

# Doctor of Philosophy in Computer and Cyber Sciences



AUGUSTA UNIVERSITY

**SCHOOL OF COMPUTER  
AND CYBER SCIENCES**

# About Augusta University

Founded in 1828, located in Augusta, Georgia, Augusta University is a public research university and medical center dedicated to training the next generation of innovators, leaders and health care providers. Augusta University is at the forefront of groundbreaking research focused on improving and enriching the student experience.

Augusta is centrally located among many government and corporate partnerships critical to our nation's cybersecurity efforts, including the U.S. Army Cyber Center of Excellence, NSA Georgia, the future home of the U.S. Army Cyber Command and Savannah River National Laboratory. Our faculty come from diverse academic, government and industry backgrounds, bringing a broad range of scientific expertise and practical skills into the classroom. It is a vibrant time in the life of Augusta University, and the School of Computer and Cyber Sciences has endless opportunities for growth and advancement as a comprehensive research college and a leader in cybersecurity.





## PhD in Computer and Cyber Sciences

Augusta University's PhD program in Computer and Cyber Sciences will prepare students for top-ranked positions in research-based companies, universities, government agencies, and technology based startup companies. This is accomplished through immersion in faculty research projects, satisfying qualifying and elective course requirements, successfully passing a comprehensive examination, engaging in productive dissertation research, and passing the dissertation defense. The PhD program is a minimum 72 credit hour program with students spending time face-to-face in the classroom with our first-class faculty and pursuing research. As a Computer and Cyber Sciences Ph.D. student, you will have the opportunity to participate in a unique training and research ecosystem, comprising core subject areas of computer and cyber sciences.

## Program Benefits

Students graduating with doctoral degrees in Computer and Cyber Sciences will have distinct advantages. Doctoral degrees are increasingly included in minimum hiring requirements for technical leadership and research positions at high-tech companies and technology-oriented government agencies. The disciplines of Computer Science and Cybersecurity continue growing in their strategic importance in our information age. Each segment of our society, from public and education, to industry and military, is becoming a sophisticated component of the overall digital enterprise.

A graduate degree in computing disciplines opens many new avenues of possible work in the industry, including with tech titans Google, Amazon, Apple, Microsoft and Oracle, as well as a broad range of government agencies.

## Admission Requirements

- Sufficient proficiency in English is an essential prerequisite to be admitted into the program
- CV/Resume
- At least two letters of recommendation
- A one-page personal statement.
- Bachelor of Science in Computer Science or in a related field (Computer Engineering, Information Systems, Software Engineering, Mathematics, etc.) from an established program or an evaluation of their relevant courses
- At least a minimum cumulative GPA of 3.0 on a 4.0 scale
- A General GRE score. GRE scores will be optional for Fall 2021 applicants as a result of the COVID-19 pandemic. The absence of GRE scores will not impact the applicant negatively.

A minimum TOEFL score of 550 (paper-based), 213 (computer-based), or 79 (internet-based), for candidates who need to additionally demonstrate English proficiency.



LIVE YOUR VALUE

# FEATURED FACULTY PROFILES



## GAGAN AGRAWAL

Gagan Agrawal is a Professor of Computer and Cyber Sciences at Augusta University. Agrawal received his PhD degree from University of Maryland, College Park. Prior to his arrival at Augusta University, he served on the faculty at Ohio State University between 2001 and 2019. Agrawal's research interests include high performance computing (with emphasis on programming and application frameworks, performance modeling and resilience), parallel machine learning and data mining, cloud and edge computing, and scientific data management. He has published more than 275 papers in these areas over his career and has supervised 30 PhD dissertations. Several of his works have received best paper awards or best paper finalist nominations. His work has been extensively funded by National Science Foundation and Department of Energy. He has served on editorial boards of IEEE Transactions on Parallel and Distributed Computing, IEEE Transactions on Cloud Computing, and Journal of Parallel and Distributed Computing. He also served on the ACM Dissertation Award Committee, including chairing it for one year. He has also served as a program committee member, area chair or program co-chair for several conferences in his research areas.



## PAUL ATTIE

Paul Attie is a Professor of Computer and Cyber Science at Augusta University. Attie received a Ph.D. in Computer Science from the University of Texas at Austin in 1995. He has previously held faculty positions at Florida International University, Northeastern University, and the American University of Beirut. Attie was also a Visiting Scientist and Research Affiliate at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL).

Paul also was a member of technical staff at the Industrial Research Consortium MCC (Microelectronics and Computer Technology Corporation). Dr. Attie's research is in software engineering, formal methods, and distributed computing. He works on devising efficient methods for specifying, designing, and reasoning about the behavior of large distributed software systems.



## CLEMENT AUBERT

Dr. Clément Aubert is an Assistant Professor in the School of Computer and Cyber Sciences at Augusta University. Prior to moving to the United States, he occupied two post-doctoral researcher positions in France, for the Centre national de la recherche scientifique (CNRS) and Institut national de recherche en sciences et technologies du numérique (INRIA). He holds a PhD in Computer Science from the University of

Paris 13 (Paris, France). His current research interests are type systems for the study of complexity, and reversible concurrent systems.



## BOGDAN CHLEBUS

Bogdan S. Chlebus is a Professor in the School of Computer and Cyber Sciences at Augusta University. He graduated with a PhD in Computer Science from the University of Warsaw in 1983. He taught at the University of Warsaw and the University of Colorado Denver prior to coming to Augusta University in 2019. His research interests are in algorithms for distributed systems and communication networks.



## HARLEY EADES

Harley Eades is an Associate Professor in the School of Computer and Cyber Sciences. His research is centered on the theory of programming languages, computational logic, and category theory, which earned him a funding award from the National Science Foundation. He obtained his PhD in theoretical computer science in 2014 also from the University of Iowa. Dr. Eades joined the faculty at Augusta University after earning his PhD in 2014.



## ONYEKA EZENWOYE

Dr. Onyeka Ezenwoye is an Associate Professor of Computer and Cyber Sciences. Dr. Ezenwoye received his PhD in Computer Science from Florida International University in 2007. Dr. Ezenwoye previously taught at South Dakota State University in Brookings, South Dakota. His research interests are in non-functional aspects of software engineering, such as security and reliability, as well as software engineering education.



## MARK HARRIS

Dr. Mark Harris has taught information technology and cyber security courses at the collegiate level since 2000. He started at Augusta University in 2016 and is now the director of graduate studies for the School of Computer and Cyber Sciences. Dr. Harris has a Ph.D. in Business with a major in Information Systems Security from Virginia Commonwealth University. Dr. Harris' research interests include mobile and wearable device security, behavioral factors of security, security policy management, security awareness training, security curriculum, and health security. He has authored dozens of manuscripts in well-respected

refereed information systems and security journals and conferences, such as the International Journal of Information Management, Communications of the Association for Information Systems, and the Journal of Information Systems Education.



## DARIUSZ KOWALSKI

Dr. Dariusz Kowalski is a Professor in the School of Computer and Cyber Sciences. His primary research interests are in design, analysis and applications of algorithms, and the main areas of expertise are distributed and parallel computing, network communication, and fault-tolerance. He published more than 160 peer-reviewed research papers in computer science, and also in mathematics, physics and bioinformatics. Kowalski received a PhD in Computer Science in 2001 from Warsaw University, Poland. Dr. Kowalski joined the School of Computer and

Cyber Sciences faculty in 2019 from the University of Liverpool in the United Kingdom.



## HODA MALEKI

Dr. Hoda Maleki is an Assistant Professor with the School of Computer and Cyber Sciences. She received her PhD from the University of Connecticut in 2019. Her research interests are in system security and privacy. She has combined rigorous cryptographic thinking with system design resulting in various works on supply chain security & privacy, security & privacy of infrastructure-as-a-service (OpenStack), moving

target defense, and more recently resulting in studies on social network privacy and blockchain technology. Her work on secure supply chain management was well-received by Comcast and led to continued funding through the Comcast Center of Excellence.



## MICHAEL NOWATKOWSKI

Dr. Michael Nowatkowski is the Head of the Cyber Program of Study and an Associate Professor with the School of Computer and Cyber Sciences. Dr. Nowatkowski received his PhD in Electrical and Computer Engineering from the Georgia Institute of Technology in 2010. He holds many certifications including the Certified Information Systems Security Professional (CISSP). Prior to his arrival at Augusta University

in 2016, Dr. Nowatkowski served as an Officer in the United States Army from 1990-2016. During his service in the Army, Dr. Nowatkowski taught in the Department of Systems Engineering as well as the Department of Electrical Engineering and Computer Science at the United States Military Academy in Westpoint, New York. His research interests include Embedded System Security, Industrial Control System Security, Cyber-Physical Systems, and Cyber Security Education.



## NISHA PANWAR

Dr. Nisha Panwar is an Assistant Professor in the School of Computer and Cyber Sciences (SCCS) at Augusta University. Prior to joining SCCS she was a postdoctoral scholar (2017-2019) in the Department of Computer Science, University of California Irvine. Dr. Panwar received her PhD in 2016 at department of Computer Science, Ben-Gurion University of the Negev, Israel. Dr. Panwar worked on trusted computing in smart spaces that won Best Paper Award in IEEE NCA in 2019. In addition, Panwar has had an opportunity to outreach and connect with the special audiences at events such as ACM WomENcourage, CyberW and NSF-sponsored Women in data Sciences (WiDS). Current research interests include (not limited to) trustworthy computing in user-centric smart spaces, smart home privacy issues, vehicle network security, integrity and privacy issues in cloud-assisted remote services such as data retention and deletion guarantees.



## REZA RAHAEIMEHR

In January 2020, Reza Rahaeimehr joined the School of Computer and Cyber Sciences as an assistant professor. Dr. Rahaeimehr got a Ph.D. in Computer Science at the University of Connecticut in November 2019. He has 14 years of teaching and industrial experience prior to joining Augusta University. His research interests are in applied security and cloud computing. He has combined rigorous cryptographic

thinking with system design resulting in various works on supply chain security and authentication in a cloud platform (OpenStack).



## ALEXANDER SCHWARZMANN

Alexander A. Schwarzmann is the Dean of the School of Computer and Cyber Sciences at Augusta University. His research is in fault-tolerant distributed computing and security of electronic election systems. He earned his Ph.D. in Computer Science from Brown University in 1992, and he did his post-doctoral work at MIT from 1995 to 1997. Prior to pursuing his academic career he worked at Bell Labs and Digital Equipment

Corp. In 1997 he joined the faculty at the University of Connecticut, where he ultimately served as the Department Head of Computer Science & Engineering. He chaired and served on the Program Committees of more than 50 leading conferences, and he served as the Steering Committee Chair of both the ACM Symposium on Principles of Distributed Computing and EATCS Symposium on Distributed Computing. He is an author of over 150 technical publications and three books.

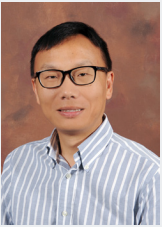




## JAMES SMITH

Dr. James N. Smith is an Assistant Professor in the School of Computer and Cyber Sciences. Dr. Smith holds a Doctor of Business Administration degree in information systems from Kennesaw State University. Before coming to Augusta University, Dr. Smith taught previously at Nova Southeastern University, Mercer University, and Georgia Southern University.

Prior to entering academia, Dr. Smith was in the information technology industry for nineteen years and was the Director of Information Technology for L.E. Schwartz & Son, Inc. He holds numerous certifications including the Certified Information Systems Security Professional (CISSP). Dr. Smith's research interests revolve around cybersecurity from a human and organizational perspective.



## WEIMING XIANG

Dr. Weiming Xiang is currently an Assistant Professor in the School of Computer and Cyber Sciences. Dr. Xiang received his PhD degree from the School of Transportation and Logistic, Southwest Jiaotong University, Chengdu, China, in 2014. Before joining Augusta University, Dr. Xiang worked as a Postdoctoral Research Scholar in the Department of Electrical Engineering and Computer Sciences at Vanderbilt University from September 2016 to July 2019. Dr. Xiang is currently on the Editorial Board of IET Control Theory and Applications. Dr.

Xiang's research interest is developing formal synthesis and verification techniques and software tools for Cyber-Physical Systems (CPS). His current research centers on formal methods on safety, security and reliability of learning-enabled CPS.

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[CCS@augusta.edu](mailto:CCS@augusta.edu).



This program builds on the research strengths created in the School of Computer and Cyber Sciences since the school's founding. There is a tremendous research momentum in the school and new Ph.D. students will be becoming an integral part of it right from the beginning.

*- Dr. Gagan Agrawal  
Interim Associate Dean of Research and Graduate Studies*







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