# 28th International Conference on Concurrency Theory

**CONCUR 2017, September 5–8, 2017, Berlin, Germany**

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# Preface

This volume contains the proceedings of the 28th Conference on Concurrency Theory, which was held in Berlin, Germany, on September 5–8, 2017. CONCUR 2017 was organized by Technische Universität Berlin and Technische Universität Braunschweig.

CONCUR is a forum for the development and dissemination of leading research in concurrency theory and its applications. The aim is to bring together researchers, developers, and students, 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-organization, self-stabilization, 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 86 full paper submissions. We would like to thank the authors for their interest in CONCUR 2017. After careful reviewing and discussions, the Program Committee selected 36 papers for presentation at the conference. Each submission was reviewed by at least three reviewers who wrote detailed evaluations and gave insightful comments. The Conference Chairs warmly thank the members of the Program Committee and the additional reviewers for their excellent work, as well as for the constructive discussions. The full list of reviewers is available as part of these proceedings.

The conference program was greatly enriched by the invited talks by Hongseok Yang (University of Oxford, UK), Azadeh Farzan (University of Toronto, Canada), Madan Musuvathi (Microsoft Research, USA), and Jean-Francois Raskin (Université libre de Bruxelles, Belgium). Moreover, Alastair Donaldson (Imperial College London, UK), Pawel Sobocinski (University of Southampton, UK), and Viktor Vafeiadis (Max Planck Institute for Software Systems, Germany) kindly agreed to contribute tutorials. The invited and the tutorial talks cover a broad range of topics from traditional concurrency theory and domains through games to the analysis of GPU kernels and the semantics of C++ in the presence of concurrency. The abstracts and invited papers are available as part of these proceedings. We thank the speakers for having accepted our invitation.

This year, the conference was jointly organized with the 14th International Conference on Quantitative Evaluation of SysTems (QEST), the 15th International Conference on Formal Modelling and Analysis of Timed Systems (FORMATS), and the 14th European Performance Engineering Workshop (EPEW) in an overarching event QONFEST. QONFEST included five more satellite events, the combined 24rd International Workshop on Expressiveness in

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Concurrency and 14th Workshop on Structural Operational Semantics (EXPRESS/SOS), the 1st Workshop on Recent Advances in Concurrency and Logic (RADICAL), the 7th Young Researchers Workshop on Concurrency Theory (YR-CONCUR), the 6th IFIP WG 1.8 Workshop on Trends in Concurrency Theory (TRENDS), and the 9th International Workshop on Practical Applications of Stochastic Modelling (PASM).

The CONCUR proceedings are available for open access via LIPIcs, and we thank the Marc Herbstritt and Sebastian Schweizer for helping us with the preparation.

Last, but not least, we thank the authors and the participants for making this year's CONCUR a successful event.

Roland Meyer (TU Braunschweig)
Uwe Nestmann (TU Berlin)

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