



## S<sup>2</sup>ERC Showcase

### Researcher/Presenter Biographies

#### **Pekka Abrahamsson**



Dr. Pekka Abrahamsson works as a full professor of information systems and software engineering at University of Jyväskylä in Finland. He received his PhD on Software Engineering in 2002 from University of Oulu. His research is in the area of new & emerging software technologies, empirical software engineering, software startups, and ethics of artificial intelligence. Prior to his current position he has served as full professor in University of Helsinki (Finland), Free University of Bolzano (Italy), Norwegian University of Science and Technology (Norway). He worked also at VTT Technical Research Centre of Finland as a research professor of software technologies. He has published broadly in his fields of expertise and received many awards and recognitions. he received the Nokia Foundation Award in 2007, Aminer.org selected him as Top-100 Most Influential Scholar in software engineering in 2016 and he co-authored the best paper of 2018 in Journal of Systems and Software. He is the co-founder of the Software Startup Research Network (SSRN) and a seasoned expert in leading large research projects.

#### **Robert Sungsoo Ahn**



Robert Sungsoo Ahn, is a PhD student in department of computer science at the University of Texas, Dallas, working with Dr. Lawrence Chung. His research areas include conflict analysis of non-functional requirements, requirements engineering, machine learning, knowledge representation and model-driven software engineering. Mr. Ahn performed and presented research work at NSF Net-centric & Cloud Software & Systems (NCSS) Industry & University Cooperative Research Center (I/UCRC). Before entering academia, he had participated in several industrial/governmental projects, such as development of an information retrieval system, management of biodiversity data, and design of a decision support system. He received his B.S. and M.S. in Computer Science from Hanyang University, Korea.

#### **Eric Burger**



Dr. Eric Burger is Research Professor of Computer Science at Georgetown University. He established the Georgetown site of the S<sup>2</sup>ERC in 2012. Until October 2019, he was on IPA at the Federal Communications Commission serving as its Chief Technology Officer. Prior to Georgetown he worked in the communications, enterprise software, and semiconductor design industries. He holds an SBEE, MBA, and CS PhD from MIT, Catholic University of Leuven, and IIT.

#### **Ulrico Celentano**

Ulrico Celentano holds a dott.ing. degree in electronics engineering from the University of Florence, Italy, a doctoral degree in technology from the University of Oulu, Finland, and has completed a block of studies in psychology at the University of Oulu. He currently is with the Biomimetics and Intelligent Systems Group at the University of Oulu, where he has been doing research on adaptive systems and interacting natural and artificial intelligent entities. His present research interests encompass dependable systems (including data privacy and information security), as well as networked artificial intelligent systems, human cognition and the social interaction of the above.

## Tam Chantem



Tam Chantem is an assistant professor in ECE at Virginia Tech. Her primary areas of research are embedded systems and cyber-physical systems, with focuses on the hardware/software co-design of real-time embedded systems, integrated security, energy-aware and thermal-aware system-level design, and intelligent transportation systems. She received her Ph.D. and Master's degrees from the University of Notre Dame in 2011 and her Bachelor's degrees from Iowa State University in 2005. Before joining Virginia Tech, Chantem was an assistant professor in ECE at Utah State University. Chantem received a U.S. Air Force Research Lab Summer Faculty Fellowship, Utah State University's 2016 ECE Advisor of the Year, and 2011 Outstanding Research Assistant Award from University of Notre Dame. She has also served as the TPC co-chair (ICISS 2017, RTSOPS 2017, and LPDC 2015) and technical program committee for several conferences such as RTAS, ECRTS, and RTSS.

## Lawrence Chung



Lawrence Chung has been working in Requirements Engineering, System/Software Architecture and Systems Engineering. He was the principal author of the research monograph "Non-Functional Requirements in Software Engineering", and has been involved in developing "RE-Tools" (a multi-notational requirements tool), "HOPE" (a smartphone app project for people with difficulties), and "Silverlining" and "IRIS" (respectively a cloud computing and big data project). He has been a keynote speaker, invited lecturer, co-editor-in-chief for International Journal of Innovative Software (IJIS) and International Journal of Big Data Intelligence and Applications (IJBIDIA), editorial board member for Requirements Engineering Journal (REJ) and International Journal of Networked and Distributed Computing (IJNDC), editor for ETRI Journal, and program co-chair for various international events. He is currently on the faculty of Computer Science at University of Texas at Dallas. He received his Ph.D. in Computer Science in 1993 from University of Toronto.

## T. Charles Clancy



Charles Clancy is vice president for Intelligence Programs in MITRE's Center for Programs and Technology. In this role, he leads the organization's technical strategy and priorities in support of the intelligence community. This includes ensuring technical quality, affordability, and timely delivery of work products; nurturing a developmental culture for MITRE employees; and accelerating technical innovation to anticipate and meet the future demands of government sponsors. He is an internationally recognized expert on topics at the intersection of wireless, cybersecurity, and artificial intelligence. Before joining MITRE in 2019, Clancy served as the Bradley Professor of Cybersecurity at Virginia Tech, and executive director at the Hume Center for National Security and Technology. There, he led Virginia Tech's research and experiential learning programs in defense and intelligence. Clancy started his career at the National Security Agency, filling a variety of research, engineering, and operations roles, with a focus on wireless communications. Clancy has co-authored more than 250 patents and academic publications, as well as five books. An avid entrepreneur, he co-founded several venture-backed security startup companies that apply commercial innovation to national security challenges. Clancy has also been heavily involved in wireless security protocol standardization and held leadership positions within the Internet Engineering Task Force, Wireless Innovation Forum, and Institute for Electronics and Electrical Engineers. In 2015, he was elected to the prestigious AFCEA Intelligence Committee. He holds a bachelor's degree in computer engineering from Rose-Hulman Institute of Technology, a master's in electrical engineering from the University of Illinois Urbana-Champaign, and a Ph.D. in computer science from the University of Maryland College Park.

## Todor Cooklev



Todor Cooklev's research interests include most aspects of modern wireless systems. He has contributed to the development of a number of communications standards, including Bluetooth, DSL, Wi-Fi, cellular, and military radio systems, serving at times in leadership positions in standardization organizations such as ITU-T, IEEE 802, and 3GPP. He has several years of experience working in Silicon Valley, California. Dr. Cooklev has contributed to more than 100 publications and numerous patents. He currently serves as an editor of the wireless and radio communication series of the IEEE Communications Standards Magazine.

## Wil Davis



Wil Davis co-founded Ontario Systems, LLC, serving as its CEO until 2008 and as its Chairman until the 2017 sale of the company. He is currently serving his alma mater, Ball State University, as President of the Ball State Innovation Corporation where he assists with the protection and commercialization of new intellectual property. He has also launched Noble Why, LLC, an organizational effectiveness consulting firm dedicated to helping organizations foster passionate, purposeful, and productive cultures where there is both an individual and collective pride in the work being accomplished. Wil is an entrepreneur with both his BS and MBA from Ball State University. He has also been awarded an honorary doctorate in Business Management from Indiana Wesleyan University. Wil Davis is an author, sought-after speaker and training consultant with over 30 years of leadership experience. He has a true passion for helping companies develop and maintain successful and inspiring corporate cultures. Prior to co-founding Ontario Systems, he gained financial, engineering, and software systems experience with Mutual Bank and General Motors. He currently serves as a board member for a number of organizations, including IU Health Ball Memorial Hospital, AAA Hoosier Motor Club, and Mutual First Financial Corporation/Mutual Bank, among others.

## Huseyin Ergin



Huseyin is an assistant professor of the Computer Science Department at Ball State University, Muncie, Indiana. He pursued his Ph.D. at the University of Alabama, his M.Sc. at Sabanci University - Turkey, and his BS.C. at Yeditepe University - Turkey, all in computer science degrees. His expertise areas are software engineering, model-driven engineering, and model transformation. He worked in various industries as a software developer including the R&D department at Huawei Telecommunications, the IT department at Mercedes-Benz US International, a smart shopping assistant startup called Mona, and a wedding ring manufacturing company called Benchmark. His software projects in these companies gave him an extensive look at the software development practices in various settings. He has been in the organization committee of successful local programming, scientific, and robotics competitions and camps. Lately, he is closely working with industry partners on software engineering techniques and practices. He is teaching software engineering classes and supervising software projects for local community partners, including startups, non-profits organizations, university branches, and local companies. He is also the director of Capstone Connector, which is a program under the Innovation Connector of Muncie to connect industry partners with student Capstone teams.

## Holmes Finch



Holmes Finch is the George and Frances Ball Distinguished Professor of Educational Psychology at BSU, and a professor of statistics and psychometrics. His research interests include machine learning, prediction models, structural equation modeling, item response theory, educational and psychological measurement, multilevel modeling, and robust multivariate inference. In addition to conducting research in the field of statistics, he also regularly collaborates with colleagues in fields such as educational psychology, neuropsychology, and exercise physiology.

## Tapio Frantti



Tapio Frantti holds degrees of MSc, LicTech and Dr. Tech. from the Department of Automation and Information Technology, University of Oulu. He is also an Adjunct Professor in the University of Oulu. He has worked at the Outokumpu Polarit Oy, University of Oulu, Nokia Telecommunications, and Nokia Mobile Phones as a researcher, senior researcher, chief engineer, and research manager. He has also worked in Technical Research Centre of Finland as a chief research scientist and Research Professor and as Visiting Professor in Tokyo Denki University. Lately he has been working in Renesas Mobile Europe and Broadcom Communications Finland as a distinguished researcher and research leader, in IoLiving Ltd. as CTO and in University of Oulu as a Director of Security and Software Engineering Research Site of Finland. He also works in FRE company doing security and control engineering consultation. He has been on the field about 20 years and he has published +100 scientific and technical papers in journals, magazines, books and international conferences. The most of the publications consider adaptive and intelligent control algorithms in handheld devices, communication, electronic production, power plant, household, and health systems. He has also authored several adaptive and intelligent control patents. Tapio Frantti also acts as a regular reviewer in international conferences and 11 scientific top rated journals and he is a member of Technical Program Committees in tens of international conferences. His research interests are in the adaptive and intelligent control theory, networking technologies and cyber security.

## Laura Freeman



Dr. Laura Freeman is a Research Associate Professor and the Associate Director of the Intelligent Systems Lab at the Virginia Tech Hume Center. Her research includes cybersecurity, data analytics, machine learning, and developing new methods for test and evaluation focusing on emerging system technology. Previously, Dr. Freeman was the Assistant Director of the Operational Evaluation Division at the Institute for Defense Analyses. In that position, she established and developed an interdisciplinary analytical team of statisticians, psychologists, and engineers to advance scientific approaches to DoD test and evaluation. Dr. Freeman has a B.S. in Aerospace Engineering, a M.S. in Statistics and a Ph.D. in Statistics, all from Virginia Tech. Her Ph.D. research was on design and analysis of experiments for reliability data.

## Ryan Gerdes



Ryan M. Gerdes is an Assistant Professor in ECE at Virginia Tech. Dr. Gerdes' work focuses on designing resilient computing systems, with an emphasis on cyber-physical systems operating in adversarial environments and leveraging the physical layer for defensive and offensive purposes. He is the principal investigator on NSF and DOE projects that examine the security and privacy of cooperative, automated vehicles; unmanned aerial systems (UAS); and next-generation battery electric vehicles and chargers. Recent research topics have included: use of intentional electromagnetic interference for the physical-layer manipulation of sensors and actuators, including radar and electric motors; identification and tracking of cognitive radios; attack detection and prevention for automotive systems; electromagnetic side-channel analysis for code-change detection; machine learning in adversarial environments; and detection of malicious logic in untrusted, integrated circuit designs.

## Paul Gestwicki



Paul Gestwicki is a professor of Computer Science at Ball State University, where he leads a games research and development group. His multidisciplinary student teams have been building educational games since 2009, working with such community partners as The Children's Museum in Indianapolis, the Indiana State Museum, and local museums and nonprofits. His previous work with S2ERC includes the cybersecurity education game--Social Startup Game--which teaches security concepts and practices to upper middle school and high school students; see S2ERC TR 318 for complete details on this project. Dr. Gestwicki has written many scholarly

articles on software design, development, and evaluation techniques for educational games, focusing on methodologies for multidisciplinary and cross-functional teams. Dr. Gestwicki earned his Ph.D. in Computer Science and Engineering in 2005 from the University at Buffalo for his work on interactive visualization of object-oriented program execution.

### **Ronaldo Goncalves, Jr.**



Ronaldo Goncalves Junior is a PhD student of the Department of Computer Science at the University of Texas at Dallas. He is a member of the Requirements Engineering Lab at the University of Texas at Dallas, working with Dr. Lawrence Chung. His research includes Recommender Systems, Interactive Systems, Machine Learning, and Non-Functional Requirements. He received his B.S. degree in Computer Science in 2011 from the University of Fortaleza, Brazil, and his M.S. in Computer Science from the University of Fortaleza, Brazil in 2015. Before joining the University of Texas at Dallas, he participated in research projects on Cloud Computing and worked as a software developer in 2013.

### **Lauri Haverinen**



Lauri Haverinen is a Master's student at University of Oulu and is currently working as a research assistant at Oulu University Secure Programming Group.

### **Linghuan Hu**



Linghuan Hu received a M.S. in software engineering from the University of Texas at Dallas. He is currently a Ph.D. student in software engineering at the University of Texas at Dallas under the supervision of Professor Eric Wong. His research interests include testing internet of things, combinatorial testing, symbolic execution, and test generation.

### **Jari Jääskelä**

Jari Jääskelä is an MSc student in Computer Science and a research assistant at the Oulu University Secure Programming Group (OUSPG), Finland. He is currently working on his MSc thesis. The thesis focuses on the evaluation of unsupervised anomaly detection techniques in the context of insider threat detection, and how to incorporate domain knowledge using feedback into the system. In 2017, he received his bachelor's degree in Electrical Engineering from Centria University of Applied Sciences, where he worked as a research assistant. There his work was mainly related to industrial robots, PLCs, and software development.

### **Haan Mo Johng**



Haan Mo Johng is a Ph.D. candidate in Software Engineering at the University of Texas at Dallas, working with Dr. Lawrence Chung. He has been researching on adopting emerging technologies, such as Microservices, Blockchain, and Cloud Computing, to business in a rational manner in the perspective of non-functional requirements. Recently, he has collaborated with IBM Thomas J. Watson Research Center regarding microservice change management using DevOps and Service Mesh in a complementary manner.



## Taija Kolehmainen

Taija Kolehmainen is an MSc student in the IT-Faculty at University of Jyväskylä in Finland. Taija works in the Smart Money research project sponsored by Tieto Corporation and builds a Proof-of-Concept prototype of the Smart Money concept. Her MSc thesis deals with governance in blockchain based innovations. She has a multidisciplinary background, experience as a software developer and as an educator.

## Kirthy Kolluri



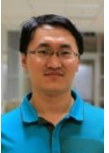
Kirthy Kolluri, is a fourth year Software Engineering PhD student at The University of Texas at Dallas, working with Prof. Lawrence Chung. Her current research areas include Software Engineering, Requirements Engineering, Risk Analysis and Intelligent systems. She has been working on performing risk analysis for an Indoor Navigation System for the visually impaired and auto-drive domains. She has given various status presentations at the NSF-Net Centric & Cloud Software & Systems Industry & University Cooperative Research Center (I/UCRC). She received her master's degree in Computer Science in 2010 from the University of Houston-Clear Lake and her undergraduate degree in Information Technology in 2008 from JNTU (Jawaharlal Nehru Technological University), India.

## Markku Korhikoski



Markku has more than 20 years of professional experience from information and communication technologies. He is a member of the advisory board in the national funding agency in Finland (Business Finland) and a member of the management board of Finnish Information Security Cluster. Markku is an active member of national cyber security domain in Finland and an avid promotor of research collaboration. He was nominated as DIMECC Fellow from his work as a program director of DIMECC Cyber Trust program, which was one of the largest cyber security research programmes in the whole of Europe. He currently leads cyber security business in Netox.

## Xuelin Li



Xuelin Li graduated from the University of Texas at Dallas with a Ph.D. degree in Software Engineering under the supervision of Professor W. Eric Wong. Before that, he received his Bachelor degree in Engineering from Beihang University, China. His research interests include software testing, software fault localization, and software complex networks.

## Lan Lin



Dr. Lan Lin is an Associate Professor of Computer Science at Ball State University. She earned her M.Sc. and Ph.D. in Computer Science from the University of British Columbia and the University of Tennessee, Knoxville, respectively. Prior to joining Ball State she worked as a Research Scientist in the Software Quality Research Laboratory (SQRL) at the University of Tennessee. Her research has been focused on rigorous software specification and automated, model-based statistical testing, and funded by Lockheed Martin, Northrop Grumman, Rockwell Collins, Air Force Research Laboratory, and Ontario Systems, through the NSF Security and Software Engineering Research Center, and most recently by NSF. Her funded project titled "Towards Scalable Modeling for Rigorous Software Specification and Testing" was nominated and selected to be published in the 2016 NSF Industry & University Cooperative Research Center Technological Breakthrough Compendium.

## Lauri Lovén



Lauri Lovén is a doctoral candidate at the Center for Ubiquitous Computing in the Oulu University. With a background in mathematical statistics, his current research concentrates on distributed AI methods. Mr. Lovén currently has 25 accepted peer-reviewed research articles, including 2 patents. Beyond academia, Mr. Lovén has a long experience in ICT business and startups.

## Patrick McDaniel



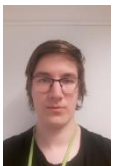
Patrick McDaniel is the William L. Weiss Professor of Information and Communications Technology and Director of the Institute for Networking and Security Research in the School of Electrical Engineering and Computer Science at the Pennsylvania State University. Professor McDaniel is also a Fellow of the IEEE and ACM and the director of the NSF Frontier Center for Trustworthy Machine Learning. He also served as the program manager and lead scientist for the Army Research Laboratory's Cyber-Security Collaborative Research Alliance from 2013 to 2018. Patrick's research centrally focuses on a wide range of topics in computer and network security and technical public policy. Prior to joining Penn State in 2004, he was a senior research staff member at AT&T Labs-Research.

## Geoffrey Mearns



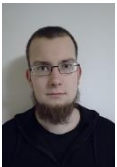
President Geoffrey S. Mearns serves as the 17th president of Ball State University. After joining the University in May 2017, President Mearns helped to develop a new strategic plan. Destination 2040: Our Flight Path establishes a long-range vision for the University that sets priorities across five key areas: undergraduate excellence, graduate education and lifetime learning, community engagement and impact, scholarship and societal impact, and institutional and inclusive excellence. During his tenure, President Mearns has pursued initiatives that have produced the largest freshman class in history and increased alumni engagement and fundraising. President Mearns has also strengthened the University's relationship with the community, most notably through its innovative partnership with Muncie Community Schools. President Mearns earned his undergraduate degree in English from Yale University and a law degree from the University of Virginia. After a legal career that included serving as a federal prosecutor, President Mearns held academic and administrative roles at Cleveland State University, and then he served as president of Northern Kentucky University. He and his wife, Jennifer, have five children.

## Mauri Miettinen



Mauri Miettinen is working as a research assistant and completing his Master's Thesis for the University of Oulu. He is currently part of the ProGame project provided by Fingersoft Ltd. He has recently completed the fourth year of his Computer Science and Engineering studies, with a specialization in Applied Computing. Mauri's Bachelor's thesis was on the topic of attribute-based network access control. In the future he wants to be involved in research related to artificial intelligence, data analysis, cybersecurity, ubiquitous computing, and/or anything that involves (digital) arts and crafts.

## Jukka Pajukangas



Jukka Pajukangas is a master's student working as a research assistant at Oulu University Secure Programming Group. He has been working at OUSPG for almost two years and has gained versatile experience about a variety of topics such as REST API testing, hardware security, and digital forensics. In the future, he looks forward to working with topics associated with software security testing and digital forensics.

## Ella Peltonen



Dr. Ella Peltonen is a research scientist with the Center for Ubiquitous Computing, University of Oulu, Finland. She gained her PhD at the University of Helsinki and did her postdoc period at the Insight Centre for Data Analytics, University College Cork, Ireland. In addition, she has undertaken research visits to University of California, Berkeley, US, University of Cambridge, UK, University College London, UK, and University of Melbourne, Australia. Her research focuses on pervasive everyday sensing, edge-native machine learning, and “from data to actions” including ubiquitous recommendation systems and data analytics. Dr. Peltonen has been granted Marc Weiser Best Paper Award in the IEEE PerCom 2015, Rising Stars in Networking and Communications 2017 by N2 Women, The European Initiative EPIC Grant 2018, and Nokia Foundation Jorma Ollila Grant 2018. She is a member of the ACM Future of Computing Academy.

## Pekka Pietikäinen



M. Sc. (Eng.) Pekka Pietikäinen is currently finishing up his PhD at the Oulu University Secure Programming Group a (OUSPG). His thesis concentrates on modeling the behaviour of complex systems. Pekka did his M.Sc. thesis at CERN with the title “Hardware-assisted Networking Using Scheduled Transfer Protocol on Linux”. He has nearly 20 years of experience in the field, in both research and private industry. He was a founding partner of Net People Oy, the first ISP in northern Finland (later merged with Nixu Oy) and Clarified Networks Oy, a pioneer in collaborative analysis, reporting and visualization of events related to abuse, incident and critical infrastructure.

## David Pilkington



David Pilkington is the Senior Director of Technology and GM of Cloud Products at Ontario Systems in Muncie, Indiana. David successfully completed his Masters of Data Science at Northwestern University specializing in Data Analytics and Modeling. He has worked over the past 20 years in the technology space that is heavily scrutinized by PCI compliance and CFPB laws. He also runs a Data Analytics division at Ontario Systems that needs to focus on data privacy, ethics and how they should interact with artificial intelligence.

## Susanna Pirttikangas



Susanna Pirttikangas, D.Sc. (tech.), 2004, M.Sc. (math), 1998 leads the Interactive Edge research group and several digitalization/data analytics projects for different industries at the University of Oulu. Dr. Pirttikangas made her postdoctoral visits to Waseda University, Japan (2005-2006), Tokyo Denki University, Japan (2008) and Tsinghua University, China (2011), doing research on methodology to de-noise, fuse, segment, and analyse real-time data streams with a focus on creating situation awareness for more informed and ethical decision making. She has worked as a business developer and as a data scientist for industry and consults companies on artificial intelligence maturity and application of AI in their business. She is the community builder for SuperIoT AI DIH.

## Jian Ren



Jian Ren is an Associate Professor in the Department of Electrical and Computer Engineering at Michigan State University. Prior to joining MSU, Dr. Ren was the Leading Secure Architect at Avaya Labs and Bell Lab. Dr. Ren's research interests include network security, error-control coding, distributed storage, cloud computing and big data security and privacy. Dr. Ren received the National Science Foundation (NSF) CAREER award in 2009. He served as the TPC Chair of ICNC'17 and General Chair of ICNC'18. Since 2019, Dr. Ren has been serving as the Executive Chair of ICNC. Dr. Ren serves as an Associate Editor of IEEE Transactions on Mobile Computing and ACM Transactions on Sensor Networks, and a Senior Associate Editor of IET Communications.



## Eric Snyder

Eric S. Snyder is currently aiding Wayne and Dolores Zage on their Code Duplication ++ research project. As an off-shoot to this research, Eric has resolved, with 100% accuracy, the OWASP Benchmark 1.3 test suite with respect to CWE determination and vulnerability detection. It is hoped by the time of the conference that similar results may be obtained for both the OWASP 1.1 test suite and the Juliet 1.3 test suite. Eric has a MS in Software Engineering and a BS in Computer Science both from Ball State University. Eric was recently elected to serve as Chairman of the Board of Directors for Open Door Health Services, a not-for-profit serving East Central Indiana.

## Xin Sun



Dr. Xin Sun is an Assistant Professor in the Computer Science Department at Ball State University. In summer 2014 he was a visiting researcher at IBM Watson Research Center. He received his Ph.D. from Purdue University, West Lafayette, in 2012. The overarching goal of his research is to create rigorous scientific approaches and automated software tools for managing and securing large and complex cyber-infrastructure, which today are kept running mostly by manual efforts and thus prone to human errors. Dr. Sun is passionate about Computer Science education and loves working with students. He is a recipient of the Computer and Information Science and Engineering Research Initiation Initiative (CRII) Award from National Science Foundation (NSF), and his research has been funded by NSF, S<sup>2</sup>ERC, and the State of Florida.

## Satu Tamminen



Dr. Satu Tamminen has over 10 years of experience in industrial data mining and machine learning. She received her PhD degree from University of Oulu in 2014 (thesis title: "Modelling the rejection probability of a quality test consisting of multiple measurements"). Her research interests cover industrial data mining, real-time quality monitoring, smart decision support and transparent machine learning.

## Eli Tilevich



Eli Tilevich is an Associate Professor in the Dept. of Computer Science at Virginia Tech. Tilevich's research interests lie in the System's end of Software Engineering (mobile/IoT computing, cloud/edge computing, middleware, software refactoring, energy efficiency, and privacy), CS Education, and Music Informatics. He has published over 100 refereed research papers on these subjects. His research awards include a Microsoft Research Software Engineering Innovation Foundation Award and an IBM Faculty Award. Tilevich chaired the Program Committee of the 15th International Conference on Managed Languages & Runtimes (ManLang 2018) and served as General Chair of the 6th IEEE/ACM International Conference on Mobile System Engineering and Systems (MOBILESoft 2019). Tilevich holds a Ph.D. in Computer Science from Georgia Tech. At Virginia Tech, Tilevich leads the Software Innovations lab. The lab's research projects have been supported by major US government funding agencies and private industry. Tilevich is also a professionally trained classical clarinetist, with experience in orchestral, chamber, and solo performances.

## Teemu Tokola



Teemu Tokola has worked at the Oulu University Secure Programming Group (OUSPG) since 2004. His work at the OUSPG has focused on teaching and dissemination, with latest projects related to Europe-wide collaboration on cybersecurity education and dissemination, Finland-wide collaboration on improving cyber security teaching at universities to better cater to industry needs and on development of cybersecurity courses and making cybersecurity curriculum planning for the University of Oulu. His additional teaching and research interest areas include development of effective systems for providing support for Bachelor level thesis writing, teaching of programming and software engineering skills, black-box modelling, computer architectures, artificial intelligence and natural language processing.

## Eric Wong



W. Eric Wong received his Ph.D. in Computer Science from Purdue University. He is a Full Professor and the Founding Director of Advanced Research Center for Software Testing and Quality Assurance in Computer Science at the University of Texas at Dallas. He also has an appointment as a guest researcher at the National Institute of Standards and Technology. Dr. Wong was the recipient of the 2014 IEEE Reliability Society Engineer of the Year. He is also the Edit-in-Chief of IEEE Transactions on Reliability. His research focuses on software testing, program debugging, risk analysis, safety, and reliability.

## Shaoen Wu



Shaoen Wu is an Associate Professor of Computer Science at Ball State University and the Director of the Security and Software Engineering Research Center (S<sup>2</sup>ERC). He also directs the research group of Intelligent Computing and Communication Systems (ICCS). He is a member of the Advisory Council of Scholarship for the Vice Provost for Research and serves on the Dean's Faculty Advisory Board. He held the role of Assistant Department Chair during the 2018-2019 academic year. He received his PhD degree in Computer Science and Software Engineering from Auburn University. He is a senior member of IEEE, the secretary of IEEE ComSoc Multimedia Communications Technical Committee (MMTC), and a member of ACM. He has worked as an Assistant Professor in the School of Computing at University of Southern Mississippi; a Staff Scientist at ADTRAN; and a Member of Technical Staff at Bell Labs, Lucent Technologies. His research interests include Internet of Things (IoT), Cyber-Physical Systems (CPS), Cyber Security, and Wireless Networking. He has published over 70 peer-reviewed papers on wireless networking, IoT, information security, smart health, and robotics. His research has been generously supported by NSF, NASA, Cisco, NVIDIA, Intel, Dell, ARM, Cypress Inc., and Microsoft. He has received three Best Paper Awards (BPAs) including a recent prestigious IEEE Globecom 2019 BPA, a Faculty Excellence Award, and First Place in a Graduate Student Forum. He has actively served as a Chair/Co-Chair at various international conferences and as an editor for several prestigious international journals.

## Dolores Zage



Dolores M. Zage is an Assistant Professor Emerita of Computer Science at Ball State University where she was a faculty member for 35 years. In addition, she served as the Research Coordinator of the Security and Software Engineering Research Center (S<sup>2</sup>ERC) since 2001. Dolores' research interests continue to be in software metrics and models and their application during the design and maintenance phases of software development. She has been a co-principal investigator on over 40 projects funded by the National Science Foundation, Motorola, Telcordia, Northrop Grumman, Computer Sciences Corporation, Harris Corporation, Magnavox Electronics Systems Division, GTE Data Services, NASA, Raytheon, Rockwell Collins, iconectiv, Beulah Works, the U.S. Air Force Research Lab and the U.S. Army Research Lab.

## Wayne Zage



Wayne M. Zage is the George & Frances Ball Distinguished Professor Emeritus of Computer Science at Ball State University where he was a faculty member for 42 years. He has been conducting research in SERC and in the S<sup>2</sup>ERC since its inception in 1986 and served as Center Director from July 2001 to July 2019. His research in design metrics and models led to the Zages' design metrics being used at Center industrial sites as indicators of good software design, to identify error-prone modules during the design phase of development, and as indicators of where to place effort during software testing. During his tenure at Ball State, Wayne won three university-wide awards: the Outstanding Young Faculty Award in the 1980s, the Outstanding Research Award in the 1990s, and the Ball State University Outstanding Faculty Award in 2002. He and Dolores were also the co-recipients of the National Science Foundation I/UCRC Association's Award entitled the Alexander Schwarzkopf Prize for Technological Innovation for their work in design metrics, which they received in 2007.