Jasmin Jahić
14.09.1988
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Experience

Research assistant - Department of Computer Science and Technology, University of Cambridge, Cambridge, UK (01.06.2020 – ongoing).
Researcher and **project manager** - Fraunhofer Institute for Experimental Software Engineering (IESE), Kaiserslautern, Germany (01.01.2013 – 31.05.2020).
Guest part-time researcher – Free University of Bolzano, Bolzano, Italy (15.01.2020 - 14.06.2020).
Lecturer, Software Architectures for Embedded Software Systems, Master program at Technische Universität Kaiserslautern (01.05. 2016 – ongoing).
Coordinator for European Masters Programme in Software Engineering (EMSE) for Technical University of Kaiserslautern (October 2018 – 31.05.2020).
Software engineer - AtlantBH, Sarajevo, Bosnia and Herzegovina (1. March 2011 – 31. August 2011).

Education

PhD, "Supervised Testing of Embedded Concurrent Software", Technische Universität Kaiserslautern, Germany (submitted in April, 2020).
Master of robotics, Ecole Centrale de Nantes, France (September, 2012).
Engineer Diploma, Technical Computer Science, University of Tuzla, Bosnia and Herzegovina (March, 2011).

Programming languages:

C/C++, Java, PHP, C#, Python, JavaScript

Languages:

Bilingual/native: English, Bosnian.
Working proficiency: German, French.

Committees:

- Member of a committee for creating Strategic Research Agenda (SRA) 2021 for European industry associations AENEAS, ARTEMIS-IA and EPoSS - Electronic Components & Systems (ECS).
    - Embedded Software and Beyond (Continuous Integration of Embedded Software, Embedding Reliability & Trust)
    - Architecture and Design: Methods and Tools
- Reviewer, International Workshop on Embedded Multicore Systems (ICPP-EMS 2020)
- Web chair, International Conference on Embedded Computer Systems: Architectures, Modeling And Simulation (SAMOS) (2018 – ongoing)

Honors and awards:

- Fraunhofer IESE award - contribution to the project of the year, Kaiserslautern, 2018.
- Master program scholarship, government of France, 2011.

Lectures and talks:

- Advanced software development in the era of multicores at Summer School of the European Master Program in Software Engineering - EMSE (04.09.2020)

NGO activities:

- 2020, February – ongoing: ***Mentor*** at Bosnia & Herzegovina Futures Foundation (https://www.bhfuturesfoundation.org/mentorship-mentors)
- 2011 - ongoing: ***Lecturer*** at the Tuzla Summer Institute, Bosnia and Herzegovina.
    - Development of courses, teaching, management of the program activities.
- 2013, April – 2016, January: ***Founder and Vice chairman*** of the board, Electrical Engineering STudents' European association (EESTEC), department in Kaiserslautern.
- 2012 – 2014: ***International board assistant***, Electrical Engineering STudents' European association (EESTEC) international.
- 2010 - 2012: ***Project coordinator*** at BILD (Bosnian Initiatives for Local Development).

Other skills and personal interests:

- Fencing, volleyball, jogging (several half marathons).
- Driving license: B category.
- Teaching.
- The real artificial intelligence.
- Well-being of humanity.

Publications:

- *State of the Practice Survey: Predicting the Influence of AI Adoption on System Software Architecture in Traditional Embedded Systems*; **Jasmin Jahić**, Robin Roitsch; Context-aware, Autonomous and Smart Architecture Workshop at European Conference on Software Architecture 2020, September 2020.
- *FERA - A Framework for Critical Assessment of Execution Monitoring based Approaches for Finding Concurrency Bugs*; **Jasmin Jahić**, Thomas Bauer, Thomas Kuhn, Norbert Wehn; Springer Computing Conference, July 2020.
- *Towards Runtime Monitoring for malicious behaviors detection in Smart Ecosystems*; Emilia Cioroaica, Felicita Di Giandomenico, Thomas Kuhn, Francesca Lonetti, Eda Marchetti, **Jasmin Jahić**, Frank Schnicke; International Workshop on Governing Adaptive and Unplanned Systems of Systems (GAUSS) at ISSRE, October 2019.
- *Detection of conflicts and inconsistencies between architecture solutions*; Benno Kallweit, Pablo Oliveira Antonino, **Jasmin Jahić**, Thomas Kuhn, Peter Liggesmeyer; ACM European Conference on Software Architecture (ECSA), September 2019.
- *(Dis)Advantages of Lock-free Synchronization Mechanisms for Multicore Embedded Systems*; **Jasmin Jahić**, Khuram Ali, Milad Chatrangoon, Nazanin Jahani; IEEE International Workshop on Embedded Multicore Systems, August 2019.

- *Rapid Identification of Shared Memory in Multithreaded Embedded Systems with Static Scheduling*, **Jasmin Jahić**, Varun Kumar, Matthias Jung, Gerhard Wirrer, Norbert Wehn, Thomas Kuhn; IEEE International Workshop on Embedded Multicore Systems, August 2019.
- *Towards Virtual Validation of Distributed Functions*, Peter Baumann, Roland Samlaus, Lars Mikelsons, Thomas Kuhn, and **Jasmin Jahić**, ACM Summer Simulation Conference, July 2019.
- *Testing the Implementation of Concurrent AUTOSAR Drivers against Architecture Decisions*; **Jasmin Jahić**, Varun Kumar, Pablo Oliveira Antonino, Gerhard Wirrer; IEEE International Conference on Software Architecture (ICSA); March 2019.
- *Mitigating the Influence of Embedded Software Development Environments and Toolsets (ESDT) on Software Architecture*; **Jasmin Jahić**, Peter Enbrecht, Uwe Mayer, Pablo Oliveira Antonino; IEEE International Conference on Software Architecture (ICSA); March 2019.
- *Supervised Testing of Embedded Concurrent Software*; **Jasmin Jahić**; Design, Automation and Test in Europe (DATE); March, 2019.
- *A Framework for Non-Intrusive Trace-driven Simulation of Manycore Architectures with Dynamic Tracing Configuration*, **Jasmin Jahić**, Matthias Jung, Thomas Kuhn, Claus Kestel, Norbert Wehn; Springer International Conference on Runtime Verification; November 2018.
- *BOSMI - A Framework for Non-intrusive Monitoring and Testing of Embedded Multithreaded Software on the Logical Level*; **Jasmin Jahić**, Thomas Kuhn, Matthias Jung, Norbert Wehn; ACM International Conference on Embedded Computer Systems Architectures Modelling and Simulation (SAMOS), July 2018.
- *Bridging the Gap between Architecture Specifications and Simulation Models*; Pablo Oliveira Antonino, **Jasmin Jahić**, et al.; IEEE International Conference on Software Architecture Companion (ICSA); April 2018.
- *Accelerated Simulated Fault Injection Testing - A Bayesian Approach*; Emilia Cioroaica, **Jasmin Jahić**, et al.; IEEE International Symposium on Software Reliability Engineering Workshops (ISSREW); October 2017.
- *Supervised Testing of Concurrent Software in Embedded Systems*; **Jasmin Jahić**, Thomas Kuhn, Matthias Jung, Norbert Wehn; IEEE International Conference on Embedded Computer Systems Architectures Modelling and Simulation (SAMOS), July 2017.
- *Support Development and Testing of Concurrent Software through Supervised Software Execution*; **Jasmin Jahić**; HiPEAC Advanced Computer Architecture and Compilation for High-Performance Embedded Systems (ACACES), July 2017.
- *Analysis of Functional Software Dependencies through Supervised Execution*, **Jasmin Jahić** and Thomas Kuhn. IEEE International Symposium on Software Reliability Engineering Workshops (ISSREW), November 2014.
- *Automatic Test Coverage Measurements to support Design Space Exploration*, Springer International Workshop on Design Space Exploration of Cyber-Physical Systems (IDEAL); **Jasmin Jahić**, Thiyagarajan Purusothaman, Markus Damm, Thomas Kuhn, Peter Liggesmeyer; April 2014.

Supervised Master thesis:

- Approach for predicting Effects of adopting Machine Learning in traditional Embedded Systems on their System Architecture, 2020.
- Extracting Concurrency-Related Architectural Properties from Software Implementation, 2019.
- Generation of Test Cases in Multithreaded Software that Satisfy Modified Condition/Decision Coverage (MC/DC), 2019.
- Guidelines for migration of concurrent software with lock synchronization primitives to lock-free software, 2019.
- Reducing Power Consumption in a Multicore LoRaWAN Embedded System, 2019.
- Interactive design space exploration of multithreaded software deployment properties with visualization techniques, 2018.
- Manufacturer-Specific Software Development Tools Versus Off-the-Shelf Tools and Their Influence on Software System Architecture, 2018.
- Finding Concurrency Bugs in AUTOSAR APIs, 2018.
- A case study: Migration of a bare metal deployed, single channel safety control system to a Real Time Operating System – Challenges and benefits, 2017.
- Distributed Work Scheduling for low power multicore DSP, 2017.
- Development of "Steer by Angle" system for subjective testing of steering system in Driving Simulator, 2016.
- Development of an application for autonomous outdoor navigation using ROS, 2014

Book reviews:

- Book proposal - "Scheduling in Embedded Systems: Constraints, Objectives and Approaches"; Springer Nature, 2020
- Getting Started with LLVM Core Libraries, Bruno Cardoso Lopes, Rafael Auler, 2015