



*Monday May 28th, 2018*

**12.00 – 13.15 Lunch**

**13.15 – 13.30 Opening**

*Henk Corporaal*

**13.30 – 14.30 Session 0**

13.30 Mitigating Data Cache Aging through Compiler-Driven Memory Allocation

*Dominic Oehlert, Arno Luppolt and Heiko Falk*

14.00 Interrelations between Software Quality Metrics, Performance and Energy Consumption in Embedded Applications

*Lazaros Papadopoulos, Charalampos Marantos, Georgios Digkas, Apostolos Ampatzoglou, Alexander Chatzigeorgiou and Dimitrios Soudris*

**14.30 – 15.00 Coffee Break**

**15.00 – 16.00 Session 1**

15.00 Reinforcement Learning for Power-Efficient Grant Prediction in LTE (Full Paper)

*Peter Brand, Joachim Falk, Jonathan Ah Sue, Johannes Brendel, Ralph Hasholzner and Jürgen Teich*

15.30 On the Cost of Freedom From Interference in Heterogeneous SoCs

*Bjoern Forsberg, Luca Benini and Andrea Marongiu*

**16.00 – 16.30 Coffee Break**

**16.30 – 17.30 Session 2**

16.30 Fast and Portable Vector DSP Simulation Through Automatic Vectorization (Full Paper)

*Jumana Mundichipparakkal, Mohamed Bamakhrama and Roel Jordans*

17.00 Control Flow Vectorization for ARM NEON (Full Paper)

*Angela Pohl, Nicolás Morini, Biagio Cosenza and Ben Juurlink*

**19.00 – 22.00 Diner**

# SCOPES 2018: Program

*Tuesday May 29th, 2018*

## **9.00 – 10.30 Session 3**

- 9.00 Optimizing Worst-Case Execution Times Using Mainstream Compilers  
*Martin Becker and Samarjit Chakraborty*
- 9.30 Measuring and Modeling Energy Consumption of Embedded Systems for Optimizing Compilers  
*Mikko Roth, Arno Luppold and Heiko Falk*
- 10.00 Less is More: Exploiting the Standard Compiler Optimization Levels for Better Performance and Energy Consumption (Full Paper)  
*Kyriakos Georgiou, Craig Blackmore, Samuel Xavier de Souza and Kerstin Eder*

## **10.30 – 11.00 Coffee Break**

## **11.00 – 12.00 Session 4**

- 11.00 Restricted Scheduling Windows for Dynamic Fault-Tolerant Primary/Backup Approach-Based Scheduling on Embedded Systems  
*Petr Dobias, Emmanuel Casseau and Oliver Sinnen*
- 11.30 Toward Efficient Many-Core Scheduling Using Partial Expansion Graphs  
*Hai-Nam Tran, Shuvra S. Bhattacharyya, Jean-Pierre Talpin Talpin and Thierry Gautier*

## **12.00 – 13.30 Lunch**

## **13.30 – 15.00 Session 5**

- 13.30 Automatic Optimization of Redundant Message Routings in Automotive Networks (Full Paper)  
*Fedor Smirnov, Felix Reimann, Jürgen Teich, Zhao Han and Michael Glaß*
- 14.00 Exploiting Specification Modularity to Prune the Optimization-Space of Manufacturing Systems (Full Paper)  
Joao Bastos, Jeroen Voeten, Sander Stuijk, Ramon Schiffelers and Henk Corporaal
- 14.30 Dataflow-Based Modeling and Scheduling of Real-Time Networks-of-Systems  
Andreas Gerstlauer

## **15.00 – 15.30 Coffee break**

# SCOPES 2018: Program

## **15.30 – 16.30 Session 7**

15.30 Automatic Kernel Fusion for Image Processing DSLs (Full Paper)

*Bo Qiao, Oliver Reiche, Frank Hannig and Jürgen Teich*

16.00 stdcbench - A Benchmark for Small Systems

*Philipp Klaus Krause*

## **18.00 – 19.00 Visit to Castle**

## **19.00 – 22.00 Diner**

# SCOPES 2018: Program

*Wednesday May 30th, 2018*

## **9.00 – 10.00 Keynote**

*Peter Marwedel*

## **10.00 – 10.30 Session 8**

10.00 Low-Power Radar Signal Processing

*Oguz Meteer and Marco Bekooij*

## **10.30 – 11.00 Coffee Break**

## **11.00 – 12.00 Session 9**

11.00 Multi-Criteria Compiler-Based Optimization of Hard Real-Time Systems

*Kateryna Muts, Arno Luppold and Heiko Falk*

11.30 Towards a verified Lustre compiler with modular reset

*Timothy Bourke, L elio Brun and Marc Pouzet*

## **12.00 – 12.30 Best presentation award ceremony / Closing remarks**

## **12.30 – 13.30 Lunch**

