

Proceedings of the 10th International Workshop on Context-Oriented Programming: Advanced Modularity for Run-time Composition

Co-located with the
European Conference on Object-Oriented Programming
(July 16, Amsterdam, Netherlands)

Organizers

Robert Hirschfeld	<i>University of Potsdam, Germany</i>
Atsushi Igarashi	<i>Kyoto University, Japan</i>
Tetsuo Kamina	<i>Oita University, Japan</i>
Jens Lincke	<i>Hasso Plattner Institute, Germany</i>
Hidehiko Masuhara	<i>Tokyo Institute of Technology, Japan</i>

With special thanks to all of our Program Committee members:

Tomoyuki Aotani, Nicolás Cardozo, Coen De Roover, Elisa Gonzalez Boix, David H. Lorenz, Gorel Hedin, Stefan Marr, Kim Mens, Stefan Ramson, Guido Salvaneschi, Matthias Springer, Mario Südholt, Naoyasu Ubayashi, Didier Verna, Harumi Watanabe, and Tijs van der Storm

Contextual information plays an ever-increasing role in our information-centric world. Current-day software systems adapt continuously to changing execution and usage contexts, even while running. Unfortunately, mainstream programming languages and development environments still do not support this kind of dynamicity very well, leading developers to implement complex designs to anticipate various dimensions of variability.

Context-Oriented Programming directly supports variability at the programming level, depending on a wide range of dynamic attributes. It enables run-time behavior to be dispatched directly on any detected properties of the execution or user context. Since more than a decade, researchers have been working on a variety of notions approaching that idea. Implementations ranging from first prototypes to mature platform extensions used in commercial deployments have illustrated how multidimensional dispatch can be supported effectively to achieve expressive run-time variation in behavior.

The goal of the 10th Workshop on Context-Oriented Programming was to further establish context orientation as a common thread throughout language design, application development, and system support.

Table of Contents

1. *Declarative Language for Context Activation*
by Nicolás Cardozo *pages 1-7*
2. *A Context-Oriented Programming Approach to Dependency Hell*
by Yudai Tanabe, Tomoyuki Aotani, and Hidehiko Masuhara pages 8-14
3. *Feature Visualiser: An Inspection Tool for Context-Oriented Programmers*
by Benoît Duhoux, Kim Mens, and Bruno Dumas pages 15-22
4. *A Simple Context-Oriented Programming Extension to an FRP Language for Small-Scale Embedded Systems*
by Takuo Watanabe. *pages 23-30*
5. *Activity Contexts: Improving Modularity in Blockchain-based Smart Contracts using Context-oriented Programming*
by Toni Mattis, and Robert Hirschfeld. pages 31-38
6. *Cross-cutting Commentary: Narratives for Multi-party Mechanisms and Concerns*
by Robert Hirschfeld, Tobias Dürschmid, Patrick Rein, and Marcel Taeumel.
... pages 39-47

About the review process

All authors were asked to submit a paper for presentation at the workshop. Every paper was reviewed by at least three reviewers, who assessed the paper both for its quality to be presented at the workshop and inclusion in the post-workshop proceedings.

Number of papers initially submitted: 8

Number of papers accepted: 6