



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.

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 worked in Renesas Mobile Europe and Broadcom Communications Finland as a distinguished researcher and research leader, in IoLiving Ltd. as a CTO and as a Co-Director of Security and Software Engineering Research Center. Currently he works as a cybersecurity professor in the University of

Jyväskylä. He also works in FRE company doing security, communication and control engineering consultation. He has been on the field about 30 years and he has published +100 scientific and technical papers in journals, magazines, books and international conferences. He has also authored several 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 interest are in the adaptive and intelligent control theory, networking technologies and cyber security.

Kevin Hamlen



Dr. Kevin Hamlen is the Louis A. Beecherl, Jr. Distinguished Professor in the Computer Science Department at The University of Texas at Dallas, and a Senior Technical Advisor for the Cyber Security Research and Education Institute. His research applies and extends compiler theory, functional and logic programming, and automated program analysis technologies toward the development of scientifically rigorous software security systems. Over the past ten years his work has received over \$20 million in federally funded research awards, including the National Science Foundation CAREER award and the Air Force Office of Scientific Research Young Investigator Award. His research on secure binary retrofitting, reactively adaptive malware, and software cyber-deception has received numerous best paper awards, including two CSAW Best Applied Security Paper of the Year prizes and the 2016 NSF IUCRC Technology Breakthrough award, and has been featured in thousands of news headlines worldwide, including The Economist and New Scientist. Dr. Hamlen received his Ph.D. and M.S. degrees from Cornell University, and his B.S. from Carnegie Mellon University, where his work on proof-carrying code earned the Allen Newell Award for Excellence in Undergraduate Research.

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, 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.

Alexander Ilin



Alexander Ilin is Professor of Practice in the Department of Computer Science of Aalto University. He was a post-doctoral researcher funded by the Academy of Finland, Senior Data Scientist and Chief Scientist at Analyse2 (2012-2015), Machine Learning Scientist at Amazon (2016), and Senior Scientist and Head of Machine Learning at the Curious AI company (2016-2018). His research interests are in data-efficient deep learning and deep reinforcement learning, and in industrial applications of machine learning. He is an author of over 40 peer-reviewed scientific articles and his h-index is 23.

Kalle Kujanpää



Kalle Kujanpää is a M.Sc. student and a research assistant in the Department of Computer Science at Aalto University. His research interests include deep reinforcement learning and industrial applications of machine learning. Currently, he is writing a master's thesis in deep reinforcement learning for cybersecurity before starting his doctoral studies at Aalto University.

Joni Kultanen



Joni Kultanen, M.Sc. (Econ.), is a Doctoral Researcher in the Empirical Cyber Security and Software Engineering research group at the University of Jyväskylä. He has been part of S²ERC Artificial Intelligence and blockchain research projects since 2019 and started his research career in 2018 as a research assistant in AI ethics research group. 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.

Lan Lin



Dr. Lan Lin is an Associate Professor of Computer Science. She earned her Ph.D. in Computer Science from the University of Tennessee at Knoxville. Prior to joining Ball State, she worked as a Research Scientist in the Software Quality Research Laboratory at the University of Tennessee. Her research has focused on rigorous software specification and testing methodologies, and has been generously funded by Lockheed Martin, Northrop Grumman, Rockwell Collins, Air Force Research Laboratory, and Ontario Systems (all through S2ERC), and also by NSF. Her S2ERC-funded project titled “Towards Scalable Modeling for Rigorous Software Specification and Testing” was selected to be published in the 2016 NSF Industry & University Cooperative Research Center Technological Breakthrough Compendium. Dr. Lin was appointed to be the S2ERC Director in July 2020, and served as the Program Co-Chair for the 33rd International Conference on Software Engineering and Knowledge Engineering (SEKE 2021).

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.

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.

Vappu Schroderus



Vappu Schroderus is a CSE Bachelor's student from University of Oulu and is currently working as a research assistant at Oulu University iEdge research group. Her main interest is Human Computer interaction research.

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 organization, particularly the Internet Engineering Task Force (IETF).

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



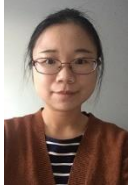
W. Eric Wong received his Ph.D. in Computer Science from Purdue University. He is a Full Professor and the Founding Director of Advanced Research Center for Software Testing and Quality Assurance in Computer Science at the University of Texas at Dallas. He also has an appointment as a guest researcher 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 the State Farm Endowed Chair Professor and the Director of the Center for Cybersecurity Research and Education (C2RE) at Illinois State University. He received his PhD degree in Computer Science and Software Engineering from Auburn University. He is a senior member of IEEE, the Vice Chair for North America of IEEE MMTC 2020-2022, and a member of ACM. He worked for Ball State University 2013-2020 where he served on the Director of Security and Software Engineering Research Center (S2ERC), the Advisory Council of Scholarship for the Vice Provost for Research, the Dean's Faculty Advisory Board and the assistant department chair of computer science. He also 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 85 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 over \$3M by NSF, NASA, AFRL, Lockheed Martin, Cisco, NVIDIA, Intel, Dell, ARM, Cypress Inc. and Microsoft. He has received three Best Paper Awards including one from IEEE GC'19, a Faculty Excellence Award, and a First Place in Graduate Student Forum. He has actively served as a Chair/Co-Chair at several international conferences and an editor for a few prestigious international journals.

Hanning Zhao



Hanning Zhao is a doctoral researcher working in the Networks and Information Security Group at Tampere University. Her research interests focus on data visualization in the domain of cybersecurity, IoT devices management and monitoring, and human-centered design. Currently, Hanning is also working on the area of security visualization and information sharing in the maritime industry.

Noah Ziems



Noah Ziems is an undergraduate who just finished his senior year at Ball State University. Noah has been researching Machine Learning under Dr. Shaoen Wu for 3 years. His previous research involves detecting security vulnerabilities in code using state of the art machine learning architectures. This summer he is doing research in healthcare analytics and Bayesian machine learning.