

Third International Workshop on Feature-Oriented Software Development (FOSD 2011)

<http://fosd.de/2011>

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ABSTRACT

Feature orientation is an emerging paradigm of software development. It supports the automatic generation of large-scale software systems from a set of features. A feature is a unit of functionality that satisfies a requirement, represents a design decision, and provides a potential configuration option. The goal of *feature-oriented software development* (FOSD) is to consider and trace the features of a software system during all phases of the software life cycle from analysis and design to implementation and testing. The aim of the FOSD workshop is to stimulate collaboration between researchers working on FOSD and related areas.

I. MOTIVATION

The key idea of FOSD is to emphasize the similarities of a family of software systems for a given application domain (e.g., database systems, banking software, text processing systems) with the goal of reusing software artifacts among the family members. Features distinguish different members of the family. Features can be implemented with a variety of techniques such as feature-oriented programming (FOP), aspect-oriented programming (AOP), components, preprocessors, etc. A challenge in FOSD is that often a feature does not map cleanly to an isolated module of code. Rather it may affect (“cut across”) many components/artifacts of a software system. Furthermore, the decomposition of a software system into its features gives rise to a combinatorial explosion of possible feature combinations and interactions. Research on FOSD has shown that the concept of features pervades all phases of the software life cycle and requires a proper treatment in terms of analysis, design, and programming techniques, methods, languages, and tools, as well as formalisms and theory.

II. OBJECTIVES

The primary goal of the Third International Workshop on Feature-Oriented Software Development (FOSD 2011) is to foster and strengthen the collaboration between the researchers

who work in the field of FOSD or in the related fields of software product lines, service-oriented architecture, and model-driven engineering. The focus of FOSD 2011 is on discussions, rather than on presenting technical content only. That is, beside technical talks, there are explicit discussion sessions, a session for presenting ideas in the form of lightning talks, as well as a tool demo session.

The intended audience comprises, on the one hand, researchers who work in the field of FOSD and, on the other hand, researchers who work in closely related fields, as mentioned above, who use concepts of FOSD or who can contribute ideas for FOSD.

III. WORKSHOP TOPICS

The program committee invites contributions in the following topics:

- Programming language and tool support for FOSD
- Mapping between problem and solution space
- Formal methods and theory for FOSD
- Variability-aware analysis (e.g., type checking, testing, data flow analysis, and verification)
- Feature composition, interaction, and refactoring
- Versioning, evolution, and maintenance
- Generative programming and automatic programming
- Components, services, and models

IV. ORGANIZATION

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