



S²ERC 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.

Eric Burger



Dr. Eric Burger is Research Professor of Computer Science. He is currently on IPA as the Chief Technology Officer of the Federal Communications Commission. He can dedicate up to 20% of his time to Georgetown activities.

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.

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.

Huseyin Ergin



Huseyin got his B.Sc. and M.Sc. in Computer Science and Engineering in Turkey. He pursued his Ph.D. in Computer Science at the University of Alabama. His research area is Model-driven Engineering, and he is analyzing the need for a higher-level language that is closer to the domain and free of complexities introduced by general purpose languages. He is also interested in computer science education to educate the next generation of computer scientists starting from high or middle school. He developed software for various departments in companies; in an R&D department at Huawei Telecommunications, in an IT department at Mercedes-Benz US International, at a wedding ring manufacturer called Benchmark, located in Tuscaloosa, Alabama, and at a smart shopping assistant startup company called Mona. His projects in these companies gave him an extensive look at the current software development practices and eventually led to adding another research interest in software development practices by people in various fields. Currently, he is an Assistant Professor of Computer Science at Ball State University, is assigned to teach master of science classes in software engineering and improve the program.

Rahel Fainchtein



Rahel Fainchtein, is a first year Computer Science PhD student at Georgetown University, working with Micah Sherr and Eric Burger. Her current research areas include Security and Privacy, and Cryptography.

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.

Jarno Limnell



Jarno Limnell is Professor of Cybersecurity at Aalto University, Finland, and an adjunct professor in three other Finnish universities. He also works as CEO in a private company. He has been working with security issues for over 20 years, and has a profound understanding of the global threat landscape, combined with the courage to address the most complex issues. Professor Limnell has published a comprehensive list of works on security issues.

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



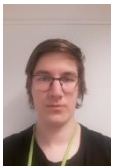
Lauri Lovén is a doctoral researcher at the Center for Ubiquitous Computing in the Oulu University. With a background in mathematical statistics, his current research concentrates on distributed AI methods. Mr. Lovén currently has 22 accepted peer-reviewed research articles, including 2 patents. Before entering academia, Mr. Lovén had a long professional background in software development, ICT business and startups.

Shin'ichiro Matsuo



Shin'ichiro Matsuo is a research scientist in cryptography and information security. He is working on maturing Blockchain technology from the academia perspective. Dr. Matsuo conducts university research and serves as a program committee member and editor for academic journals and conferences. In the context of Blockchain, he founded BSafe.network, which is the neutral international research test network for Blockchain to promote applied academic research in blockchain technologies. It is an international actual network with 24 international universities and serves the same role as NSFNet for the Internet. Dr. Matsuo also founded CELLOS, the international consortium for security evaluation of cryptographic protocol and serves as the head of its technical working group for securing cryptographic protocol like TLS. Previously, he served as the head of Japanese national body of ISO/IEC JTC1 SC27/WG2 for cryptographic techniques.

Mauri Miettinen



I'm working as a research assistant and doing my Master's Thesis for the University of Oulu, and I'm part of the ProGame project provided by Fingersoft Ltd. I've recently completed the fourth year of my Computer Science and Engineering studies, with a specialization in Applied Computing. My Bachelor's Thesis was on the topic of attribute-based network access control. In the future I want to be involved in research related to artificial intelligence, data analysis, cybersecurity, ubiquitous computing and/or anything that involves (digital) arts and crafts.

Anway Mukherjee

Anway Mukherjee received his B.S. degree in electronics and communications from West Bengal University of Technology, India, in 2011. He is currently working towards his Ph.D. degree at the Department of Electrical and Computer Engineering, Virginia Tech, VA, USA. His research focuses on energy-aware and resource-aware hardware-software co-design of real-time embedded systems.

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. Her research focuses on pervasive everyday sensing, edge-native machine learning, and “from data to actions” including ubiquitous recommendation systems, data analytics, and artificial intelligence.

Susanna Pirttikangas



Susanna Pirttikangas, D.Sc. (tech.), 2004, M.Sc. (math), 1998 leads several digitalization and 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.

Daniel Shin



Daniel Shin graduated in 2010 from Northwestern University. In 2012 he earned a Masters Degree from Mannheim Universität, Mannheim, Germany, and he received his J.D. from William & Mary Law School in May 2019. He was the Center for Legal and Court Technology's head of IT and its Webmaster and teaching assistant for W&M's course, Artificial Intelligence, Emerging Technologies, and Their Effects on the Legal Landscape. In the summer of 2017, he was employed by the Drug Enforcement Administration's Intelligence Law Section and Technology Law and Criminal Justice Policy Section of the Office of Chief Counsel, working on, among other matters, cryptocurrency. From February to August 2018, he worked at the Department of Justice's Office of Privacy and Civil Liberties. His research interests include publicly available deep learning technologies and their impact on law enforcement investigative techniques.

Clare Sullivan



Dr. Clare Sullivan is cyber-lawyer specializing in digital identity, international privacy and data protection, blockchain and cyber security. She is a Visiting Professor at the Law Center, and a Fellow at the Center on National Security at Georgetown University in Washington D.C. Professor Sullivan is also the Managing Director of both the Security and Software Engineering Research Center and the new blockchain Technology Ecosystem Design Research Center at Georgetown University; and of the soon-to-be-established new multi-discipline research center, Cyber SMART. Professor Sullivan is the author of "Digital Identity" the first text to define and examine digital identity from a legal perspective and its implications for government, business and individuals. She has authored internationally published articles on digital identity, blockchain, privacy, and cyber security and reports for the U.S, U.K. and Australian governments, and for the Commonwealth Secretariat. Professor Sullivan's recent research involved examination and evaluation of the privacy and data protection laws of 40 countries; the E.U. GDPR, new E.U. e-Privacy Regulation; and comparison of the E.U. model with the APEC cross border data transfer scheme. Professor Sullivan is currently undertaking international cyber security and data privacy research for the World Bank.

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-infrastructures, 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, S²ERC, and the State of Florida.

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 95 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.

Nathan White



Nathan White is currently finishing his graduate masters degree at Ball State University in Software Engineering. He is a research assistant to the Zages assisting them with the current project titled, Code Duplication++. In previous employment, Nathan filled a support role for the Computer Science Department at Taylor University. While in this role, he learned the skills of a systems administrator and enjoyed assisting students and faculty by removing computational barriers to the achievement of course objectives. Additionally, he has been employed on a part time basis since Spring of 2014 by a small startup company specializing in cubesats called NearSpace Launch. In this employment, he has worked on software which has flown on several cubesats, automated server cluster setups, built websites and APIs, developed and championed software workflows, and built a number of applications to meet specific business needs. He obtained his undergraduate degree in biology from Taylor University and broadened his studies with minors in computer science and chemistry. He enjoys spending time with family and friends, reading books, hiking, travelling, making and eating good food, physical activity, playing sports, and going for walks.

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 currently an early-tenured associate professor of computer science at Ball State University. He is the director of Intelligent Computing and Communication Systems Lab. He received his PhD degree in Computer Science and Software Engineering from Auburn University, his MS degree in Control Theory and Engineering from University of Electronic Science and Technology of China (UESTC), and his BS degree in Automation from Qingdao University of Science and Technology (QUST). He serves on the Advisory Council of Scholarship for the Associate Provost for Research, and the Dean's Faculty Advisory Board. He served as the assistant department chair from 2018-2018. He was featured in the spotlight story of the Ball State Research Magazine 2015. He is a senior member of IEEE, the secretary of IEEE MMTC 2018-2020, 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. He has published over 70 peer-reviewed papers in wireless, IoT, smart health and robotics at international journals e.g. IEEE Internet of Things Journal and conferences e.g. IEEE Globecom, ICC and ICCCN. His research has been generously supported by NSF, NASA, Cisco, NVIDIA, Intel, Dell, ARM, Cypress Inc., Microsoft, and Ball State Aspire Program. He has received two Best Paper Awards, a Faculty Excellence Award, and a First Place in Graduate Student Forum. He has actively served as Chair/Co-Chair for international conferences such as IEEE ICNC, IEEE ICME and SCS ANSS, as well as an editor/associate editor for a few international journals such as IEEE TMM, IEEE IoT Journal, and Elsevier DCN.

Dolores Zage



Dolores M. Zage is an assistant professor in the Computer Science Department at Ball State University and the Research Coordinator of the Security and Software Engineering Research Center (S2ERC). Dolores' research interests are 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, Cisco Systems, the U.S. Department of Homeland Security, the U.S. Air Force Research Lab and the U.S. Army Research Lab.

Wayne Zage



Wayne M. Zage is the George and Frances Ball Distinguished Professor of Computer Science at Ball State University. Wayne has been conducting research in the Security and Software Engineering Research Center (S2ERC) and previously in the Software Engineering Research Center (SERC) since it began in 1986. His research in design metrics and models has 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 42 years at Ball State, Wayne has won three university-wide awards: the Outstanding Young Faculty Award in the 1981, the Outstanding Research Award in the 1994, and the Ball State University Outstanding Faculty Award in 2002. He and Dolores Zage 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 software design metrics, which they received in 2007. Wayne is in his 18th year as a Director of an NSF Industry/University Cooperative Research Center.