New opportunities for innovation, training, and engagement
School Overview

The School of Computing and Information Sciences (SCIS) had another successful year in 2014-2015. SCIS is one of the largest computing programs in the country and enrollments have more than doubled over the last six years. According to the 2014 edition of American Society for Engineering Education (ASEE) Profiles of Engineering & Engineering Technology Colleges, the School awarded the seventh most Computer Science Degrees (inside Colleges of Engineering) in the United States. In the Florida State University System (SUS), we are the only university that offers both a BS and MS in both CS and IT. We remain one of the nation’s leaders in training Hispanic Ph.D. students.

Inside...

We began a collaboration with UCF and USF via a $4.9M Targeted Educational Attainment (TEAm) grant awarded by the Florida Board of Governors. Our students, faculty, and alumni had significant accomplishments in the last year. The School continued its very high level of external funding, exceeding four million dollars for the seventh straight year while continuing to make significant progress in increasing entrepreneurship and technology transfer activities.

Dr. Ram Iyengar
SCIS Director and Ryder Professor

Dr. Ranu Jung
College of Engineering and Computing Interim Dean
Dr. Ram Iyengar was awarded Fellow of the National Academy of Inventors. Dr. Mark Weiss was named the recipient of the 2015 SIGCSE Award for Outstanding Contributions to Computer Science Education. Dr. Shu-Ching Chen received the SIRI Outstanding Service Award, presented by the Society for Information Reuse and Integration, 2014. Dr. Jason Liu was named an ACM Distinguished Scientist in 2014.

Recent faculty promotions include: Dr. Tao Li to Professor, Associate Professor Dr. Christine Lisetti awarded Tenure, and Joslyn Smith to Senior Instructor. Carlos Cabrera won an IEEE James Bell award and was named an IEEE Senior Member.

We recruited two new faculty members: Dr. Mark Finlayson from MIT (Computational Linguistics, Artificial Intelligence, Cognitive Science, and the Digital Humanities) and Dr. Ruogu Fang from Cornell (Machine Learning, Computer Vision, Medical Imaging, and Health Informatics) who joined us in 2014-2015.

Christy Charters and Dr. Debra Davis joined SCIS as Instructors. Both are spearheading efforts to improve the way we teach computer science through the use of active learning techniques.
Research and Education Highlights

SCIS continues to make excellent progress in its research activities, maintaining its funding at a very high level. The School’s external research funding (Direct Awards) reached $4M for the seventh year in a row. Our income from Foundation and Auxiliary accounts was $749K (an SCIS record) for a total of $4.7M external funding in addition to the State’s $1.53M Targeted Educational Attainment (TEAm) award. Foundation gifts include donations from Microsoft, Kaseya, Ultimate Software, VMWare, and Intel. Faculty publication activities remained at an all-time high in both quantity and quality; SCIS had a record year of research publications, including 5 books, 13 book chapters, 62 journal papers, and 122 conference proceeding papers in top venues.

NSF CRII award to SCIS Assistant Professor Dr. Xin Sun: The National Science Foundation made one of its first Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII) awards to Dr. Xin Sun. This two year award, totaling $150,384, aims to fundamentally transform our understanding of network complexity and to significantly advance the state of the art in measuring network complexity while modeling the interplay between design objectives, design choices, and the resulting complexity. It will enable "what-if" analysis and complexity-aware top-down design of networks.

Our School partnered with the University of Central Florida and the University of South Florida to win a $4.9M Targeted Educational Attainment (TEAm) grant, funded by the Florida Legislature and approved by Gov. Rick Scott during the last legislative session. Through this program, which includes $1.53M to FIU, consortium partners will share best practices, policies and programs to maximize career-readiness of Computer Science and Information Technology Students, particularly among under-represented and limited-income students. Activities include enhanced predictive analytics to better track students' degree progress, more targeted support through mentors and advisors, and closer partnerships with local companies to open up more internship or practicum opportunities. Pictured below, Dr. Mario Eraso, STEM and Internship Coordinator, was hired to address needs in many of these areas.
FIU Tech Station

is a $3 million, 8,000 sq. ft. facility build out that reflects trends in the industry to provide tech professionals with creative and inspiring workspaces and is expected to attract a wider diversity of students into our program. Industry will play a significant role throughout the facility mentoring our students and providing real-world requirements that students can experience in the laboratory.

Tech Station will increase the number of top talent graduating in such areas as software developers, systems administrators, and data scientists. Funding for the facility was awarded by the Florida Board of Governor’s who have recognized FIU as a top institution for training tech talent.

Our Software Design and Development lab (PG6 106) provides 24 developer workstations and laptop supported meeting areas for students creating software to complete our challenging course work. The IT Hardware and Services lab (PG6 102) provides technology students hand-on skills training on a variety of computing equipment/tools to integrate hardware and software.
Inaugural
2015

Florida International University
School of Computing and Information Sciences
Tech Station
2015

Dr. Ram Iyengar, FIU SCIS Director and Ryder Professor, with Adam Rogers, Ultimate Software CTO, Dr. Ken Furton, FIU Provost, and Dr. Ranu Jung unveil the Ultimate Software Innovation Showcase Dedication

Donna Dorsett, Administrative Manager, and Dr. Mark Weiss, Associate Director and Eminent Scholar Chaired Professor

Adam Rogers addresses the gathering

Over 200 guests attended the opening ceremony

Pete Martinez, FIU SCIS Industry Advisory Chairperson, moderates the Industry Panel Session

Chris Flick, Citrix VP, pictured with ASI Team

Students discussing outreach efforts of Tech Station
Our SCIS Advising Center and Ultimate Software Innovation Showcase (PG6 100) features demonstrations of the most outstanding work of our students and acts as the welcoming area for new and existing students visiting our Student Advising Center. The Advising Center provides one-on-one academic counseling, career placement and community-driven interventions designed to improve student performance and degree completion.

The Advanced Systems Training Lab (PG6 105) houses 49 computer training workstations students use to complete in-class assignments and receive state-of-the-art systems training.

The Team Rooms (PG6 101A-D) provide collaboration support for courses where student teams are developing large projects and provide’s a relaxed environment for peer study group sessions.
The ICAVE, a joint collaboration with the College of Architecture & Arts, is an immersive virtual reality space, rendering 3-D visualization, using 5 18’ x 15’ Clarex Flex-screens, commercial-grade projectors, PC-cluster image processing and data storage. LCD-shutter glasses provide stereo depth perception while a synchronized tracking system coordinates user movements with the projected environment. The I-CAVE includes a high quality audio system for intense surround sound capability. The system provides standard software for 2-D and 3-D visualization including animations, videos, graphics software and 3D modeling. The system provides user-friendly interaction so students and faculty can develop projects quickly and with minimal start up time.

Professor Geoffrey Smith wins the National Security Agency competitive research award

The winning paper titled, “Additive and multiplicative notions of leakage, and their capacities” was written in collaboration with other prestigious international researchers, Mario Alvim, Kostas Chatzikokolakis, Annabelle McIver, Carroll Morgan, and Catuscia Palamidessi. The paper was published in the 2014 IEEE Computer Security Foundations Symposium.

The NSA competition was open to all scientific cybersecurity papers published in 2014. Nominated papers were judged on "scientific merit, the strength and significance of the work reported, and the degree to which the papers exemplify how to perform and report scientific research in cybersecurity.”

MS in Cyber Security - DHS/NSA Designation as Center of Excellence

The FIU School of Computing and Information Sciences and Department of Electrical and Computer Engineering received approval to begin offering a Master of Science in Cybersecurity degree program. The first cohort began their studies in the Fall of 2015.
Ultimate Software, FIU Expand Partnership to Prepare Students for Job Market

Ultimate Software (Nasdaq: ULTI), a leading provider of human capital management (HCM) solutions in the cloud, and FIU have announced a 10-year extension to their current technology-education partnership. The new commitment will help establish an endowment for the FIU College of Engineering and Computing’s School of Computing and Information Sciences, fund scholarships for students at the university, and support the development of Science, Technology, Engineering, and Mathematics (STEM) education throughout high schools in the community.

Ultimate first partnered with FIU in 2007 to create the TechSTARS internship program. Through TechSTARS, Ultimate works in tandem with FIU’s School of Computing and Information Sciences to identify promising students and provide them with real-life experience as part of a growing tech company. Since the program’s inception, Ultimate has employed more than 100 TechSTARS from FIU as full-time engineers.

“One of the ways we’ve been able to provide industry-leading HR software is by relying on fresh ideas from the best talent,” said Adam Rogers, chief technology officer at Ultimate. “We believe that the future of technology isn’t just in Silicon Valley, but also here in South Florida. Through our $1 million extended partnership, we’re working closely with FIU faculty and local high school teachers to help prepare the brightest students for successful careers in tech across the region. Our overall goal is to have a lasting impact on the lives of aspiring tech leaders.”

Founded in 1990, Weston-based Ultimate Software employs more than 2,700 professionals, who help design, build, deliver, and support Ultimate’s award-winning HCM solution, UltiPro®. Throughout its 25-year history, Ultimate has collaborated with educational institutions across the region to foster academic excellence and prepare the workforces that have contributed to South Florida’s growing tech ecosystem.

SCIS Community Engagement

Dr. Peter Clarke led the first NSF I-Corps award made to an SCIS professor; this award enabled Dr. Clarke’s group to explore the potential of commercializing technology that was developed with NSF funding.

Dr. Niki Pissinou and her collaborators hosted fifteen undergraduate students from schools like Columbia University, MIT, the University of Miami, and the University of North Carolina in an NSF- and DoD-funded Research Experiences for Undergraduates site that focused on Advanced Secured Sensor Enabling Technologies.

Dr. Masoud Milani and his collaborators hosted an NSF-funded Research Experiences for Teachers site with the goal of Advancing Knowledge and Understanding in Nanotechnology.

Through the National Science Foundation’s Partnerships for Innovation-Accelerating Innovation Research (PFI-AIR) program, led by Dr. Naphtali Rishe in collaboration with other researchers from the School of Computing and Information Sciences, the College of Engineering and Computing, and the Herbert Wertheim College of Medicine, researchers are developing academic innovations and then translating that research into viable products for industry.

Dr. Kip Irvine coordinated a workshop entitled Teaching Mobile Computer Science Principles for ten selected teachers from South Florida. The hope is that these teachers will go on to offer a new Advanced Placement course created by the College Board.
Academic Success Initiative

The SCIS Advising Team has implemented a new program to assist students-at-risk, called Academic Success Initiative (ASI) with 96 students. ASI utilizes a proactive advising model to improve the academic performance of students, which in turn guarantees increased retention and graduation rates. With engaging and appreciative advising techniques, ASI builds rapport with students by creating a safe and welcoming environment. The program, along with the Lead Advisor, Myrían Herlle won the 2016 National Academic Advising Association (NACADA) Region 4: Excellence in Advising - Advising Program Award.

At present, ASI works with full-time students who are at-risk of dropping out of the School because they are either on academic warning or probation. After signing a contract to participate actively, students are advised, coached and mentored through various required activities.

ASI evaluates program success by tracking student progress during and at the end of each academic semester. Advisors administer pre and post-assessments to benchmark student attitudes toward the types of interventions. In the summer of 2015, advisors started soliciting student feedback through focus groups and surveys to monitor the success of the program. At the end of each semester, students are invited to a celebration, acknowledging successful completion of the program requirements. Selected students who regain their good academic standing are invited to become Student Ambassadors for the next semester.
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<tr>
<td><strong>Barbara Ericson</strong></td>
<td>June 26, 2015</td>
<td>Women in Computing - Creating the Future</td>
<td>Director of Computing Outreach and Senior Research Scientist, Georgia Tech</td>
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<tr>
<td><strong>Vicki Hanson</strong></td>
<td>September 04, 2015</td>
<td>The Human Side of Computing</td>
<td>Distinguished Professor, Rochester Institute of Technology, ACM Vice President</td>
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<td><strong>Yvette Pearson Weatherton</strong></td>
<td>September 18, 2015</td>
<td>Engineering for Humanity: A Broader View of Broader Impacts</td>
<td>Associate Chair of the Department of Civil Engineering, University of Texas</td>
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<td><strong>Bhavani Thuraisingham</strong></td>
<td>November 06, 2015</td>
<td>Network and Internet of Things</td>
<td>Distinguished Professor of Computer Science, University of Texas</td>
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<td><strong>Daniela Rus</strong></td>
<td>December 04, 2015</td>
<td>One Robot for Every Task</td>
<td>Director of the Computer Science and Artificial Intelligence Laboratory, MIT</td>
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<td><strong>Lori A. Clarke</strong></td>
<td>February 26, 2016</td>
<td>Errors in Healthcare</td>
<td>Chair of the School of Computer Science, University of Massachusetts, Amherst</td>
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<td><strong>Tracy Camp</strong></td>
<td>March 25, 2016</td>
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<td>Founder and Director of the Toilers, Colorado School of Mines</td>
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**Distinguished Turing Lecture Series**

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<tr>
<td><strong>Ed Clarke</strong></td>
<td>September 25, 2015</td>
<td>Delta-reachability Analysis for Hybrid Systems</td>
<td>Professor Emeritus in Computer Science, Carnegie Mellon University</td>
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<td><strong>Manuel Blum</strong></td>
<td>January 08, 2016</td>
<td>Toward a Theory of Humanly Computable Protocols</td>
<td>Bruce Nelson Professor of Computer Science, Carnegie Mellon University</td>
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