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Shigeru Chiba · Éric Tanter  
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Transactions on  
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Software  
Development XII

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## Editorial

Welcome to Volume XII of the Transactions on Aspect-Oriented Software Development. This volume has one regular paper and a special section on selected papers from Modularity 2014. The regular paper “Modular Reasoning in Aspect-Oriented Languages from a Substitution Perspective” presents a new approach to modular reasoning of aspect-oriented programs. Modular reasoning in aspect-oriented languages like AspectJ has been leading interesting discussion in the research community and a number of papers have been published on this topic. This paper reports the latest result on this topic. In the paper, the authors propose their new language ContractAJ, in which programmers can describe contracts for modular reasoning. The special section following this paper is a collection of the papers selected from Modularity 2014 conference. The papers were guest edited by Erik Ernst, Research Results Program Chair, and Robert Hirschfeld, Modularity Visions Program Chair of the conference. Although the conference proceedings is already a collection of high-quality papers in this area, which are available from ACM digital library, this special section collected longer versions of the best papers presented at the conference.

We thank the guest editors for soliciting submissions, running review processes, and collecting final versions within such a short period. We are pleased to publish this special issue in a timely fashion. We also thank the editorial board members for their continued guidance and input on the policies of the journal, the reviewers for volunteering a significant amount of time despite their busy schedules, and the authors who submitted papers to the journal.

January 2015

Shigeru Chiba  
Éric Tanter

# **Guest Editors' Foreword**

## **Special Section of Selected Papers from Modularity 2014**

This special section of TAOSD contains selected papers presented at Modularity 2014, the 13th conference in the conference series that started out under the name International Conference on Aspect-Oriented Software Development (AOSD). The papers were selected based on input from the Modularity 2014 Program Committees, for which we served as Program Committee Chairs. The authors of the selected papers were invited to submit a revised and extended version of their work. Each revised paper was reviewed both by a member of one of the two Program Committees who had been a reviewer of the original conference paper and by one other reviewer. Each paper underwent two revision steps, thus ensuring that the extensions were substantial and well integrated. As is common for this kind of section, we handled the reviewing process without the involvement of the Editors-in-Chief.

The result of the substantial efforts made by the authors and the careful feedback provided by the reviewers is this interesting snapshot of current state-of-the-art research on modularity. The topics covered include novel dynamic semantics through delegation proxies, modularity potential detection based on co-change clusters, improvements in reusability for components of semantic specifications of programming languages, and probabilistic model checking applied to dynamically generated members of a product line. We hope that you will enjoy reading this section!

January 2015

Erik Ernst  
Robert Hirschfeld

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