



# **PESARO 2020**

The Tenth International Conference on Performance, Safety and Robustness in  
Complex Systems and Applications

February 23 - 27, 2020

Lisbon, Portugal

## **PESARO 2020 Editors**

Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster (WWU)/  
DIMF / Leibniz Universität Hannover, Germany

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2020) by International Academy, Research, and Industry Association (IARIA)  
Please refer to the Copyright Information page.

Printed with permission by Curran Associates, Inc. (2020)

International Academy, Research, and Industry Association (IARIA)  
412 Derby Way  
Wilmington, DE 19810

Phone: (408) 893-6407  
Fax: (408) 527-6351

[petre@iaria.org](mailto:petre@iaria.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## Table of Contents

Accelerating Real-time Processing of Articles by Using an OpenCL-based FPGA for the OSS Syntactic Parser SyntaxNet <i>Yoshiki Kurokawa, Yuichiro Aoki, Yuki Kondo, and Yaoko Nakagawa</i>	1
Monitor for Safety-Critical Mirror Drivers of MEMS Micro-Scanning LiDAR Systems <i>Philipp Stelzer, Andreas Strasser, Philip Pannagger, Christian Steger, and Norbert Druml</i>	7
Challenges in Mitigating Soft Errors in Safety-critical Systems with COTS Microprocessors <i>Amer Kajmakovic, Konrad Diwold, Nermin Kajtazovic, and Robert Zupanc</i>	13