Rowan University

The Data Mine

Cyber Security!

(page 3)

New Faculty

We are pleased to announce the addition of 2 new faculty members to the Department of Computer Science for fall 2018. We welcome to our full time staff, **Dr. Chenxi Qiu and Dr. Ning Wang.**

Dr. Qiu received his B.S. degree in Telecommunication Engineering from Xidian University, Xi'an, China, in 2009, and his Ph.D. degree in Computer Engineering from Clemson University in 2015. He is now a Postdoc Scholar in the College of Information Science and Technology at Penn State University. His research interests include cybersecurity, networking, and Internet-of-Things (IoT). He received the Harris Outstanding Researcher Award in 2015 from the Department of ECE at Clemson University and the Best Paper Award of IEEE CloudCom in 2016. Currently, he has published over 20 papers in top journals and conferences, including ToN, TMC, TC, TPDS, INFOCOM, AAMAS, and ICDCS.

Dr. Wang completed his Ph.D. in the Department of Computer and Information, Temple University, USA. He received his B.Eng. in Electrical Engineering from the University of Electronic

Science and Technology of China, Chengdu, China in 2013. His research focuses on algorithmic optimization in the Internet of Things, Smart Cities, cloud computing, etc.

We are also pleased to welcome 5 lecturers to our department. They are Darren Provine, Mike Chu, Mohamed Mansaray, Jake Levy and Patrick McKee.

We wish everyone great success in the coming semesters!

Awards

Congratulations to **Nick Weintraut** on receiving the 2018 ACM UPE Scholarship Award. All UPE scholarship applicants are required to complete a comprehensive application form including a statement on their long-term plans in the profession, a summary of their contributions to their respective UPE chapters and related student activities at their college or university.

Out of everyone studying Computer Science in the country, Nick was selected to receive this scholarship

because of his academic achievement. Congratulations Nick and we wish you luck in your future goals!

Congratulations to **Xuan Do**, junior Computer and Informatics major on receiving the AAA South Jersey Scholarship. AAA South Jersey presents a $2500 scholarship to a South Jersey resident studying at Rowan University. The student must be entering their junior year, have a GPA of 3.0 or higher, demonstrate financial need and show community involvement. Xuan is a 23 year old native of Vietnam who moved to the United States 5 years ago. In addition to majoring in Computing and Informatics, Xuan is minoring in Computer Science and Management Information Systems. She hopes to become either a web developer or an IT project manager upon her graduation in 2019. We wish her every success!

Thoughts From The Chair

It is my pleasure to welcome you to the Department of Computer Science at Rowan University. We are undergoing a period of tremendous growth and change, with many, many exciting oportunities and invaluable experiences available to our students. The department created a number of new programs and courses in such cutting-edge technologies as Big Data Analytics and Machine Learning, Mobile App Development, Cyber Security, Virtual Reality, Game Development, Internet of Things (IoT), Cloud Computing, and others. Currently, the department boasts over 900 students working towards undergraduate and graduate degrees in Computer Science, Computing and Informatics, Data Analytics, as well as many students pursuing minors and certificates in Fundamental Computing, Mobile Application Development, Cyber Security, Web Development, Software Engineering, Networks, and others.

The Computer Science Department strives to keep pace with the newest technological developments. We are redesigning our ABET-accredited Bachelor of Science Program to include such vital subjects as Cyber Security, Databases, and Networking as part of the required curriculum in the Computer Science program. In addition, the department, led by Dr. Vahid Heydari, developed two new specializations in the field of Cyber Operations and Cyber Defenses. The addition of these two new programs positions the Computer Science Department to apply for and obtain the NSA/DHS National Center of Academic Excellence Certification. Furthermore, Dr. Heydari is also working on creating a Cybersecurity Lab for hands-on experience in Industrial Controls Systems and IoT security.

The Computer Science Department would like to extend a warm welcome to Dr. Ning Wang and Dr. Chenxi Qiu who will join the department in Fall 2018. Dr. Ning Wang comes from Temple University. His expertise encompasses the broad field of Internet of Things with focus on such exciting areas as Opportunistic Mobile Networks, Mobile Edge Computing, Smart Cities, and others. Dr. Chenxi Qiu received his Ph.D. from Clemson University and is currenty finishing his Postdoc position at Penn State University. His research interests include modeling, optimization, and algorithm design in the fields of Cyber Security, Wireless networks, and Internet of Things.

Please come visit us to see for yourself the multitude of exciting opportunities offered by the Computer Science Department!

Vasil Hnatyshin

Department Head

Department of Computer Science

Rowan University

SPOTLIGHT ON: Dr. Vahid Heydari and Cyber Security

Dr. Heydari joined the Rowan University Computer Science Department in the fall of 2017. He received his Masters from the University of Alabama in CyberSecurity and also attained a Ph.D in Computer Engineering. Upon graduation Dr. Heydari, looking for a open positions, came across Rowan University wanting an applicant who would be "expected to take a leadership role in the development and expansion of curricular programs in cybersecurity." This was the very opportunity for which Dr. Heydari was looking. In his short time here, Dr. Heydari has become a department leader in cybersecurity advancement with the development of cybersecurity programs, club meetings and creation of a new lab.

First Cyber Club Meeting

Dr. Heydari is also teaching classes at Rowan University as well. He gained teaching experience as an assistant in multiple classes over the course of his attendance at the University of Alabama. During his first year of teaching at Rowan he developed and implemented three new courses, while also updating the cybersecurity curriculum. He started the Rowan Cybersecurity Center for Education and Research, the Rowan Cyber Club for students, and the Rowan Cybersecurity lab. He has submitted five grant proposals, submitted five curricular proposals, visited six cybersecurity centers in other schools, published a journal paper, a book chapter, two conference papers, and a poster.

While much work has already been done, Dr. Heydari has additional goals. His plan is to create a Cybersecurity Talent Pipeline in South Jersey to increase the production of professionals. The goal is to work with colleges and high schools in South Jersey via cybersecurity workshops and training for teachers to prepare them for teaching cybersecurity-related courses. According to Dr. Heydari, "We can also help them with curriculum design and provide Virtual Labs and course materials that they need for hands-on experience. Encouraging students via Cybersecurity Summer Camps is another part of this plan. Then, we will expand our coverage to be the leader of cybersecurity education and research activities in Greater Philadelphia Area."

> "I believe that if you love what you are doing, there are no boundaries to human performance." - Dr. Heydari

For the long term, Dr. Heydari hopes to see Rowan achieve the following:

- Listed as one of the top 50 US schools in cybersecurity education
- Obtain all NSA/DHS certifications
- Acquire grants from NSF-SFS
- Offer MS and Ph.D. degrees in cybersecurity
- Host international conferences related to cybersecurity
- Operate one of the best cybersecurity labs in the nation with multiple sections related to different subfields

Dr. Heydari has great aspirations and vision for Rowans cybersecurity presence and the Computer Science Department is happy to have such a great addition to the staff!

Debi's Corner

I can't believe that the fall semester is beginning! While you were relaxing during your summer break the computer science department has been really busy with exciting new opportunities for each of you to consider. Did you know Dr. Heydari has sponsored a new club- The Cyber Security Club? It's been meeting following the Tuesday night seminars in Westby 111. And he is actively working on building a specific lab just geared for Cyber Security which will be located in James Hall. And don't forget the ACM and ACM W clubs that meet on Fridays or the UPE club which is now selling T shirts designed by its members! Are you aware that Computer Science has a new additional lab just for CS? The Mac Lab in 304 is available to all CS students and you can use the card reader with your student ID just like the Advanced Lab in 303. Space is a premium at Rowan and those labs can also be used for group meetings as long as you are not disturbing others while they work. Speaking of space, Computer Science has secured additional research space on the

2nd floor of Robinson for some of our grants which will be sorely needed especially as we welcome yet two more new full time Computer Science faculty.

Please be sure to read your email as we try to keep you all informed of every opportunity. And of course make sure you are signed up for the CSJobs listserve.   Lastly congratulations to all our graduates, and thank you for your contribution to this department. Good Luck to you all and remember you are always more than just Rowan Alumni: you are part of the Computer Science Legacy!

Announcements

Dr. Anthony Breitzman, Computer Science, has been awarded a research grant of $155,884 for Option Year 3 ($160,560 Option Year 4 / $165,377 Option Year 5) from ASRC Federal Mission Solutions. The grant will be used to fund five students working on a variety of software and data analytics projects.

Dr. Jennifer S. Kay co-chaired PHICWIC (Philadelphia Celebration of Women in Computing) on April 20-21, 2018. One of roughly 25 similar events across the globe this year, the conference brought together students from schools around the region to build community and to reduce the feelings of isolation that female students can experience in a majority male field like computer science. The event is sponsored by ACM (Association for Computing Machinery), the professional organization for Computer Scientists and its Council on Women in Computing.

Sophomore James McGinty was selected for the Cracker Barrel Information Services Internship. James was one of 5 out of 300 applicants chosen to participate in an 8 week paid internship at the Cracker Barrel home office in Lebanon, TN. He helped to implement a new register system, update technologies to Cracker Barrel stores nationwide, navigate the backend of systems being implemented to understand their functionality, and implementation/testing of new systems.

James is proof that through effort, creativity, leadership, and passion anything is possible. Congratulations, James!

Co-op

The Cooperative Education Program in the CS Department allows our students to gain valuable experiential learning through a full-semester in a technical position at one of our industry partners. This semester we welcomed employers Lockheed Martin and ASRC Federal Mission Solutions.

In lieu of the spring semester, students in their junior/senior year would be on co-op starting in January-February through June-August. Participation in the CS Co-op Program would not delay graduation and is completely voluntary. However, all co-op students would be required to coordinate with the Office of Career Advancement to help accommodate their individual financial aid and housing needs, as well as meet with their CS Academic Advisors to refine their plan of study with possible Spring-Summer courses for a timely graduation.

Rowan University CS students interested in participating in the CS Co-op Program should observe the following process to be eligible in the program. Please note: following the process does not guarantee a co-op placement.

1. Meet with CS Academic Advisor (any semester)
2. Take (highly-encouraged) INTR 01.488 Career Planning & Development (2nd/3rd semester)
3. Attend CS Co-op Program information session (3rd/4th semester)
4. MUST complete Student Co-op Agreement Form (3rd/4th semester)
   *Completed forms with all signatures should be brought to the Office of Career Advancement (OCA)
5. Apply to posted co-op job opportunities (4th semester)
6. MUST complete Co-op Registration Form (5th semester)
   *After offer is accepted, students must also meet with their CS Academic Advisor to review their plan of study and discuss registration/schedule to maintain full-time status while out on co-op in the spring as well as for their returning fall semester
7. Contact CS Co-op Program Coordinator and/or Field Experience course instructor (5th semester)
8. Start co-op position (6th semester)

The new program is a very exciting opportunity to gain practical industry experience for qualified Computer Science students and will provide a jumpstart to candidates' careers. Additional information can be found at:

https://academics.rowan.edu/csm/departments/cs/students/cs_coop_program/index.html

Alumni Stories

Congratulations to Rowan University alumna, Bethany Edmunds, BS in Computer Science, class of 2002, on being named one of British Columbia's Most Influential Women 2018 by BC Business Magazine!

After her graduation from Rowan University in 2002, Dr. Edmunds wrote flight simulators for the Federal Aviation Administration. She then obtained her Ph.D. in machine learning and worked on developing small autonomous vehicles that learned to drive on different surfaces. She then moved to Vancouver, BC with her husband and began a career as a computer systems and technology instructor for the British Columbia Institute of Technology. Last year, she was named associate dean, computing, for BCIT. Dr. Edmunds worked with Dr. Kay on the ACMW Philadelphia Celebration of Women in Computing Conference in April.

Invited Speaker Series

Each week during this semester the Department of Computer Science holds our Invited Speaker Series. Speakers from several prestigious companies including AFMS, JP Morgan Chase, and Lockheed Martin present topics such as internship and interview tips, secure coding, Agile development, but mostly to inform students on particular concept development in the working world . Please come out to join this informative series. All talks are held on Tuesdays from 6:30pm-8pm in Westby 111.

JP Morgan Chase presenting Machine Learning on April 17th.

STEM SYMPOSIUM

Rowan University celebrated its 21st annual STEM Symposium April 20, 2018, a daylong event detailing hands-on, student research, virtually all of it in the fields of science, technology, engineering and mathematics. The department of Computer Science submitted 22 posters covering areas such as internet controlled devices, artificial intelligence, automating theater effects and extrapolating info and determining abnormalities in flight data.

One poster on real time geospatial tracking caught the attention of global security and aerospace company Lockheed Martin. So impressed were they that 2 presenters, Alex Tejada and Tyler Rambo, were hired as summer interns. Congratulations to both Alex and Tyler and to all the presenters.

2018 UPE Awards

Congratulations to the 2018 UPE Award Inductees!

Upsilon Pi Epsilon (UPE) is an honorary society whose membership consists of outstanding undergraduate and graduate students in Computing and Information Disciplines. Only schools that offer a degree in a computing science-related discipline may be chartered.

The requirements for being inducted into UPE as an undergraduate (not including transfers), are:

- must rank in the upper 35% of the class,
- have attained a general scholarship rating, in all college work thus far completed,
- have to satisfy Article VIII, Section 2 of UPE's Constitution,
- have completed at least 45 (Forty Five) semester hours of college work including fifteen (15) semester hours or twenty-three (23) quarter hours in the basic courses in the Computing and Information Disciplines.

This year the awards ceremony was held on Friday, March 2, 2018. Friends and families braved the snowy weather to congratulate the following inductees:

Abby Elizabeth Beizer	Monica Marie Mahon	Shafin Siraj
Brooke L. Brown	Christopher John Malitsky	Joseph Tagliaferro
Justin Anthony Davis	Christian Alexander Marcy	Jamie Tyler Walder
Phillip Dibona	Caitlin Elizabeth McElwee	Daniel Bradley Wallace
Christopher R. Hobson	Kathryn Anne Prochilo	David Thomas Yeager
Scott Ryan Howard	Philip Scott Quinn	Gene Lawrence Zaleski
Austin Huang	Patrick Michael Richeal	Eric Nathaniel Zielonka
Jevgeni Kalatsjov	Brennan Scott Ringel	

Congratulations to the Rowan University Computer Science and Computing and Informatics graduating class of 2018!!

Accelerated BS/MS IN Computer Science

- Christopher James Heisler
- Scott Andrew Jeffery
- Jacob Kershaw
- Cole T. Robertson
- Damen Stephen Tomassi
- Nicholas Scott Weintraut

B.S. Computer Science

- Yousuf Ahmed
- Jerico Alcon
- Elisa M. Ambrose
- Curtis Baillie
- Aaron Barbury
- Michael Bayruns
- Paul Bayruns
- Ryan Bell
- Andres Blotta
- Stephanie Canada
- Stephen Canzanese
- Cole Christensen
- Mounika Chunduri
- Tyler Cockburn
- Nathaniel Desimone
- Jonathan Diamond
- ABrandon Dixon
- Thien Hoang Tran Do
- AMiles Dreisbach
- Corey Dues
- Robert Dunlap
- David Ferrara
- Sean Fitzpatrick
- Andrew Freitas
- Dominic Funaro
- Justin Gavin
- Ryan Godfrey
- Joshua Golding
- Brandon Gordon
- Matthew Greco
- Jared Hamlin
- Harold Hatch
- Rebecca Hedum
- Christopher Hobson
- Patrick Jacaszek
- David Jefferson
- Brett Kwak
- Matthew Lempa
- Harrison Lidoshore
- Peter Lieb
- Samuel Liebe-Randall
- Connor Loftus
- Alexander Luongo
- Timothy McClintock
- James McGrath
- Kyle McHenry
- Donald McKay
- Alexander Mendelsohn
- Christopher Myers
- Matthew Newman
- Sean O'Donnell
- Jason Pagotaisidro
- Kien Trung Pham
- Jillian Pulicicchio
- Brennan Ringel
- Brandon Rodriguez
- Jake Schooley
- Shamimara Sharif
- Todd Shaw
- Thomas Soistman
- Charles Steinmetz
- Kevin Tomkins
- David Yeager
- Paul Turner
- Daniel Wallace
- Kimberly White

B.A. Computing and Informatics

- Tony Asibey-Anokye
- Ryan Samuel Basile
- Gordon Beakman
- Bradley Robert Brown
- Patty L. Champon
- Achraf Chaouch
- Patrick Curiale
- Joseph T. Dominisac
- Patrick J. Foltyn
- Kirk Douglas James
- Jenny Kaur
- Manoj Kumar
- Michael Lu
- Robert W. Luderitz
- Tyler Norstegaard,
- Dhruv Ishwarbhai Patel
- Maulik Chankyakumar Patel
- Joseph Thomas Scavetta
- Claudia Schrader
- Adeel Ahmed Syed
- Brendon Tiver

M.S. Computer Science

- Michael Charles Billings
- Carlos E. Gil
- Timothy Holmes
- Takeshwari Kamal
- Matthew Paul Kaplan
- Johnathan Adam Saunders
- Harini Sridharan
- Michael Vivona