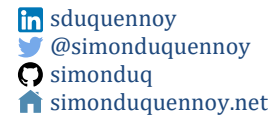


Simon Duquennoy

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I'm an experienced researcher and systems builder. I work on reliability and security of distributed embedded systems. Looking for projects that are both challenging and have real-world impact.

Experience

- Oct 2011 – Now** Research Scientist, RISE SICS, Sweden
Research, Grant application, Project management
- Jan 2016 – July 2017** Research Scientist, Inria, Lille, France
On a dual affiliation with SICS
- Oct 2010 – Sep 2011** PostDoc, SICS, Sweden. *Recipient of an EU “Alain Bensoussan” grant*

Education

- 2010** PhD in computer science, Univ. Lille 1, France. *Recipient of a 3 years PhD grant from the French Ministry of University and Research. Worked on Smart Card Web Servers*
- 2007** MSc in computer science, Univ. Lille 1, France. Ranked **1st among 128**
Distributed and embedded systems, image processing, and software engineering
- 2005** BSc in computer science, Univ. Lille 1, France. Ranked **1st among 125**

Track Record

- 30+ papers in peer-reviewed venues, with **H-Index of 20 and 2000+ citations** ([google scholar](#))
- Participation in over 40 conference Technical Program Committees ([details](#))
- Public speaking in over 30 events: scientific conferences and invited talks
- Co-advised 4 PhD students and over 20 MSc students
- Active standardization contributions at IETF
- Open sourcing and technology transfer experience
- 200h of University teaching, in Lille, KTH and Uppsala

Project Funding & Management

- Obtained a total of **22 MSEK in research funding**, for collaborative research projects
- 2018–2023 SSF aSSIsT. 8.6 MSEK (SICS)
 - Software security and exploit mitigation
 - Co-principal investigator
- 2017-2019 H2020 Vessedia. 296 k€ (Inria)
 - Formal verification of Internet of Things software
 - Principal investigator, management, work package lead, and technical work
- 2016 EIT Digital CPSLTA. 139 k€ (SICS)
 - Lifetime estimation of embedded software
 - Principal investigator
- 2015–2019 KKS Ecare@home. 5.3 MSEK (SICS)
 - Internet of Things for e-care
 - Principal investigator, management, and technical work
- 2014-2015 EIT Digital RICH. 275.5 k€ (SICS)
 - Reliable low-power wireless scheduling
 - Principal investigator, management, work package lead and technical work
- 2011-2014 FP7 CALIPSO. 383 k€ (SICS)
 - Low-power IPv6 connectivity
 - Management, work package lead and technical work

Software Projects

Contiki, an Operating System for the Internet of Things (2700 followers and 160 contributors)

- Maintainer: code review and continuous integration experience
- Production-ready software used by our many industrial partners
- Contributed routing protocol for >99.999% end-to-end delivery in low-power IPv6 mesh

Applied Cryptography

- IPsec for MSP430 and ARM microcontrollers (lead developer)
- Encrypted databases: Talos, Pilatus (advisor on system design)
- Blockchain-based decentralized authorization: Droplet (advisor on system design)

Other

- Smews, Web server for Smart Cards: from task scheduler to TCP/IP stack and HTTP services
- MPPSoC, an emulator of a massively parallel processor on chip
- IoTBench, an international initiative and framework for benchmarking of Internet of Things stacks

Selected Publications

- Secure Sharing of Partially Homomorphic Encrypted IoT Data. H. Shafagh, A. Hithnawi, L. Burkhalter, P. Fischli, and S. Duquennoy. ACM SenSys 2017
- Network-wide Consensus Utilizing the Capture Effect in Low-power Wireless Networks. B. Al Nahas, S. Duquennoy, and O. Landsiedel. ACM SenSys 2017
- CrossZig: Combating Cross-Technology Interference in Low-power Wireless Networks. A. Hithnawi, H. Shafagh, S. Li, J. Gross, and S. Duquennoy. ACM/IEEE IPSN 2016
- Orchestra: Robust Mesh Networks Through Autonomously Scheduled TSCH. S. Duquennoy, B. Al Nahas, O. Landsiedel, and T. Watteyne. ACM SenSys 2015
- Talos: Encrypted Query Processing for the Internet of Things. H. Shafagh, A. Hithnawi, A. Dröscher, S. Duquennoy, and W. Hu. ACM SenSys 2015
- TIIM: Technology-Independent Interference Mitigation for Low-power Wireless Network. A. Hithnawi, H. Shafagh, and S. Duquennoy. ACM/IEEE IPSN 2015

Standardization

- 6TiSCH Minimal Scheduling Function (MSF). T. Chang, M. Vucinic, X. Vilajosana, S. Duquennoy, D. Dujovne. IETF 6TiSCH, 2018
- Robust scheduling against selective jamming in 6TiSCH networks. M. Tiloca, S. Duquennoy, G. Dini. IETF 6TiSCH, 2018
- Neighbor Management Policy for 6LoWPAN. R. Jadhav, R. Sahoo, S. Duquennoy, J. Eriksson. IETF LWIG, 2018
- Compression of IPsec AH and ESP Headers for 6LoWPAN Networks. S. Raza, S. Duquennoy, G. Selander. IETF 6lo, 2016

Distinctions and Awards

- 2010 Recipient of a 12-month ERCIM Alain Bensoussan PostDoc fellowship
- 2009 Best paper award: "Smews: Smart and Mobile Embedded Web Server" in IMIS'09
- 2007 Recipient of a 3 years PhD grant from the French Ministry of University and Research
- 2007 Ranked 1st out of 128 students in MSc graduating class
- 2005 Ranked 1st out of 125 students in BSc graduating class

Skills

- Networking, Protocol Design, Distributed Systems, Embedded Systems, System Security
- Expert: C and Python; Familiar: C++, Java, Bash and more
- Languages: French (native), English (fluent), Swedish (intermediate)