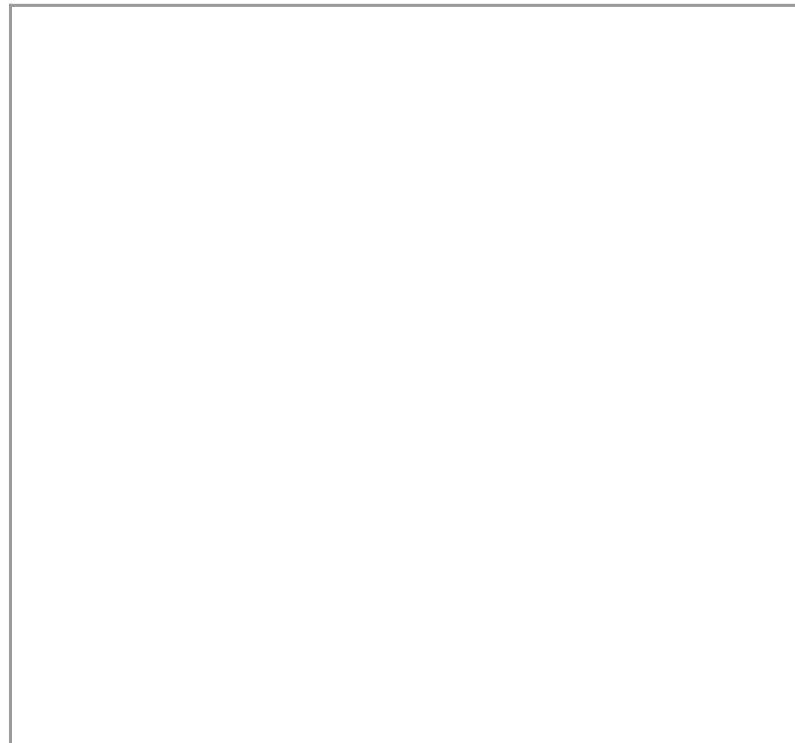


Veröffentlichungen

2019/05/24



1. Keynote Address „**Rethinking Firmware Design**“ - Wolfgang Ecker (Infineon Technologies AG, DE) - *DATE 2018 / ESIIT Workshop, Dresden, DE*
2. Vortrag: **A Structured Approach for Generating Embedded Software**, Keerthikumara Devarajegowda (Infineon, TU Kaiserslautern, DE), Wolfgang Ecker (Infineon, TU München, DE), Lorenzo Servadei (Infineon, TU München, DE), Michael Werner (Infineon, TU München, DE), *DATE 2018 / ESIIT Workshop, Dresden, DE*
3. Vortrag und Poster: **Gesture Recognition for Embedded Interactions in Industrial Automation Applications**, J.-P. Wolff, Ch. Haubelt (U Rostock, DE) *ESIIT Workshop März 2018, Dresden, DE*
4. **Virtual Prototype Based Analysis Framework in Model-Driven Development: A Use Case Study**, Frederik Haxel, Leon Hielscher, Sebastian Reiter, Alexander Viehl, Oliver Bringmann und Wolfgang Rosenstiel, FZI 2018, März, *DATE 2018 / ESIIT Workshop, Dresden, DE*
5. Übersichtsvortrag in Zusammenhang mit den Forschungsprojekten CONFIRM und COMPACT: „**Firmware Generation: State-of-the-Art, Challenges, and New Approaches**“ - Wolfgang Ecker (Infineon, TU München, D), Lorenzo Servadei (Infineon, TU München, D), Michael Werner (Infineon, TU München, D), Elena Zennaro (Infineon, TU München, D) - *edaWorkshop 2018, Hannover, DE*
6. **Current and Future RISC-V-Activities for Virtual Prototyping and Chip Design**, P. Adelt, B. Koppelman, W. Mueller, *RISC-V Workshop, June 21, 2018, München, DE*
7. **Efficient Fault Injection for Embedded Systems: As Fast as Possible but as Accurate as Necessary**, Petra R. Maier, Uzair Sharif, Daniel Müller-Gritschneider, Ulf Schlichtmann, TUM, *IEEE International Symposium on On-Line Testing and Robust System Design (IOLTS), Juli, 2018, Girona, ES*
8. Johann-Peter Wolff, Florian Grützmaker, Arne Wellnitz, Christian Haubelt: **Activity Recognition using Head Worn Inertial Sensors**, In *Proceedings of the 5th international Workshop on Sensor-based Activity Recognition and Interaction, Berlin, Deutschland, September 2018*
9. **Performance and Accuracy in Soft-Error Resilience Evaluation using the Multi-Level Processor Simulator ETISS-ML**, Daniel Mueller-Gritschneider, Uzair Sharif, Ulf Schlichtmann, In: *IEEE/ACM International Conference on Computer-Aided Design (ICCAD), November 2018, San Diego, US*
10. **SeRoHAL: Generation of Selectively Robust Hardware Abstraction Layers for Efficient Protection of Mixed-criticality Systems**, Petra R. Kleeberger, Juana Rivera, Daniel Mueller-Gritschneider, Ulf Schlichtmann, To appear in: *The 24th Asia and South Pacific Design Automation Conference (ASP-DAC), Jan. 2019*
11. Johann-Peter Wolff, Christian Haubelt, Rolf Schmedes, Kim Grüttner: **Inertial Sensor Based Robot Gesture Detection for Safe Human-Robot Interaction**, In *Proceedings of International Workshop on Embedded Software for the Industrial IOT, Florenz, Italien, März 2019*
12. P. Adelt, B. Koppelman, W. Mueller, Chr. Scheytt, B. Driessen. **QEMU for Dynamic Memory Analysis of Security Sensitive Software**, *ESIIT 2019, Florence, Italy, March 2019.*

13. **A Syntax Oriented Code Generation Approach for SoC Design Automation**, Michael Werner (Infineon, TU München, DE), Andreas Neumeier (Infineon, TU München, DE), Wolfgang Ecker (Infineon, TU München, DE), ESIIT 2019, Florence, Italy, March 2019.
14. Rolf Schmedes, Philipp Ittershagen, and Kim Grüttner: „**Towards Distributed Runtime Monitoring with C++ Contracts**“ In the Proceedings of the 2nd International Workshop on Embedded Software for the Industrial IOT (ESIIT) at DATE Conference 2019
15. Johann-Peter Wolff, Florian Grützmaier, Rainer Dorsch, Rolf Kaack, Lars Middendorf, Christian Haubelt: **Towards Automated Prototyping of Gesture Recognition Systems for Wearable Devices using Inertial Sensors**, In Proceedings of Smart Systems Integration, Barcelona, Spanien, April 2019 (Best Paper Award Nominee)
16. Adelt, Peer; Koppelman, Bastian; Müller, Wolfgang; Scheytt, Christoph: **Analyse sicherheitskritischer Software für RISC-V Prozessoren**. In: Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2019), Kaiserslautern, April 2019.
17. **Towards Distributed Runtime Monitoring with C++ Contracts**, Rolf Schmedes, Kim Grüttner, Philipp Ittershagen; International Conference on Omni-layer Intelligent systems (COINS); Mai 2019, Crete, Greece; ACM, New York, NY, USA, 141-145. DOI: <https://doi.org/10.1145/3312614.3312645> ^[1].
18. Prof. Ulf Schlichtmann: Keynote „**Early System-Level Resilience Evaluation for Embedded Systems**“, Synopsys User Group (SNUG) Meeting in München am 20.5.19.
19. **Increasing Soft Error Resilience by Software Transformation**, Michael Werner (Infineon, TU München, DE), Keerthikumara Devarajegowda (Infineon, TU Kaiserslautern, DE), Moomen Chaari (Infineon, DE), Wolfgang Ecker (Infineon, TU München, DE), Design Automation Conference (DAC), June 2019, Las Vegas, US
20. Koppelman, Bastian; Adelt, Peer; Müller, Wolfgang; Scheytt, Christoph: **RISC-V Extensions for Bit Manipulation Instructions**. In: 29th International Symposium on Power and Timing Modeling, Optimization and Simulation (PATMOS), Rhodos, Griechenland, Juli 2019.
21. Friederike Bruns, Philipp Ittershagen, and Kim Grüttner: „**Time Measurement and Control Blocks for Bare-Metal C++ Applications**“ In Proceedings of 2019 Forum for Specification and Design Languages (FDL), Southampton, United Kingdom, September 2019, pp. 1-8. DOI: <https://doi.org/10.1109/FDL.2019.8876898> ^[2]
22. Arne Wellnitz, Johann-Peter Wolff, Christian Haubelt, Thomas Kirste: **Fluid Intake Recognition using Inertial Sensors**, In Proceedings of the International Workshop on Sensor-based Activity Recognition and Interaction (iWoAR'19), pp. 4:1-7, Rostock, Deutschland, September 2019
23. **Towards a Python-Based One Language Ecosystem for Embedded Systems Automation**, Zhao Han (Infineon, TU München, DE), Keerthikumara Devarajegowda (Infineon, TU Kaiserslautern, DE), Michael Werner (Infineon, TU München, DE), Wolfgang Ecker (Infineon, TU München, DE), IEEE Nordic Circuits and Systems Conference (NORCAS, Helsinki, Finland, October 2019.
24. Fachvortrag auf dem MPS Community Meetup von Dr. Klaus Birken: „**Tackling Security and Safety with MPS**“. Amsterdam, Oktober 2019.
25. M. Völter, K. Birken, S. Lisson, A. Rimer: **Shadow Models – Incremental Transformations for MPS**. ACM SIGPLAN International Conference on Software Language Engineering (SLE), Athens, Oktober 2019.
26. K. Birken, A. Rimer: **Safety Weaving für Code und Modelle: Safety-Maßnahmen in C-Code und Modelle einweben**. In: ESE2019 Tagungsband Embedded Software Engineering Kongress (ESE), Sindelfingen, Dezember 2019 (Vortrag am 4.12.2019 um 11:45)
27. Fachvortrag auf dem Embedded Software Engineering Kongress (ESE 2019) von Dr. Klaus Birken: „**Safety-Weaving for Code and Models**“. Sindelfingen, Dezember 2019.
28. Uzair Sharif, Daniel Mueller-Gritschneider, Ulf Schlichtmann, **Investigating the Inherent Soft Error Resilience of Embedded Applications by Full-System Simulation**, In: IEEE/ACM Asia and South Pacific Design Automation Conference (ASP-DAC), China National Convention Center, Beijing, China, January 2020
29. Irune Yarza, Mikel Azkarate-askasua, Peio Onaindia, Philipp Ittershagen, Kim Grüttner, and Wolfgang Nebel. Januar 2020. **Static/Dynamic Real-Time Legacy Software Migration – A Comparative Analysis**. In Proceedings of the Rapido'20 Workshop on Rapid Simulation and Performance Evaluation: Methods and Tools (RAPIDO '20) in Bologna, IT. Association for Computing Machinery, New York, NY, USA, DOI: <https://doi.org/10.1145/3375246.3375257> ^[3]
30. **A Scalable Platform for QEMU Based Fault Effect Analysis for RISC-V Hardware Architectures**, Peer Adelt, Bastian Koppelman, Wolfgang Müller und Christoph Scheytt, UPB, MBMV, Stuttgart, DE, 19.-20.3.2020.
31. **Optimized HW/FW Generation from an Abstract Register Interface Model**, Michael Werner (Infineon, TU München, DE), Igli Zeraliu (Infineon, TU Kaiserslautern, DE), Zhao Han (Infineon, TU München, DE), Sebastian Prebeck (Infineon, TU München, DE), Lorenzo Servardei (Infineon, DE, Johannes Kepler University Linz, AT), Wolfgang Ecker (Infineon, TU München, DE), Euromicro DSD/SEAA 2020, Virtual Conference, Portorož | Slovenia August 2020.
32. **Automated SoC Hardening with Model Transformation**, Varsha Bhupal Bavache^(1,3), Zhao Han^(2,3), Heimo Hartlieb⁽¹⁾, Endri Kaja^(2,4), Keerthikumara Devarajegowda^(2,4) and Wolfgang Ecker^(2,3); ⁽¹⁾ Infineon Technologies Austria AG, Austria (IFAT), ⁽²⁾ Infineon Technologies AG, Germany (IFAG), ⁽³⁾ Technical University Munich, Germany, ⁽⁴⁾ Technical University Kaiserslautern, Germany, BALTIC ELECTRONICS CONFERENCE 2020 (BEC2020), Tallin, Estonia, October 2020.
33. **IP-Coding Style Variants in a Multi-layer Generator Framework**, Zhao Han^(1,2), Keerthikumara Devarajegowda^(1,3), Andreas Neumeier^(1,4), Wolfgang Ecker^(1,2); ⁽¹⁾ Infineon Technologies AG, Germany, ⁽²⁾ Technical University Munich, Germany, ⁽³⁾ Technical University Kaiserslautern, Germany, ⁽⁴⁾ University of Applied Sciences Munich, Germany, Design and Verification Conference (DVCon Europe 2020), Virtual Conference, October 2020.
34. **SAFE4I: Automatischer Entwurf von Software für sicherheitskritische Anwendungen**, Moomen Chaari (Infineon, D), edaWorkshop20, 7.10.2020
35. **A Configurable Virtual Prototyping Environment for Different RISC-V ISA Subsets**, Peer Adelt (University of Paderborn, D)
36. Yarza, I., Azkarate-askatsua, M., Onaindia, P., Grüttner, K., Ittershagen, P., & Nebel, W. (2021). **Legacy software migration based on timing contract aware real-time execution environments**. *Journal of Systems and Software*, 172, 110849. <https://doi.org/10.1016/j.jss.2020.110849> ^[4]

37. Friederike Bruns Irune Yarza, P. I., & Grüttner, K. (2020). **Time Measurement and Control Blocks for Bare-Metal C++ Applications**. *ACM Transactions on Embedded Computing Systems*, 25.
38. **Register and Instruction Coverage Analysis for Different RISC-V ISA Configurations**, Peer Adelt, Bastian Koppelman, Wolfgang Müller und Christoph Scheytt, UPB, MBMV, Virtuell, 18.-19.3.2021.
39. Uzair Sharif, Daniel Mueller-Gritschneider, Ulf Schlichtmann
REPAIR: Control Flow Protection based on Register Pairing Updates for SW-Implemented HW Fault Tolerance, *ACM Transactions on Embedded Computing Systems (TECS)* 20(70), 1-22, October 2021

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- [1] <https://doi.org/10.1145/3312614.3312645>
[2] <https://doi.org/10.1109/FDL.2019.8876898>
[3] <https://doi.org/10.1145/3375246.3375257>
[4] <https://doi.org/10.1016/j.jss.2020.110849>