



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.

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.

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.

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 Co-Director of Security and Software Engineering Research Center. 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 12 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.

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.

Marko Helenius



Dr. Marko Helenius is University Teacher at Tampere University of Technology, Tampere, Finland. He completed his master's thesis in 1994 and during that time he started assessing computer antivirus product's virus detection capabilities. Computer antivirus vendors valued the assessments because of their accuracy and detailed data. He completed his Ph.D. from University of Tampere in 2002. After that he became interested about information security in general and usable security in 2006. He has been active in many national research programs obtaining research funding including Future Internet, Cloud Software, Internet of Things, Need4Speed and Cyber Trust. He is responsible of the master's degree program in information security.

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 Jääskylä



Jari Jääskelä (MSc) recently finished his MSc thesis while working at the Oulu University Secure Programming Group (OUSPG). The thesis focused on insider threat detection using anomaly-based approaches. In addition, he has experience working as a software developer and regularly practices his information security skills, such as web application security testing and software reverse engineering on his free time.

Taija Kolehmainen

Taija Kolehmainen is an MSc student in the IT-Faculty at University of Jyväskylä in Finland. Taija currently works in the COOL-APPIA (Collaborative Governance Approaches for Blockchain-enabled Distributed Business Networks) research project sponsored by TietoEVRY Corporation and Ontario Systems. In the earlier blockchain research project she built a Proof-of-Concept prototype of the Smart Money concept in collaboration with TietoEVRY. Her MSc thesis deals with governance in blockchain based innovations. She has a multidisciplinary background, experience as a software developer and as an educator.

Joni Kultanen



Joni Kultanen is a MSc student in Information Systems Science and a research assistant at the University of Jyväskylä. His research interests include empirical cybersecurity, AI ethics and blockchain governance.

Gabriella Laatikainen



Gabriella Laatikainen is a postdoctoral researcher at the Faculty of Information Technology, University of Jyväskylä, Finland. She pursued her Ph.D. in Economics and Business Administration (Information Systems) at the University of Jyväskylä in 2018, her MSc. Mathematics and Computer Science at the University of Debrecen, Hungary in 2007, and her BSc. Information Technology degree at the University of Applied Sciences in Jyväskylä in 2008.

She worked also as a software developer for several years. Her current research interests encompass digital innovations, business models, cloud computing and blockchains. Her work has been published in Decision Support Systems and Journal of Systems and Software.

Shou-Yu Lee



Shou-Yu received a B.S. in Computer Science from National Tsing Hua University, Taiwan, and M.S. in Computer Science from Tunghai University, Taiwan. 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 software engineering, software fault-proneness prediction and risk analysis, and system quality insurance.

Lan Lin



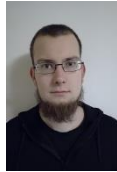
Dr. Lan Lin is an Associate Professor of Computer Science at Ball State University. She earned her M.Sc. and Ph.D. in Computer Science from the University of British Columbia and the University of Tennessee, Knoxville, respectively. Prior to joining Ball State she worked as a Research Scientist in the 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.

Jukka Pajukangas



Jukka Pajukangas is a master's student working as a research assistant at Oulu University Secure Programming Group (OUSPG). He is currently finishing up his master's thesis with title "Measuring test coverage of REST API". He has been working at OUSPG for over two years and has gained versatile experience about a variety of topics such as REST API testing, hardware security, digital forensics and teaching. 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 (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.

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.

Behrooz A. Shirazi



Behrooz A. Shirazi is the NSF CISE/CNS IUCRC Program Director. With an IPA appointment at NSF, he is also a Professor of Computer Science at Washington State University (WSU). He served as the Director of the School of Electrical Engineering and Computer Science at WSU from 2005 to 2016. Prior to joining WSU, he served as the Chair of the Computer Science and Engineering Department at University of Texas at Arlington. Dr. Shirazi has conducted research in the areas of pervasive computing, health analytics, green/energy efficient computing, and high-performance computing over the recent years. He is currently serving as the Editor-in-Chief for Sustainable Computing: Informatics and Systems journal. He is the principal founder of the IEEE Symposium on Parallel and Distributed Processing (later joined with IPPS to form IPDPS); a co-founder of the IEEE International Conference on Pervasive Computing and Communications (PerCom); and, a co-founder of the International Green and Sustainable Computing Conference (IGSC).

Bilhanan Silverajan



Bill Silverajan is a Doctoral Researcher from the Networks and Information Security Group at Tampere University. His research interests lie in the crossroads of communication, networking, and security. For the past 15 years, these have been applied in the domain of IoT device and network security, edge computing, trust and the security of autonomous systems particularly in the context of maritime cybersecurity. He is also an active contributor in standards organisation, particularly the Internet Engineering Task Force (IETF).

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, S²ERC, and the State of Florida.

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 (S²ERC). 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.

Noah Ziems



Noah Ziems is an undergraduate who just finished his junior year at Ball State University. Noah has been researching Machine Learning under Dr. Shaoen Wu for 2 years. His previous research involves detecting security vulnerabilities in code using state of the art machine learning architectures. This summer he is working at Lockheed Martin as a Software Engineering Intern.