

Cyber Resilience Workshop Series

Committee

John L. Manferdelli

Chair

John Manferdelli previously held the position of Project Leader for the Confidential Computing Incubation in the Office of the Chief Technology Officer at VMware. Previously, he was Professor of the Practice and executive director of the Cybersecurity and Privacy Institute at Northeastern University. Immediately prior, Manferdelli was Engineering Director for Production Security Development at Google. Prior to Google, he was a senior principal engineer at Intel Corporation and co-PI (with David Wagner) for the Intel Science and Technology Center for Secure Computing at the University of California at Berkeley. He was also a member of the Information Science and Technology advisory group at DARPA and is a member of the Defense Science Board. Prior to Intel, J Manferdelli was a distinguished engineer at Microsoft and was an affiliate faculty member in computer science at the University of Washington. He was responsible for computer security, cryptography, and systems research, as well as research in quantum computing. At Microsoft, John also worked as a senior researcher, software architect, product unit manager, general manager at Microsoft and was responsible the development of the next-generation secure computing base technologies and the rights management capabilities currently integrated into Windows, for which he was the original architect. He joined Microsoft in February 1995 when it acquired his company, Natural Language Inc., based in Berkeley, California. At Natural Language, Manferdelli was the founder and, at various times, vice president of research and development and CEO. Other positions he has held include staff engineer at TRW Inc., computer scientist and mathematician at Lawrence Livermore National Laboratory, and principal investigator at Bell Labs. He was also an adjunct associate professor at Stevens Institute of Technology. Manferdelli's professional interests include cryptography and cryptographic mathematics, combinatorial mathematics, operating systems, and computer security. He is also a licensed Radio Amateur (AI6IT). Manferdelli has a bachelor's degree in physics from Cooper Union for the Advancement of Science and Art and a PhD in mathematics from the University of California, Berkeley.

Yair Amir

Member

Yair Amir is Professor of Computer Science and the director of the Distributed Systems and Networks (DSN) lab at Johns Hopkins University. From June 2015 to June 2018, he served as the chair of the Department of Computer Science. His goal is to invent resilient, performant and secure distributed systems that make a difference, collecting friends along the way. Dr. Amir is the recipient of the Alumni Association Excellence in Teaching Award for 2014, the highest teaching award in the Whiting School of Engineering, Johns Hopkins University. He was a finalist for the Excellence in Mentoring and Advising award in 2014 and for an Excellence in Teaching award in 2013. Dr. Amir was nominated for the DARPA agency-wide "Performer with Significant Technical Achievement" award in 2004, and was the recipient of the DARPA Dynamic Coalitions program Bytes-for-Buck trophy in 2002. His work received the Best Paper award in the IEEE International Conference on Distributed Computing Systems (ICDCS) in 2017. Dr. Amir served on various technical program committees including co-chair of the IFIP/IEEE Dependable Systems and Networks (DSN) for 2015, and as an associate editor for the IEEE Transactions on Dependable and Secure Computing (2010-2013). He is a creator of the Spread toolkit (www.spread.org), the first scalable group communication system with strong semantics. He led Secure Spread, developing the first robust key agreement protocols, as well as the Spines overlay network platform (www.spines.org), the SMesh wireless mesh network (www.smesh.org), the first seamless 802.11 mesh with fast lossless handoff, the Prime Byzantine replication engine, the first to provide performance guarantees while under attack, and the Spire intrusion-tolerant SCADA for the power grid (www.dsn.jhu.edu), the first to protect against both system-level and network-level attacks and compromises. Some of these technologies are deployed in mission critical systems, support data center applications, are included in commercial products, and are used for research and teaching in universities and research labs around the world. Until 2016, Dr. Amir led the development of the LTN cloud (www.ltnglobal.com). He continues to provide technical leadership at LTN. LTN offers a global transport service for broadcast-quality live TV that is used by major broadcasters including CNN, Fox, Disney, ABC, Bloomberg, CBS, CNBC, ESPN, NBC, PBS, and Turner. Dr. Amir holds B.Sc. (1985) and M.Sc. (1990) from the Technion, Israel Institute of Technology, and a Ph.D. (1995) from the Hebrew University of Jerusalem, Israel.

Maritza Johnson

Member

Maritza Johnson is an expert on human-centered security and privacy with industry, teaching, and research experience, she is currently a director at Good Research where she works with companies to build technological solutions that people can use safely. In prior roles, Maritza was the Founding Director of the Center for Digital Civil Society at the University of San Diego, a User Experience Researcher at Google Research, and a Technical Privacy Manager on Facebook's Public Policy team. She's a member of the National Academy of Science Forum on Cyber Resilience and an advisor to Confidential. In 2011, her paper "The Failure of Online Social Network Privacy Settings" won the Future of Privacy Forum's Privacy Papers for Policy Makers Award. Maritza received M.S. and Ph.D. degrees in computer science from Columbia University in 2008 and 2012, and a B.A. degree from the University of San Diego in 2005.

Brian LaMacchia

Member

Brian LaMacchia is the president of Farcaster Consulting Group, LLC. He previously held the position of Distinguished Engineer at Microsoft Corporation and headed the Security and Cryptography team within Microsoft Research (MSR). His team's main project was the development of quantum-resistant public-key cryptographic algorithms and protocols. Brian is also a founding member of the Microsoft Cryptography Review Board and consults on security and cryptography architectures, protocols and implementations across the company. Before moving into MSR in 2009, Brian was the architect for cryptography in Windows Security, Development Lead for .NET Framework Security and program manager for core cryptography in Windows 2000. Prior to joining Microsoft, Brian was a member of the Public Policy Research Group at AT&T Labs—Research. In addition to his responsibilities at Microsoft, Brian is an adjunct associate professor in the School of Informatics and Computing at Indiana University-Bloomington and an affiliate faculty member of the Department of Computer Science and Engineering at the University of Washington. Brian also currently serves as treasurer of the International Association for Cryptologic Research (IACR) and as a vice president of the Board of Directors of Seattle Opera. Brian received S.B., S.M., and Ph.D. degrees in electrical engineering and computer science from the Massachusetts Institute of Technology (MIT) in 1990, 1991, and 1996, respectively.

Fred B. Schneider

Member

Fred B. Schneider (NAE), the founding Chair of the Forum on Cyber Resilience, is the Samuel B. Eckert Professor of Computer Science at Cornell University. He joined Cornell's faculty in Fall 1978, having completed a Ph.D. at Stony Brook University and a B.S. in engineering at Cornell in 1975. Dr. Schneider's research has always concerned various aspects of trustworthy systems —systems that will perform as expected, despite failures and attacks. Most recently, his interests have focused on system security. His work characterizing what policies can be enforced with various classes of defenses is widely cited, and it is seen as advancing the nascent science base for security. He is also engaged in research concerning legal and economic measures for improving system trustworthiness. Dr. Schneider was elected a fellow of the American Association for the Advancement of Science (AAAS;1992), the Association of Computing Machinery (1995), and the Institute of Electrical and Electronics Engineers (IEEE; 2008). He was named a professor-at-large at the University of Tromsø (Norway) in 1996 and was awarded a doctor of science (honoris causa) by the University of Newcastle-upon-Tyne in 2003 for his work in computer dependability and security. He received the 2012 IEEE Emanuel R. Piore Award for contributions to trustworthy computing through novel approaches to security, fault-tolerance and formal methods for concurrent and distributed systems. The U.S. National Academy of Engineering (NAE) elected Dr. Schneider to membership in 2011, and the Norges Tekniske Vitenskapsakademi (Norwegian Academy of Technological Sciences) named him a foreign member in 2010. He is currently a member of the National Academies of Sciences, Engineering, and Medicine's Naval Studies Board and Computer Science and Telecommunications Board and is founding chair of the Academies' Forum on Cyber Resilience.