



K O P L E

**Knowledge-Oriented
Product Line Engineering**

Second International Workshop on

**Knowledge-Oriented Product Line Engineering
(KOPLE 2011)**

<http://www.tecnalia.com/workshops/KOPLE2011>

Held in conjunction with the 15th International Software Product Line Conference
(SPLC 2011) Munich, Germany 22-26 August 2011

Workshop overview

Software Product Line Engineering (PLE) exploits systematic reuse by identifying and methodically reusing software artifacts to develop different but related software systems.

Developing Product Lines requires analysis skills to identify, model, and encode domain and product knowledge into artifacts that can be systematically reused across the development life-cycle. As such, Knowledge plays a paramount role in the success of the various activities of PLE.

The objective of KOPLE is to bring together SPL researchers and practitioners from academia and industry to investigate the role of Knowledge in PLE. Knowledge is usually encapsulated in PL architectures in a tacit or implicit way, and this may appear to be sufficient for industry to implement successful product lines. Nevertheless, KOPLE also aims to become a discussion forum about techniques and methods to convert from tacit to explicit Knowledge in PLE and to process and use this Knowledge for optimizing and innovating PLE processes.

The key specific objectives of the KOPLE workshop can be summarized as follows:

- Compile current practices and experience in applying knowledge engineering techniques in engineering product line architectures
- Explore and discuss how the PLE industry can benefit from the knowledge engineering community and vice versa
- Discuss and document challenges and barriers for knowledge management and modeling in PLE
- Investigate various innovative techniques for modeling, developing, and implementing knowledge-oriented PLE
- Initiate a Working Group that focuses on knowledge issues related to PLE to further develop this area and its practice

Workshop topics

The topics covered in the workshop include, but are not limited to:

Knowledge-based domain modeling

- . Domain analysis and Knowledge Engineering
- . Knowledge representation in PL
- . Extending existing variability languages with (more) semantics
- . Ontologies in PLE
- . Conceptual graphs in PLE
- . Experts systems in PLE
- . Domain-Specific Knowledge-Oriented PL
- . Metrics for Knowledge-Oriented PL
- . Exploiting knowledge-based Product Lines

Tool support for Knowledge-Oriented PL

- . Context-based variability resolution
- . Business decision-making support
- . Life-cycle evolution and optimization
- . Methodologies and processes supporting Knowledge-Oriented PL exploitation
- . Organizational issues and knowledge management in PLE
- . Economical/value aspects of adopting Knowledge-Oriented PLE
- . Testing PL architectures and Knowledge Engineering
- . Knowledge management of PL architecture evolution
- . PL architecture scoping and Knowledge Engineering
- . Mining Knowledge in Product Line Engineering

Knowledge acquisition and elicitation in PL.

- . Techniques for the inference of knowledge from PL assets
- . Techniques for the extraction of knowledge from products for PL adoption/discovery
- . Reasoning techniques for PLE
- . Artificial-Intelligence techniques applied to PLE
- . Usage of discovered knowledge
- . Practical experience in developing Knowledge-Oriented PL

Domain analysis and Knowledge Engineering in specific domains

- . Industry case studies
- . Experience reports

Submission and Participation

Authors interested in participating in the workshop are requested to submit either:

- . Regular paper (max. 8 pages) that represents original research or industrial experience report
- . Short paper (from 3 to 5 pages) that describes sound new ideas and concepts that are under research or experimental studies at industrial settings.

Submissions and final papers should be formatted using the ACM SIGPLAN 10 point format. Templates for Word and LaTeX are available at

<http://www.acm.org/sigs/publications/proceedings-templates> This site also contains links to useful information on how to write effective submissions.

Papers should be submitted via <http://www.easychair.org/conferences/?conf=kople2011>

All papers submitted to the workshop must be unpublished original work and must not have been submitted anywhere else for publication. Each paper will be reviewed by two PC members and accepted papers will be selected based on quality, novelty, and relevance to the workshop topic. Accepted papers will be published in Volume 2 Proceedings of the conference (Workshop Proceedings).

Important Dates

- . Paper submission: Monday, May 30
- . Author Notification: Monday, June 20
- . Final version: Thursday, June 30
- . Workshop: Friday, August 26

Workshop Organizers

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Technical Program Committee

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