

### FOAL '09

# Proceedings of the Eighth Workshop on Foundations of Aspect-Oriented Languages

held at the Eighth International Conference on Aspect-Oriented Software Development

March 2, Charlottesville, Virginia

Workshop Organizers: Curtis Clifton, Shmuel Katz, Gary T. Leavens, and Mira Mezini

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#### **Preface**

Aspect-oriented programming is a paradigm in software engineering and programming languages that promises better support for separation of concerns. The seventh Foundations of Aspect-Oriented Languages (FOAL) workshop was held at the Seventh International Conference on Aspect-Oriented Software Development in Charlottesville, Virginia, on March 2, 2009. This workshop was designed to be a forum for research in formal foundations of aspect-oriented programming languages. The call for papers announced the areas of interest for FOAL as including: semantics of aspect-oriented languages, specification and verification for such languages, type systems, static analysis, theory of testing, theory of aspect composition, and theory of aspect translation (compilation) and rewriting. The call for papers welcomed all theoretical and foundational studies of foundations of aspect-oriented languages.

The goals of this FOAL workshop were to:

- Make progress on the foundations of aspect-oriented programming languages.
- Exchange ideas about semantics and formal methods for aspect-oriented programming languages.
- Foster interest within the programming language theory and types communities in aspect-oriented programming languages.
- Foster interest within the formal methods community in aspect-oriented programming and the problems of reasoning about aspect-oriented programs.



FOAL logos courtesy of Luca Cardelli

The workshop was organized by Curtis Clifton (Rose-Hulman Institute of Technology, USA), Shmuel Katz (Technion–Israel Institute of Technology, Israel), Gary T. Leavens (University of Central Florida, USA), and Mira Mezini (Darmstadt University of Technology, Germany). The program committee was chaired by Mario Südholt.

We thank the organizers of AOSD 2009 for hosting the workshop, and in particular workshops chair Doug Schmidt, the AOSD general chair Kevin Sullivan, and the organizing chair Jeff Gray for their help.

#### Message from the Program Committee Chair

The eighth FOAL workshop maintains the high bar for quality set by previous instances. FOAL is one of the primary forums for foundational work on aspect-oriented software development. As in the past, each paper was subjected to full review by at least three reviewers. Papers co-authored by program committee members or organizers were reviewed by four or five reviewers and were held to a higher standard. I am grateful to the program committee members for their dedication, insightful comments, attention to detail, and the service they provided to the community and the individual authors

The members of the program committee were: Curtis Clifton (Rose-Hulman Institute of Technology), Erik Ernst (University of Aarhus), Pascal Fradet (INRIA), Shmuel Katz (Technion-Israel Institute of Technology), Karl Lieberherr (Northeastern University), David Lorenz (The Open University of Israel), Hidehiko Masuhara (University of Tokyo), Mira Mezini (Darmstadt University of Technology), Klaus Ostermann (Darmstadt University of Technology), James Riely (DePaul University), and Damien Sereni (Oxford)

I am also grateful to the authors of submitted works. Twelve papers were submitted for review this year. Of these, the program committee selected six for presentation at the workshop and publication in the proceedings. One of these has been included specifically for a demo-based presentation because of corresponding tool support to animate and illustrate semantics of aspect based languages

The program was rounded out with an invited talk by Mehmet Ak sit of the University of Twente in the Netherlands, and an open session on "New Ideas, Open Questions, and Work in Progress," organized by Shmuel Katz.

Finally, I would like to thank the other members of the organizing committee of FOAL—Shmuel Katz, Gary Leavens, and Mira Mezini—for their work in guiding us toward another inspiring workshop.

Mario Südholt FOAL '09 Program Chair École des Mines de Nantes, France