Mining Software Repositories
- 2009 Intl Conference on the Theory of Information Retrieval
- 2008 Intl Conference on User Modeling
- 2006 Intl Journal on User Modeling and User-Adapted Interaction
- 2006 Pacific Assoc for Computational Linguistics

BEST STUDENT PAPER AWARDS

- 2011 European Conference on Information Retrieval
- 2007 Conference on Learning Theory
- 2006 Intl Conference on the Theory and Application of Diagrams

OUR STUDENTS

Our graduate students are active researchers, often beginning in their first year. Many have won awards for their scientific/scholarly accomplishments in collaboration with their research advisors.

