FSE 2016 Summary of Co-located Workshops

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The 24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering, FSE 2016, hosted eight international workshops. The intent of the workshops was to provide opportunities for exchanging views, advancing ideas, and discussing preliminary results in various areas of software engineering research and applications. The large number of workshop proposals, and the resulting large number of co-located workshops, are testaments to the energy and excitement within the field of software engineering to growth of new ideas, the collaboration between researchers and industrial practitioners, and the education of new contributors.

The eight workshops were organized, in total, by 31 researchers from 23 institutions all over the world. (One researcher, Christian Bird, contributed to organizing two workshops.) These organizers include (in alphabetical order): Bram Adams, Earl Barr, Olga Baysal, Andrew Begel, Stephany Bellomo, Christian Bird, Judith Bishop, Fabio Calefato, Jacek Czerwonka, Prem Devanbu Sigrid Eldh, Milos Gligoric, Latifa Guerrouj, Foutse Khomh, Chang Liu, David Lo, Kim Moir, Brendan Murphy, Meiyappan Nagappan, Tien Nguyen, Alex Orso, Wishnu Prasetya, Baishakhi Ray, Federica Sarro, Emad Shihab, Rishabh Singh, Nikolai Tillmann, Christoph Treude, Guowei Yang, Tanja Vos, and Tao Xie. The workshop abstracts included below were written by these organizers, and edited by us.

The workshops were explicitly asked to be designed to offer researchers and practitioners a platform to discuss early ideas and results, and not to provide an alternative forum for presenting full research papers. The resulting set of workshops was a mixture of emerging hot topics in software engineering, efforts to engage industrial partners and transfer technology to those partners while influencing researchers with real-world problems, and well-established topics looking to generate new ideas and collaborations.

Six of the workshops (the 2nd International Code Hunt Workshop on Educational Software Engineering (CHESE) the 2nd International Workshop on Software Analytics (SWAN), the 4th International Workshop on Release Engineering (RELENG), the 7th Workshop on Automating Test Case Design, Selection, and Evaluation (A-TEST), the 8th International Workshop on Social Software Engineering (SSE), and the Workshop on App Market Analytics) published proceedings, available via the ACM Digital Library, https://dl.acm.org/.

Workshop on Naturalness of Software

Date: Sunday, November 13, 2016
URL: http://nlse-fse.github.io
Organizers: Earl Barr, Christian Bird Prem Devanbu, Baishakhi Ray, and Tien Nguyen
Abstract: Recent work has shown that software, like natural language, is highly repetitive, and is predictable using statistical models developed in statistical natural language processing (NLP). These approaches have been applied successfully to software tools. The results are promising and exciting, and point to further opportunities to explore software's amenability to NLP techniques and tools. The Workshop on Naturalness of Software will advance the pace of research in the intersection of NLP and software engineering, which will lay the groundwork for more effective solutions to common software engineering tasks such as coding, maintenance, testing, and porting.

The 2nd International Workshop on Software Analytics (SWAN)

Date: Sunday, November 13, 2016
URL: http://softwareanalytics.ca/swan16
Organizers: Olga Baysal, Jacek Czerwonka, Latifa Guerrouj, David Lo, and Brendan Murphy
Abstract: The 2nd International Workshop on Software Analytics (SWAN 2016) aims to provide a common venue for researchers and practitioners across software engineering, data mining, and mining software repositories research areas to share new approaches and emerging results in developing and validating analytics-rich solutions, as well as adopting analytics to software development and maintenance processes to better inform their everyday decisions.

The 8th International Workshop on Social Software Engineering (SSE)

Date: Monday, November 14, 2016
URL: http://sse-ws.github.io
Organizers: Andrew Begel, Fabio Calefato, and Christoph Treude
Abstract: The Workshop on Social Software Engineering (SSE 2016) focuses on the interplay between social computing and software engineering. On the one hand, social factors in software engineering activities, processes, and tools are essential for improving the quality of development processes and of the software produced by them. On the other hand, social software mediates people-to-people communication, supporting human choices, actions, and interactions. SSE 2016 brings together academic and industrial perspectives to provide models, methods, tools, and approaches to address these issues.

Workshop on App Market Analytics

Date: Monday, November 14, 2016
URL: http://appmarketanalytics.github.io
Organizers: Meiyappan Nagappan, Federica Sarro, and Emad Shihab
Abstract: Software applications are distributed very differently today that in the past — through centralized marketplaces. This distribution mechanism has changed the way developers interact with users,

and the way software is released and consumed. These markets, which are now standard for mobile applications, are now popular distribution mechanisms for desktop applications, games, and open-source software. The Workshop on App Market Analytics seeks to bring together researchers and practitioners to discuss research challenges, ideas, initiatives, and results that use application distribution market data to answer pertinent software engineering questions.

The 2nd International Code Hunt Workshop on Educational Software Engineering (CHESE)

Date: Monday, November 14, 2016
URL: http://research.microsoft.com/en-us/events/chese2016
Organizers: Judith Bishop, Chang Liu, Alex Orso, Rishabh Singh, Nikolai Tillmann, and Tao Xie
Abstract: The 2nd International Code Hunt Workshop on Educational Software Engineering (CHESE 2016) aims to build up a research community of educational software engineering around using gaming technologies to address broad educational challenges. Serious games enhance the self-motivation of students to practice coding skills. CHESE 2016 will consider the software engineering needed to construct and maintain such games; the mining, analyzing, and visualizing of data from experiments and contests; and, more broadly, the theory and practice of software engineering tools and technologies in education. We are especially interested in experience reports of playing Code Hunt (a popular educational tool with research data released to the public) as well as other educational software engineering games, systems, and tools.

The 4th International Workshop on Release Engineering (RELENG)

Date: Friday, November 18, 2016
URL: http://releng.polymtl.ca/RELENG2016/html
Organizers: Bram Adams, Stephany Bellomo, Christian Bird, Foutse Khomh, and Kim Moir
Abstract: Release engineering deals with all activities in between regular development and actual usage of a software product by the end user, including integration, build, test execution, deployment, and release of the software. Although research on this topic goes back for decades, the increasing heterogeneity and variability of software products along with the recent trend to shorten the release cycle to days or even hours starts to question some of the common beliefs and practices of the field. The 4th International Workshop on Release Engineering (RELENG 2016) aims to provide a highly interactive forum for researchers and practitioners to engage with each other to address the challenges of and share experiences with release engineering, and to build connections between the involved communities. RELENG 2016 will consist of keynotes, practitioner talks, paper presentations, working groups, and a fishbowl panel for semi-structured group discussions. In an effort to engage with practitioners, one PC-chair has been a release engineer at Google and one third of the PC consists of release engineers. Accordingly, every submitted paper is reviewed by at least one practitioner.

The Java Pathfinder Workshop

Date: Friday, November 18, 2016
URL: https://jpf.byu.edu/jpf-workshop-2016
Organizers: Milos Gligoric and Guowei Yang
Abstract: The goal of the Java Pathfinder Workshop is to highlight research and tools for Java and Android program verification and analysis. Although there is a particular emphasis on the Java Pathfinder (JPF) tool, and on projects that use JPF to support basic research, tool development, or verification case studies, the Java Pathfinder Workshop also welcomes contributions related to general program analysis of Java and Android programs. The hope is to use the Java Pathfinder Workshop to grow the community of researchers investigating Java, Android, or JPF in an effort to foster collaboration and define future needs for Java program analysis.

The 7th Workshop on Automating Test Case Design, Selection, and Evaluation (A-TEST)

Date: Friday, November 18, 2016
URL: www.a-test.org
Organizers: Sigrid Eldh, Wishnu Prasetya, and Tanja Vos
Abstract: Software testing is presently the most important and most used quality-assurance technique applied in industry. The activities that make up the testing life-cycle, such as test case design, test case selection, and test case evaluation, determine the quality and effectiveness of the whole testing process. At the same time, these activities are some of the most difficult, time-consuming, and error-prone activities. Moreover, today, there exist few tools that support test case design; most test case design is performed manually. Consequently, industry spends considerable effort and money on testing, but the quality of the resulting tests is sometimes low and the tests fail to find important errors. The 7th Workshop on Automating Test Case Design, Selection, and Evaluation (A-TEST 2016) aims to provide a venue for researchers and industrial practitioners to exchange and discuss trending views, ideas, state-of-the-art work in progress, and scientific results on automated test case design, selection, and evaluation. A-TEST 2016 emphasizes discussion, as it is the most effective way to share and improve each other's work.