

## 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)

Best Paper Award 

---

## *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  
International Journal of Computer Integrated Manufacturing (2016)

---

## *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 Gnawali, 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)

Best Demo Award 

## *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)