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Sukyoung Ryu (Ed.)

# Programming Languages and Systems

16th Asian Symposium, APLAS 2018  
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Proceedings

*Editor*  
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# Preface

This volume contains the proceedings of the 16th Asian Symposium on Programming Languages and Systems (APLAS 2018), held in Wellington, New Zealand during December 2–6, 2018. APLAS aims to stimulate programming language research by providing a forum for the presentation of the latest results and the exchange of ideas in programming languages and systems. APLAS is based in Asia but is an international forum that serves the worldwide programming languages community.

APLAS 2018 solicited submissions in two categories: regular research papers and system and tool demonstrations. The conference solicits contributions in, but is not limited to, the following topics: semantics, logics, and foundational theory; design of languages, type systems, and foundational calculi; domain-specific languages; compilers, interpreters, and abstract machines; program derivation, synthesis, and transformation; program analysis, verification, and model-checking; logic, constraint, probabilistic, and quantum programming; software security; concurrency and parallelism; and tools and environments for programming and implementation.

APLAS 2018 employed a lightweight double-blind reviewing process with an author-response period. Within the review period, APLAS 2018 used an internal two-round review process where each submission received three first-round reviews on average to drive the possible selection of additional expert reviews as needed before the author response. The author-response period was followed by a two-week Program Committee discussion period to finalize the selection of papers.

This year APLAS reviewed 51 submissions. After thoroughly evaluating the relevance and quality of each paper, the Program Committee decided to accept 22 contributions including four tool papers. We were also honored to include three invited talks by distinguished researchers:

- Amal Ahmed (Northeastern University, USA) on “Compositional Compiler Verification for a Multi-Language World”
- Azalea Raad (MPI-SWS, Germany) on “Correctness in a Weakly Consistent Setting”
- Bernhard Scholz (University of Sydney, Australia) on “Soufflé: A Datalog Engine for Static Analysis”

This program would not have been possible without the substantial efforts of many people, whom I sincerely thank. The Program Committee, sub-reviewers, and external expert reviewers worked hard in selecting strong papers while providing constructive and supportive comments in their reviews. Alex Potanin (Victoria University of Wellington, New Zealand) serving as the general chair of APLAS 2018 checked every detail of the conference well in advance. David Pearce (Victoria University of Wellington, New Zealand) serving as the Web and venues chair and Jens Dietrich (Massey University, Palmerston North, New Zealand) serving as the sponsorship and accessibility chair were always responsive. I also greatly appreciate the APLAS

Steering Committee for their leadership, as well as APLAS 2017 PC chair Bor-Yuh Evan Chang (University of Colorado Boulder, USA) for his advice.

Lastly, I would like to acknowledge the organizers of the associated events that make APLAS a successful event: the Poster Session and Student Research Competition (David Pearce, Victoria University of Wellington, New Zealand) and the APLAS Workshop on New Ideas and Emerging Results (Wei-Ngan Chin, National University of Singapore and Atsushi Igarashi, Kyoto University, Japan).

September 2018

Sukyoung Ryu

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