31st IEEE/ACM International Conference on Automated Software Engineering (ASE 2016)

The IEEE/ACM Automated Software Engineering (ASE) Conference series is the premier research forum for automated software engineering. Each year, it brings together researchers and practitioners from academia and industry to discuss foundations, techniques, and tools for automating the analysis, design, implementation, testing, and maintenance of large software systems. ASE 2016 invites high quality contributions describing significant, original, and unpublished results. Solicited topics include, but are not limited to:

- Automated reasoning techniques
- Component-based systems
- Computer-supported cooperative work
- Configuration management
- Data mining for software engineering
- Domain modeling and meta-modeling
- Empirical software engineering
- Human-computer interaction
- Knowledge acquisition and management
- Maintenance and evolution
- Model-driven development
- Model transformations
- Program synthesis & transformations
- Modeling language semantics
- Open systems development
- Program comprehension
- Re-engineering
- Requirements engineering
- Specification languages
- Software analysis
- Software architecture and design
- Software product line engineering
- Software visualization
- Testing, verification, and validation

Still time to submit tool demos, doctoral symposium and workshop papers in May and June. See back for details.

Sponsors

About Singapore

Singapore is a city-state in Southeast Asia, a global transportation hub and leading commerce and financial center. It is often referred to as the Garden City owing to an extensive greening policy across the island. Its location is one degree north of the equator and it enjoys a tropical climate throughout the year. It is one of the top tourist destinations in Southeast. Singaporeans are mostly bilingual with English as a lingua franca. For details see: http://www.yoursingapore.com/en.html
**Doctoral Symposium**

The goal of the ASE 2016 Doctoral Symposium is to provide a supportive yet questioning setting in which the Ph.D. students have an opportunity to present and discuss their research with other researchers in the ASE community. The symposium aims at providing students useful guidance and feedback on their research and to facilitate networking within the scientific community by interacting with established researchers and with their peers at a similar stage in their careers.

**Chairs:** Massimiliano Di Penta and Tien N. Nguyen  
**Submission:** June 10  
**Website:** [http://ase2016.org/doctoralsymposium.html](http://ase2016.org/doctoralsymposium.html)

**Tool Demos**

Tool demos should excite the software engineering community about new advances in our field through compelling demonstrations that help advance research and practice. The track is a highly interactive venue where researchers and practitioners can demonstrate their tools and discuss them with attendees. Tool-based demonstrations describe novel aspects of early prototypes or mature tools. A demonstration provides the opportunity to communicate how the scientific approach has been implemented or how a specific hypothesis has been assessed, including details such as implementation and usage issues, data models and representations, APIs for tool and data access. Authors of regular research papers are thus also encouraged to submit an accompanying demonstration paper.

**Chairs:** Yang Liu and Yuanfang Cai  
**Submission:** May 20  
**Website:** [http://ase2016.org/demos.html](http://ase2016.org/demos.html)

**Workshop on Specification, Comprehension, Testing and Debugging of Concurrent Programs**

Although for the past decade we have witnessed incrementally more programmers writing concurrent programs, the vast majority of applications today are still sequential due to the lack of effective tools that support the development of concurrent programs. This trend necessitates the use of advanced methods to redesign the existing tools that remain optimized for sequential program development. The goal of workshop is to advance the state of the art in different phases of concurrent software development, covering specification, comprehension, testing and debugging.

**Organizers:** Zijiang Yang, Ting Liu, and Daniel Xiapu Luo  
**Submission:** May 20  

**1st International Workshop on Software Refactoring**

Refactoring is a disciplined technique for supporting the extremely volatile software life cycle, by providing better ways to reduce and manage the growing complexity of software systems while improving developer’s productivity. Refactoring is a technique for changing the internal structure of a software system while preserving the external behavior. Developers can use it to clean up their code, to improve program readability, understandability and quality, and as a preparation for releasing their software product. The workshop will provide an interactive forum for researchers and practitioners to exchange ideas and experiences, foster research on software refactoring, share lessons and challenges, thereby articulating a vision for the future of software refactoring.

**Organizers:** Ali Ouni, Marouane Kessentini and Mel Ó Cinnéide  
**Submission:** June 13  
**Website:** [http://www.softrefactoring.com/](http://www.softrefactoring.com/)

**Fifth International Workshop on Software Mining**

The Fifth International Workshop on Software Mining aims to bridge research in the data mining community and software engineering community by providing an open and interactive forum for researchers who are interested in software mining to discuss the methodologies and technical foundations of software mining, approaches and techniques for mining various types of software-related data, and applications of data mining to facilitate specialized tasks in software engineering. Participants of diverse background in either data mining or software engineering can benefit from this workshop by sharing their expertise, exchanging ideas, and discussing new research results.

**Organizers:** Ming Li, Xiaoyin Wang, and Lucia Lucia  
**Submission:** June 20  
**Website:** [http://lamda.nju.edu.cn/conf/softwaremining16/](http://lamda.nju.edu.cn/conf/softwaremining16/)

**Workshop on Formal Methods for Analysis of Business System**

After recent advances in the techniques and scalability of formal methods, their application to business systems has become more realistic and practical, similar to their use as technology of choice for verifying reactive systems. The goal of ForMABS 2016 is to provide a platform where people experimenting and applying formal methods to software engineering of business systems, have an opportunity to present and discuss their work with other researchers and practitioners. We welcome authors exploring or applying model checking, data-flow and control-flow analysis, symbolic execution for various purposes like verifying business applications and specifications, extracting specifications from source code, testing and other development activities, especially in the context of business systems. The workshop aims to provide authors with useful feedback about their work and facilitate networking within the community.

**Organizers:** Ravindra Naik, Ansuman Banerjee, Raveendra Kumar M  
**Submission:** May 27  
**Website:** [http://tinyurl.com/formabs16](http://tinyurl.com/formabs16)

**First Int’l Works. on Singularity in Autonomous Security and Privacy**

AlphaGo’s winning over Sedol Lee, champion of the Go game, reinforced the singularity that AI is surpassing human intelligence. So, is it necessary to rethink Security and Privacy problems for automated software engineering? As the designer of all automated protection mechanisms, who are all of the role of human become ever more important? Would such protections entail surveillance into our daily life, threatening our privacy? What are the best strategies to use adaptivity to address these threats? Can multiple agents (including humans and robots) collaborate together in these situations? Many questions we ask do not yet have clear-cut answers. Aiming at engineering dependable and automated systems, the goals of the workshop are as follows: (1) Elicit singularity concerns in automated software engineering; (2) Prepare exemplars or benchmarks for the singularity problem in security and privacy; (3) Debate on the role of collaborative intelligence among attackers and/or defenders; (4) Consider the human factors in automated engineering of security and privacy aspects; (5) Scope the problem boundaries to prioritize the research issues; (6) Identify key application areas such as mobile and cloud computing, autonomous vehicles, online to online services.

**Organizers:** Yang Liu and Yijun Yu  
**Submission:** June 13  
**Website:** [http://pat.sce.ntu.edu.sg/sasp2016/](http://pat.sce.ntu.edu.sg/sasp2016/)

**Technical Foundations of Software Mining**

The technical foundations of software mining are interested in software mining to discuss the methodologies and technical foundations of software mining, approaches and techniques for mining various types of software-related data, and applications of data mining to facilitate specialized tasks in software engineering. Participants of diverse background in either data mining or software engineering can benefit from this workshop by sharing their expertise, exchanging ideas, and discussing new research results.

**Organizers:** Yang Liu and Yijun Yu  
**Submission:** June 13  
**Website:** [http://www.softrefactoring.com/](http://www.softrefactoring.com/)