COP 2018 10th International Workshop on Context-Oriented Programming
- *Advanced modularity for run-time composition* -

Amsterdam, Netherlands, July 16th, 2018, co-located with ECOOP/ISSTA 2018

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

Context-Oriented Programming directly supports variability at the programming level, featuring dedicated programming abstractions enabling programmers to write software applications that adapt dynamically to a wide range of dynamic attributes. It enables run-time behaviour to be dispatched directly on any detected properties of the execution or user context. Since more than a decade, several 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. Our series of International Workshops on Context-Oriented Programming (COP) at ECOOP since 2009 have shown to be well-received, each attracting around 30 participants. Also in 2018 we hope to advance this vibrant research domain at ECOOP in the beautiful and lively city of Amsterdam.

Topics

Topics of interest to the workshop include, but are not limited to:

- Interesting application domains and scenarios for COP;
- Programming language abstractions for COP (e.g. dynamic scoping, roles, traits, prototype-based extensions);
- Implementation techniques and mechanisms for COP (e.g. different kinds of dynamic, contextual, and multi-dimensional dispatch or pre-dispatch);
- Implementation issues for COP such as optimization, VM support, JIT compilation etc.;
- Implemented use-cases, case studies, or prototypes of COP;
- Theoretical foundations for COP (e.g., semantics, type systems);
- Configuration languages (e.g. feature description interpreters, transformational approaches);
- Interaction between non-functional programming concerns and COP (e.g. security, persistence, concurrency, distribution);
- Modularization approaches for COP (e.g. modules, aspects, features, layers, plugins);
- Guidelines to apply COP (e.g. best practices, idioms, patterns);
- Run-time support for COP (e.g. reflection, dynamic binding);
- Tool support (e.g. design tools, IDEs, debuggers);
- Support for COP at the modeling level;
- Beyond context-oriented behavior adaptation (e.g., UI adaptation, DB adaptation).

Submission guidelines

COP invites submissions of high-quality papers reporting original research, or describing innovative contributions to, or experience with context-oriented programming, its implementation, and application. Papers that depart significantly from established ideas and practices are particularly welcome.

Submissions must not have been published previously and must not be under review for any other refereed event or publication. The program committee will evaluate each contributed paper based on its relevance, significance, clarity, and originality.

Papers are to be submitted via EasyChair. They must be written in English, provided as PDF documents, and follow the new ACM Master Article Template with the sigconf option. They should not exceed 8 pages. Accepted papers will be published in the ACM Digital Library.

Important dates

- Submission deadline: **May 18th, 2018** (AoE)
- Notifications: **June 8th, 2018**
- Final version: **June 29th, 2018**

Program Committee

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