Proceedings of the 12ᵗʰ International Workshop on Context-Oriented Programming and Advanced Modularity

Message From the Chairs

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 (COP) 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.

This volume contains the papers presented at COP 2020, the 12th International Workshop on Context-oriented Programming held on July 21, 2020. It was the first online-version of the workshop: Participants met virtually, authors presented their work in 20 min talks, and everyone engaged in lively discussions that extended beyond the end of the scheduled time.

There were five submissions. Each submission was reviewed by at least three program committee members. The committee decided to accept four papers.

Our post-workshop proceedings allowed authors to reflect on the feedback they got from the program committee and the workshop participants and improve their

submission.

We would like to thank our program committee, all workshop attendees, and most importantly our authors for their contributions, constructive criticism, hard work, and willingness to share their ideas.

Presented Papers

Adaptive Variables for Declarative UAV Planning.
John Henry Burns, Xiaozhou Liang, and Yu David Liu

Zone-based Layer Activation: Context-specific Behavior Adaptations across Logically-connected Asynchronous Operations.
Stefan Ramson, Jens Lincke, Harumi Watanabe, and Robert Hirschfeld

Interfaces for Modular Reasoning in Context-Oriented Programming.
Paul Leger, Hidehiko Masuhara, and Ismael Figueroa

PLAM: Preemptive Layer Activation Architecture based on Multi-threading in Context-Oriented Programming.
Zihab Liu, Ikuta Tanigawa, Harumi Watanabe, and Kenji Hisazumi

Web

https://2020.ecoop.org/home/COP-2020

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