List of Publications

Romain Jacob

Conference publications

The Time-Triggered Wireless Architecture
Romain Jacob, Licong Zhang, Marco Zimmerling, Jan Beutel, Samarjit Chakraborty, Lothar Thiele
ECRTS (2020)

Feedback Control Goes Wireless: Guaranteed Stability over Low-power Multi-hop Networks
Fabian Mager, Dominik Baumann, Romain Jacob, Lothar Thiele, Sebastian Trimpe, Marco Zimmerling
ICCPS (2019)

Synchronous Transmissions Made Easy: Design Your Network Stack with Baloo
Romain Jacob, Jonas Bächli, Reto Da Forno, Lothar Thiele
EWSN (2019)

TTW: A Time-Triggered-Wireless Design for CPS
Romain Jacob, Licong Zhang, Marco Zimmerling, Jan Beutel, Samarjit Chakraborty, Lothar Thiele
DATE (2017)

End-to-End Real-Time Guarantees in Wireless Cyber-Physical Systems
Romain Jacob, Marco Zimmerling, Pengcheng Huang, Jan Beutel, Lothar Thiele
RTSS (2016)

directPath: An Expert Path Planning Framework to Handle Environment Knowledge
Romain Jacob, Karl J. Hedrick
CYBER (2014)
Journal publications

Fast Feedback Control over Multi-hop Wireless Networks with Mode Changes and Stability Guarantees
Dominik Baumann, Fabian Mager, Romain Jacob, Lothar Thiele, Marco Zimmerling, Sebastian Trimpe
ACM Transactions on Cyber-Physical Systems (2019)

Overview of discrete event systems opacity: Models, validation, and quantification
Romain Jacob, Jean-Jacques Lesage, Jean-Marc Faure
Annual Reviews in Control (2016)

Observable Feedback Control of discrete processes under time constraint: Application to Cluster Tools
Romain Jacob, Saïd Amari

Workshop publications

Synchronous transmissions on Bluetooth 5 and IEEE 802.15.4 – A replication study
Romain Jacob, Anna-Brit Schaper, Andreas Biri, Reto Da Forno, Lothar Thiele
CPS-IoTBench (2020)

Dataset: Wireless Link Quality Estimation on FlockLab – and Beyond
Romain Jacob, Reto Da Forno, Roman Trüb, Andreas Biri, Lothar Thiele
DATA (2019)

Towards a Methodology for Experimental Evaluation in Low-Power Wireless Networking
Romain Jacob, Carlo Alberto Boano, Usman Raza, Marco Zimmerling, Lothar Thiele
CPS-IoTBench (2019)

IoTBench: Towards a Benchmark for Low-power Wireless Networking
Carlo Alberto Boano, Simon Duquennoy, Anna Förster, Omprakash Gnavawi, Romain Jacob, Hyung-Sin Kim, Olaf Landsiedel, Ramona Marfievici, Luca Mottola, Gian Pietro Picco, Xavier Vilajosana, Thomas Watteyne, Marco Zimmerling
CPSBench (2018)

Opacity of Discrete Event Systems: models, validation and quantification
Romain Jacob, Jean-Jacques Lesage, Jean-Marc Faure
DCDS (2015)

Theses

Leveraging Synchronous Transmissions for the Design of Real-time Wireless Cyber-Physical Systems
Romain Jacob
Doctoral thesis. ETH Zurich (December 2019)
**Pre-prints**

**TriScale: A Framework Supporting Replicable Performance Evaluations in Networking**  
Romain Jacob, Marco Zimmerling, Carlo Alberto Boano, Laurent Vanbever, Lothar Thiele  
Zenodo (2020)

**Demo & Posters**

**Demo Abstract: Fast Feedback Control and Coordination with Mode Changes for Wireless Cyber-Physical Systems**  
Fabian Mager, Dominik Baumann, Romain Jacob, Lothar Thiele, Sebastian Trimpe, Marco Zimmerling  
IPSN (2019)

**Demo Abstract: The Dual Processor Platform Architecture**  
Jan Beutel, Roman Trüb, Reto Da Forno, Markus Wegmann, Tonio Gsell, Romain Jacob, Michael Keller, Felix Sutton, Lothar Thiele  
IPSN (2019)

**Competition: Keep it Simple, Let Flooding Shine**  
Jan Müller, Anna-Brit Schaper, Romain Jacob, Reto Da Forno  
EWSN (2019)

**Competition: Low-Power Wireless Bus Baseline**  
Fabian Mager, Romain Jacob, Reto Da Forno, Marco Zimmerling  
EWSN (2019)

**Benchmarking Low-power Wireless Networking**  
IoT Benchmarks Initiative  
EWSN (2018)

**A System Architecture for Wireless Codetection of Acoustic Events**  
Felix Sutton, Reto Da Forno, Matthias Meyer, Romain Jacob, Roman Lim, Tonio Gsell, Jan Beutel, Lothar Thiele  
NanoTera Exhibition (2017)

**TTW: A Time-Triggered-Wireless Design for CPS**  
Romain Jacob, Licong Zhang, Marco Zimmerling, Jan Beutel, Samarjit Chakraborty, Lothar Thiele  
SenSys (2017)

**Towards Real-time Wireless Cyber-physical Systems**  
Romain Jacob, Marco Zimmerling, Pengcheng Huang, Jan Beutel, Lothar Thiele  
ECRTS (2016)