

Emmanuel Baccelli

Last update March 2017
More information online at :
www.emmanuelbaccelli.com



Professional Experience

- 2013 - present : Guest Professor at Freie Universität Berlin, Germany.

- 2007 - present : Senior Researcher at INRIA, part of the project-team INFINE. Focus on IoT software & spontaneous wireless networking integration in the Internet. Co-founder of RIOT and coordinator its open-source community. Contributions in ROLL, MANET, OSPF, AUTOCONF, LWIG working groups in the IETF. Institute website : www.inria.fr

- 2006 : Scientific Researcher at Freie Universität Berlin, Germany, at the chair Computer Systems and Telematics (Prof. Schiller). Research focused on sensor networks, cross-fertilization between ad hoc networking and peer-to-peer networking. Department website : www.inf.fu-berlin.de

- 2003 - 2005 : Research Engineer at Hitachi Europe, Sophia-Antipolis (France) and at Hitachi Research Lab, Tokyo (Japan). Focus on IETF standardization activities. Company website : www.hitachi-eu.com

- 2001 - 2002 : Software Engineer at Metro-Optix, Santa Clara, CA, USA. Development of IP router management agents (using CLI, SNMP). Implementation in C, C++ and Java.

- 2000 : Consultant at AT&T Research Labs (Shannon's Labs) in Florham Park, NJ, USA. Focus on policy-based networking with Raju Rajan, Albert Greenberg, Jennifer Rexford. Design and implementation of an OSPF monitoring tool using to display paths between routers in an Autonomous System such as AT&T's IP backbone (WorldNet). Company website : research.att.com

Education

- 2012 : **Habilitation** (french equivalent for *tenure*) from Université Pierre et Marie Curie, Paris, France. Defended in Dec. 2012. Thesis title: "IP-Disruptive Wireless Networking: Integration in the Internet".
- 2006 : **PhD** in Computer Science from Ecole Polytechnique, Paris, France. Defended in Jan. 2006. Advised by Prof. Philippe Jacquet. Thesis title: "Routing and Mobility in Large Heterogeneous Packet Networks".
- 2000 : **Masters** of Science from the EURECOM Institute, Sophia Antipolis, France. Obtained in Sept. 2000. Engineering degree in the fields of Telecommunications and Computer Sciences from TelecomSudParis. Thesis title: "Policy-based Network Management".

Awards

- 2013 : 2013-2014 DAAD Guest Professorship Grant Awardee.
- 2007 : 2007 PhD Award from Ecole Polytechnique, Paris, France, for the thesis on "Routing and Mobility in Large Heterogeneous Packet Networks".

Academic Publications

Emmanuel Baccelli is the author or co-author of **3 books and 60+ journal or conference papers**, as well as book chapters in relevant venues. Full list available online at www.emmanuelbaccelli.com/PUBLICATIONS.html

The conferences where his work was published include top-most conferences such as **IEEE INFOCOM, IEEE SECON, ACM ICN**

The journals where his work was recently published include top-most journals such as the **IEEE Trans. on Information Theory, Trans. of IEEE., IEEE Internet of Things Journal**

Standardization (IETF Publications)

Emmanuel Baccelli is an active participant in IETF since 2003. He is the co-author of **6 RFCs and 30+ Internet Drafts**. Full list available online at www.emmanuelbaccelli.com/IETF.html

Recent Invited Talks

Oct. 2016 *Communication Protocols & Operating Systems for IoT*,
EclipseCon'16 invited talk at IoT Day, Ludwigsburg, Germany.

Oct. 2016 *Platforms & Protocols for the Internet of Things*,
Mine Telecom Invited talk for Master Course (Corps des Mines), Paris
France.

Sept. 2015 *The Internet of Things, Decentralization and Open Source*,
GetD Invited talk at GetD workshop, Berlin, Germany.

May 2015 *Can't run Linux on your IoT device ? Run RIOT !*
BIS Invited talk at BIS Workshop, Berkeley, California, USA.

May 2014 *Pimp The Internet of Things !*
LinuxTag Invited talk at LinuxTag '14, Berlin, Germany.

Sept. 2013 *On a Collision Course: Wireless, The Internet & your PhD*,
IEEE ICNP Keynote at ICNP PhD Forum, Göttingem, Germany.

Recent Teaching Activity

2015-2017 Leading a team of BSc, MSc and PhD students supervised
at Freie Universität Berlin. Seminars on IoT.

2013-2014 MSc lecture on Computer Networks (Telematiks).
Seminars on the Internet of Things.

2011/2012 Winter semester lecture on *Mobile Wireless Networks*,
Course INF567 Lecturer and instructor at Ecole Polytechnique, France.

Contracts, Projects and Acquired External Funding

- AGILE (H2020) (2016-2018) Project focused on the design and experimentation of open-source community-driven software and hardware for the interconnection of devices in Internet of Things with cloud services, preserving user privacy and data ownership. Partners include: Canonical, Eclipse Foundation, Mobistar (Orange), Libelium, iMinds, Startupbootcamp, Create-Net, Eurotech, Jolocom. Funded with more than 6M€ by the EU.
- SAFEST (2012-2015) Project focused on the design of public spaces security and safety, leveraging Internet of Things paradigms and sensor networks. Partners: SAGEM, INRIA, Freie Universitaet Berlin, HAW, DAVIKO, Flughafen Berlin Brandenburg. Funded with more than 2M€ by ANR and BMBF.
- SMARTMESH (2009-2013) Project focused on the design of intelligent wireless sensor mesh networking for video surveillance and intrusion alarm systems. Partners: SAGEM, INRIA, CEA, Telecom SudParis, Tunecharger, Ineo, Orelia, Prodomo. Funded with more than 1,9M€ by Ile-de-France region.
- e-comp@gnon (2008-2011) Realization of a new type of multimedia terminal, enhanced with wireless ad hoc IP connectivity based on the OLSR protocol. Commercialization of this terminal is expected eventually. Partners: Archos, INRIA, SCNF, Telecom SudParis, DGE, Deveryware. Funded with more than 2,5M€ by the Ile-de-France region.
- OPNEX (2007-2011) Design of architectures and protocols for multi-hop wireless networks. Systems and optimization theory used as the foundation for algorithms that achieve full transport capacity of wireless systems. Partners: Centre Of Research & Technology Hellas, INRIA, Politechnika Poznanska, Thomson Research, Freie Universitaet Berlin. Funded with more than 1,4M€ by the EU. Website: www.opnex.eu/

Related Professional Activities

- Open Source Community: **Co-founder and co-leader of the RIOT community** developing the free, open source operating system and network stack for the Internet of Things devices and applications. More info online at: www.riot-os.org
- Textbooks : **Co-author of three textbooks** on introductory Computer Science for high-school students in France.
- Conferences : **Co-organizer of international conferences** such as ACM Mobihoc '11, OLSR Workshops '09, '05, '04. Chair of ACM MobileHealth '14, '15, '16, MANIAC Challenge '13, ACM Sesp '12, RIOT Summit '16.
- Referee, TPC : **TPC/referee for IEEE & ACM conferences & journals** such as IEEE SECON, IEEE Globecom PerGroup, OLSR Workshop, IEEE ICC NovaEnEv, ACM Mobihoc Mobile Health. Computer Networks Journal, Computer Communication Journal, Performance Evaluation Journal, WSN Workshop...