Introduction to the Software Technology Track

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Welcome to the Software Technology (ST) Track. This year we have a total of nine minitracks on a wide variety of important topics in software technology: software engineering, cybersecurity, software assurance, wireless networking, agile methods, organization processes, digital forensics, virtualization, software product lines, and other vital emerging research areas. The nine minitracks are as follows:

Agile and Lean Software Engineering: looks at building a middle ground between traditional software engineering and agile software development, called Agile Software Engineering. It attempts to find best-of-both approaches, merging where possible, and selecting one or the other where appropriate.

Digital Forensics—Education, Research, and Practice: involves the use of software, computer science, software engineering, and criminal justice procedures to explore and or investigate digital media with the objective of finding evidence to support a criminal or administrative case. It involves the preservation, identification, extraction, and documentation of computer or network evidence.

New Directions in Software Assurance: explores the scientific foundations for a unified discipline of software assurance. Assurance research focuses on achieving an acceptable level of trust and confidence through auditable evidence that software systems will be built and will function as intended in both benign and threat environments to meet organizational objectives.

Organizational Processes for Innovation, Disruption and Transformation in Software Development: papers in this minitrack present the case for agile development and lean product management to improve organizational systems and outcomes.

Secure Cloud Computing: focuses on design issues and solutions for security aspects of cloud computing. This minitrack brings together researchers across engineering, management, social, and legal areas to discuss this paradigm shift. In this context, quality of service, availability, theft of IP and personal information, all become critical research topics.

Software Product Lines: Engineering, Services, and Management: focuses on business models and strategies for product lines, economic valuation of product lines, organizational and process designs for product lines, knowledge management practices and systems for product lines, service systems and their implications for product lines, and international standardization initiatives related to product lines.

Software Cybersecurity, Assurance, and Testing: focuses on the necessity and value of assurance activities such as software quality assurance, verification and validation, and capability maturity. There is a particular focus on attempts to assess the relative cost-effectiveness of the broad range of technology product and process assurance activities.

Virtualization: Environments, Research and Education: investigates the emerging security implications of virtualization, new research and education capabilities made possible by virtualization, and the manner in which systems of the future, including the hardware, hypervisors, operating systems, and applications, can be designed to take full advantage of virtual environments.

Wireless Networks: focuses on fundamental challenges and issues arising in wireless sensor networks and their applications. Wireless sensor nodes and networks must provide solutions to practical problems, and must be both cost-effective and an improvement over previous practice.

We would like to thank our minitrack chairs and authors who once again have put together what look to be a truly compelling set of minitracks.