BSC researchers win Best Paper Award at ISORC 2016

IEEE
ISORC 2016

BEST PAPER AWARD

This is to certify that

MODELLING PROBABILISTIC CACHE REPRESENTATIVENESS IN THE PR
ARBITRARY ACCESS PATTERNS

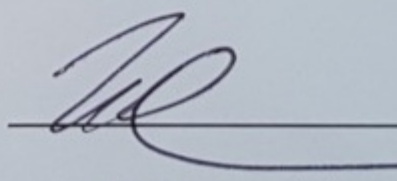
Authored by

SUZANA MILUTINOVIC, JAUME ABELLA, FRANCISCO J. CAZO

has been recognized as one of the best papers at the 19th IEEE In
Symposium on Real-Time Distributed Computing, held in York, UK, on M

Awarding Committee

Dr. Paul Townend



Prof. Uwe Brinksch

The awarded paper is a research result of the PROXIMA project, coordinated by BSC

BSC researchers Suzana Milutinovic, Jaume Abella and Francisco J Cazorla won one of the Best Paper Award at the 19th IEEE International Symposium on Read-Time Computing (IEEE ISORC) 2016 for the paper entitled "Modelling Probabilistic Cache Representativeness in the Presence of Arbitrary Access Patterns**".**

Measurement-Based Probabilistic Timing Analysis (MBPTA) is a promising industry-friendly method to derive worst-case execution time. On one hand, MBPTA is based on measurements (the most common timing analysis approach by industry). On the other hand, MBPTA reduces the burden on the user to design test scenarios capturing the worst-case conditions that can arise at operation. This is specially the case in the presence of complex hardware comprising features such as multicore processors and caches. The awarded paper introduces a Representativeness Validation Method that provides a probabilistic argument about whether cache worst-case effects on execution time have been properly factored in the tests performed by the user.

The awarded paper is a research result of the PROXIMA project, coordinated by BSC. PROXIMA provides industry-ready software timing analysis using probabilistic analysis for many-core and multi-core critical real-time embedded systems and will enable cost-effective verification of software timing analysis including worst case execution time.

PROXIMA technical coordinator Francisco J. Cazorla stated that "this award shows the high impact and recognition that our research is having in the academia."

About PROXIMA

The PROXIMA project (Probabilistic real-time control of mixed-criticality multicore and manycore Systems) was partially funded by the European Commission's Seventh Framework Programme (FP7/2007-2013 under grant agreement n° n°611085) and had a budget over 6 million Euros (2013-2016). PROXIMA brought together leading European technology companies such as Airbus Operations, Airbus Defense and Space, Infineon, Sysgo, Aeroflex Gaisler, Rapita Systems; some of the most important research centers in Europe: INRIA, Ikerlan and BSC; and leading academic partners like University of York, Universita di Padova.

www.proxima-project.eu

About IEEE ISORC

IEEE ISORC was founded in 1998 to address research into the application of real-time object-oriented distributed technology, and has said to continually evolved to meet the latest challenges faced by researchers and practitioners in the real-time domain, with an emphasis on object-, component- and service- oriented systems and solutions. The 2016 theme was **Real-Time Issues and Challenges for novel applications and systems**

www.isorc2016.org

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