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Preface

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■ Preface

This volume contains the proceedings of the 30th Conference on Concurrency Theory, which was held in Amsterdam, The Netherlands, on August 27–30, 2019. CONCUR 2019 was organized by CWI. At its 30th anniversary the CONCUR conference series has returned to its place of birth, as the first two instalments, in 1990 and 1991, took place in Amsterdam.

CONCUR is a forum for the development and dissemination of leading research in concurrency theory and its applications. Its aim is to bring together researchers, developers, and students to exchange and discuss latest theoretical developments and learn about challenging practical problems. CONCUR is the reference annual event for researchers in the field.

The principal topics include basic models of concurrency such as abstract machines, domain-theoretic models, game-theoretic models, process algebras, graph transformation systems, Petri nets, hybrid systems, mobile and collaborative systems, probabilistic systems, real-time systems, biology-inspired systems, and synchronous systems; logics for concurrency such as modal logics, probabilistic and stochastic logics, temporal logics, and resource logics; verification and analysis techniques for concurrent systems such as abstract interpretation, atomicity checking, model checking, race detection, pre-order and equivalence checking, run-time verification, state-space exploration, static analysis, synthesis, testing, theorem proving, type systems, and security analysis; distributed algorithms and data structures: design, analysis, complexity, correctness, fault tolerance, reliability, availability, consistency, self-organisation, self-stabilisation, protocols. Also the theoretical foundations of more applied topics like architectures, execution environments, and software development for concurrent systems such as geo-replicated systems, communication networks, multiprocessor and multi-core architectures, shared and transactional memory, resource management and awareness, compilers and tools for concurrent programming, programming models such as component-based, object- and service-oriented can be found at CONCUR.

This edition of the conference attracted 93 full paper submissions. We thank the authors for their interest in CONCUR 2018. After careful reviewing and discussions, the Program Committee selected 37 papers for presentation at the conference. Each submission was reviewed by at least three reviewers who wrote detailed evaluations and gave insightful comments. We warmly thank the members of the Program Committee and the additional reviewers for their excellent work, including the constructive discussions. The full list of reviewers is available as part of these proceedings.

The conference programme was greatly enriched by the invited presentations by Marta Kwiatkowska (University of Oxford, UK), Kim G. Larsen (Aalborg University, Denmark), Joël Ouaknine (Max Planck Institute for Software Systems, Germany) and Jaco van de Pol (Aarhus University, Denmark). The abstracts of their talks are available as part of these proceedings.

This year, the conference was jointly organised with the 17th International Conference on Formal Modelling and Analysis of Timed Systems (FORMATS 2019) and the 24th International Conference on Formal Methods for Industrial Critical Systems (FMICS 2019). Additionally, the event was enriched by six satellite events: the Combined 26th International Workshop on Expressiveness in Concurrency and 16th Workshop on Structural Operational Semantics (EXPRESS/SOS 2019), the 8th IFIP WG 1.8 Workshop on Trends in Concurrency Theory (TRENDS 2019), the 9th Young Researchers Workshop on Concurrency Theory (YR-CONCUR 2019), the 4th International Workshop on Timing Performance Engineering

30th International Conference on Concurrency Theory (CONCUR 2019).
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for Safety Critical Systems (TIPS 2019), the 3rd International Workshop on Methods and Tools for Distributed Hybrid Systems (DHS 2019), and the 2nd International Workshop on Recent Advances in Concurrency and Logic (RADICAL 2019).

As usual, the CONCUR proceedings are available for open access via LIPICs. We thank the authors and the participants for making this year's CONCUR a success.

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