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# Embedded Computer Systems: Architectures, Modeling, and Simulation

21st International Conference, SAMOS 2021  
Virtual Event, July 4–8, 2021  
Proceedings

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ISSN 0302-9743                      ISSN 1611-3349 (electronic)  
Lecture Notes in Computer Science  
ISBN 978-3-031-04579-0              ISBN 978-3-031-04580-6 (eBook)  
<https://doi.org/10.1007/978-3-031-04580-6>

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# Preface

SAMOS is a conference with a unique format. It brings together every year researchers from both academia and industry on the topic of embedded systems in the perfect setting of Samos island. Due to the COVID-19 crisis, the SAMOS 2021 conference was held as a virtual live event on a virtual island, where people could walk around with their virtual avatars and chat with their peers, and listen to interesting talks.

The SAMOS 2021 keynote with the title “Spectres, Meltdowns, Zombies, Orcs: Can formal methods banish the ghosts that haunt your hardware?” was given by Wolfgang Kunz from University of Kaiserslautern. He presented a new formal method in order to detect hardware vulnerabilities systematically without demanding the clever thinking of a human attacker. A specific focus was also placed on virtual prototyping and simulation through a tutorial by Jakob Engblom from Intel.

The SAMOS 2021 proceedings comprise a selection of publications targeting either systems themselves - through their applications, architectures, and underlying processors - or methods created to automate their design. A total of 45 papers were submitted to the conference and 17 papers were selected by the Program Committee for presentation at the conference (38% acceptance rate). Four special sessions were organized in the program to report recent results of European projects, coalesce novel work on next generation computing (NGC) and security and put a special focus on the lessons learnt from meaningful negative results.

The SAMOS 2021 committee would like to acknowledge the generous support of the many reviewers who contributed to the quality of these proceedings. We hope that you enjoy reading them!

July 2021

Alex Orailoglu  
Matthias Jung  
Marc Reichenbach

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