Southeast Missouri State University
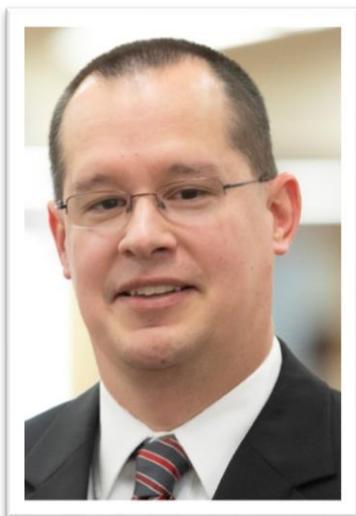## Department of Computer Science
2019-2020 Alumni Newsletter

Meet our Interim Department Chair, Dr. Chuck McAllister

Alumni and friends of the Department of Computer Science,

After being appointed July 1st as interim chairperson and learning about the curriculum, dedicated faculty, and hardworking students in the department, we wanted to provide you with an update in the form of a newsletter. Within these pages you will be introduced to the four new faculty members who started this fall, learn a little about student organization activities, and obtain some insight on the newly created Institute for Cybersecurity.

This fall, the department has enrolled a record 555 students (432 undergraduates and 123 graduate students). To help meet increasing course demands, the department has been granted approval to search for two new faculty members to begin over the next several months. Once the department gets through these transitions, it will search for a more permanent chairperson. Meanwhile, our collective efforts will continue to serve students and prepare them with the technical and professional skills they need to succeed in their future careers.

Four Fresh Faces

Dr. George Li, Assistant Professor, earned a BE and ME degrees in China. He attended Nanjing University of Science & Technology, where he majored in Mechanical & Electronics Engineering (Mechatronics). After this, he joined Lucent Technologies in 2001 as a Senior Software Engineer. While working for Lucent, Dr. Li took on roles within developer, tester, helpdesk, technical support, project technical leader, and system engineer (architect) for Mobil Core Network product development. These products were widely delivered to big carriers such as Verizon, Sprint, MetroPCS, China Telecom, and China Unicom. At the time, his research interests were Distributed Computing, Cloud Computing, and Virtualization. He had 10 patents filed in these areas, and 3 were granted in 2017. From 2015 to 2019, Dr. Li pursued his PhD at the University of Massachusetts-Dartmouth. While there, his research areas included IoT, Wireless Security, and Unsupervised Machine Learning. He developed one software for clustering and published nine different papers in these areas.

Dr. Li is currently continuing his research in IoT and Wireless Security. His present-day research interests are mmW and 5G.

Dr. Li's favorite part about his job as an assistant professor at Southeast Missouri State University is that he enjoys watching the mentees/students grow. While working in the industry, he was a mentor to many mentees, and he was able to guide master students to their research when he was pursing his Ph.D. study in UMASSD. Dr. Li takes pride in helping students achieve milestones in their lives and believes this is the best way to maximize his value.

Dr. Reshmi Mitra, Assistant Professor, received her BS degree in Electrical Engineering from the National Institute of Technology (NIT) in India in 2003, and a PhD degree in Electrical and Computer Engineering from UNC-Charlotte in 2015. Before joining Southeast Missouri State University, she was an Assistant Professor in the Computer Science Department in Webster University, St.

Louis. Her prior teaching experience includes Indian State Universities such as IIT and NIT. As a Post-Doctoral fellow at the University of Missouri-Columbia, her research involved understanding threats and performance of cloud computing and IoT paradigms. Before embracing the academic life, she was in the semiconductor industry- AMD Austin and Samsung Austin R&D Center for about 2 years.

Dr. Mitra's research interests include security, privacy, and performance in Internet-of-Things (IoT) and cloud computing.

Dr. Mitra's favorite part of her job is interacting with students and solving complex problems with them. She takes pride in promoting the idea of education being an equalizer to her mentees. This is irrespective of background, gender, or qualifications. She has come to find out that a major part of the challenge has nothing to do with academics, but more so about managing expectations and developing the right mindset about learning.

Dr. Andy Liu, Assistant Professor, received a Master's and PhD degrees in Computer Science at University of the Western Cape, South Africa. Dr. Liu also holds a master's degree in Business Analytics and a Graduate Certificate in Healthcare Information Technology at University of Texas-Dallas. Before joining Southeast Missouri State University, he was a visiting assistant professor in the Computer Science Department at Louisiana State University in Shreveport. He was a data scientist at Seven Networks in east Texas before working in academia.

Dr. Liu's research focuses on building adaptive computational models of complex human-robot social networks, especially the assessment of long-term child-robot relationships for children with special needs. Using multimodal interaction data and mobile sensing data, his research evaluates models of how disabled children's behavior with their robot companions and other children in cooperative and noncooperative settings. His other research interests include social robots, human robot interaction, artificial intelligence, machine learning, and social networks.

Dr. Liu is currently working with other colleagues and they are developing a multidisciplinary approach to create an integrated learning environment with robotics, cybersecurity, artificial intelligence, and cloud computing. With the enhanced multidisciplinary learning environments, Southeast students are able to use the skills they learned in their Computer Science classes and their experiences in different disciplines to gain actionable insights from their hands-on projects. Students are also able to learn how to design and develop creative and innovative IT solutions to solve real-world problems. These skills will be added on as students move toward completion of their degrees.

Mr. David Dai, Instructor, is a PhD candidate at the University of Arkansas-Little Rock. Mr. Dai earned his master's degree in information science from UA-Little Rock in 2016. Before moving to the U.S., he worked as a senior data scientist engineer at IBM China and IBM China Lab for seven years. Mr. Dai has published academic papers and books in the U.S. and China. In the U.S., he has published four conference papers and a journal paper. His sixth paper is under review. He has also received three awards from the UA-Little Rock Student Research and Creative Works Expo in 2016 and 2017, and two research awards from the Donaghey College of Engineering and Information Technology in 2017 and 2019. In China, he published two database books and five technical papers, released three patents, and won the Excellent Employee Award and Outstanding Instructor Award from IBM twice.

Mr. Dai's research interests are in the area of robust/machine learning, text mining, data privacy, and information quality (and the related areas of Information/Data Science and Big Data). His research directly connects to Google, IBM T.J. Watson Center, and the Fisher Delta Research Center.

Student Organizations

Southeast Missouri State University's Special Interest Group on Artificial Intelligence (SIGAI) is a group of students who support the growth of Artificial Intelligence. Last year, SEMO's SIGAI introduced basic programming knowledge such as Python and Git. The SIGAI team taught math behind neural networks. They presented on algorithms which related to association and game theory. SIGAI also introduced Arduino programming and radio.

After a successful 2018-2019 academic year, SIGAI has high standards for the coming school year. One of their top priorities is to introduce their new members to basic coding concepts. Once this is completed, they will present on topics relating to machine learning and computer vision. SIGAI will challenge their members to make and present on their AI research.

Institute for Cybersecurity

Southeast's new Institute for Cybersecurity was created by the Southeast Board of Regents in September and will launch with the spring 2020 semester to further research, education and service activities in this growing high-need field of study. In addition to his position as director, Garcia will serve as professor of cybersecurity in the Department of Computer Science in Southeast's Harrison College of Business and Computing. He will begin his new duties January 1, 2020. In his capacity as Director of the Institute for Cybersecurity, he will report to Southeast Provost Mike Godard. His office will be in the University's new Cyber Range in Dempster Hall.

In his new position, Garcia will lead the Institute for Cybersecurity which is a National Security Agency (NSA)/ U.S. Department of Homeland Security (DHS)-designated National Center of Academic Excellence in Cyber Defense Education. Garcia will also teach undergraduate and graduate courses in cybersecurity and computer science
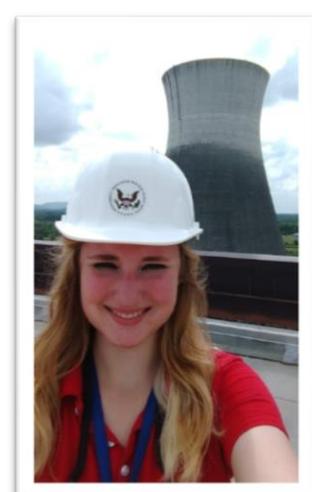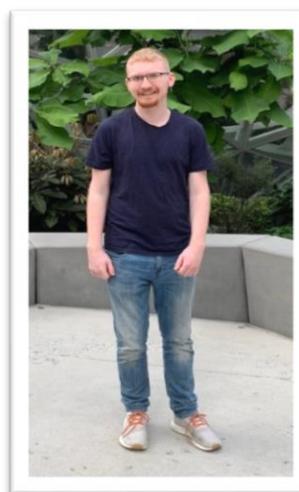
Garcia said that during his recent visit to Southeast he "found an interesting combination of computer science junior and senior faculty who are willing to do whatever it takes to help students succeed." In a meeting with Southeast's cybersecurity students, he said, "I felt their enthusiasm and desire to learn.

"I am looking forward to a long and productive career at Southeast Missouri State University," he continued. "I hope that my effort will contribute to achieving the mission, vision and goals of the University."

Student Spotlights

Grant Reid is a computer science major who was featured in the #WillToDo Wednesday on July 10, 2019 for his internship with Amazon Web Service's (AWS) Cognito team.

According to Grant, "The challenges of the Jane Stephen Honors Program have helped with my education immensely. I'm also a member of the Computer Science Club and Competitive Programming Team, which have really prepared me for applying and interviewing for software engineer jobs. The problems that we tackle in competitive programming were basically the interview questions, and that helped me get where I am today."

Emily Cieslewicz is a computer information system major who has interned at the U.S. Nuclear Regulatory Commission. Emily created a remote shutdown/startup system for nuclear control room simulators. Additionally, she migrated and standardized the simulator workstations from Windows 7 to Windows 10. Finally, she assisted in implementing a new backup system to reduce downtime.

"My job with Southeast's Department of Information Technology gave me the leadership skills and confidence to pursue this internship. The coding and hardware courses that I have taken were especially vital. These courses gave me the knowledge and skills necessary to complete my job assignments," Emily says of how her experience and education has prepared her for real world application.