Message from the Chairs

Welcome to the 6th International Workshop on Program Comprehension through Dynamic Analysis (PCODA’15), co-located with the 22nd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2015). PCODA is a half-day workshop, to be held on March 2, 2015 at École Polytechnique de Montréal, Québec, Canada.

PCODA is devoted to the theory and practice of dynamic analysis techniques for program comprehension. Unlike static analysis that focuses on examining the source code, dynamic analysis methods operate on the system’s execution, providing valuable insight into what a system does and why it does it in a certain way. The main goal of the workshop is to bring together both academics and industry professionals to discuss recent advances in the field, share results, uncover research issues, and plan future directions. This year’s edition builds on the success of the five previous editions of PCODA, held in conjunction with the Working Conference on Reverse Engineering (WCRE) in respectively Pittsburgh (2005), Benevento (2006), Vancouver (2007), Antwerp (2008), and Boston (2010). These editions of PCODA have showed an active interest in the field as evidenced by both the high number of submissions and participants.

In this year’s edition, we have received six high-quality papers, from which four were selected for presentation at the workshop. Each paper had undergone a thorough review from at least two reviewers of the technical program committee. The accepted papers cover a wide range of topics relevant to the use of dynamic analysis to facilitate program comprehension and maintenance tasks. The first paper by Wilhelm et al. discusses the challenging problem of parallelizing legacy industrial systems. The authors propose an elegant solution, implemented in a tool called Parceive, which uses dynamic binary instrumentation to trace C/C++ programs and visualize parallelization opportunities in the code. The second paper by Khoury takes on the difficult task of examining assembly code using symbolic analysis. The author developed a symbolic analyzer for assembly traces that can be used to identify vulnerabilities in the system. Supported by DRDC (Defence R&D Canada), the proposed symbolic analyzer holds real promise in practical applications. Formal representation of traces is the topic of the third paper by Varvaressos et al. The authors introduce a new approach for classifying traces with respect to defined properties expressed in LTL. They produce a trace representation called hologram that can be used to verify whether the system supports given properties. Last but not least, Noughi and Cleve propose a novel approach that combines dynamic analysis techniques and visualization to facilitate the understanding of data-intensive systems. The authors propose an approach for representing traces of SQL queries in a conceptual manner that is platform-independent. Tracing SQL queries is a topic that fits well with today’s Big Data challenges.

We would like to thank all the authors, reviewers, and members of the SANER organization committee for helping with the organization of PCODA. We hope that this year’s edition of PCODA will trigger interesting discussions that will serve to advance the state of the art in the field.

Everybody is welcome to attend.

Abdelwahab Hamou-Lhadj and Alf Larsson
PCODA 2015 Co-chairs
PCODA 2015 Organization

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