

François LEMERCIER

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Personal information

Nationality *French*

Birthdate *November the 16th, 1982*

Professional Experience

03/2020– Present **Postdoctoral Researcher**, CNRS / IRISA, MYRIADS team, Rennes, France.

Subject: "Energy Efficiency of TIC networks in Smart Grids networks"

12/18–03/2020 **Postdoctoral Researcher**, National Institute of Standards and Technologies (NIST), Gaithersburg, USA.

Subject: "5G Team: Implementation and evaluation of 802.11ay MAC"

12/15–12/18 **Ph.D. Candidate**, Itron / IMT Atlantique, Rennes, France.

Subject: "Multiple interface management in Smart Grid networks"

12/09–11/15 **Engineer**, University of Rennes 1, Rennes, France.

Description: Coordinator of the Bachelor degree SPH, involved in several projects with ESIR engineering school. Main tasks:

- Writing courses and practical activities of most of building and home automation protocols (KNX, LonWorks, BACnet, Modbus, DALi, EnOcean)
- Trainees supervision of Master thesis and engineer projects (ESIR / ISTIC)
- Header of the KNX training center of University of Rennes 1

08/06–11/09 **Software Engineer**, Marsollier Domotique, Rennes, France.

Description: Several projects related to Java application controlling building efficiency

04/06–07/06 **Engineer Internship**, Marsollier Domotique, Rennes, France.

Subject: "A KNX web application for home remote control"

Teaching **2009 - 2016**, University of Rennes 1, Lectures & Lab Session, Eng. / M.Sc. / B.Sc

Topics: "Networks and systems, Building Automation protocols, Supervision software, Java programming"

Education

2015–2018 **Ph.D. in Computer Science**, OCIF, IRISA, IMT Atlantique, Rennes, France.

Thesis title "Multiple hybrid interface management in Smart Grid networks"

Thesis supervisor: Prof. Nicolas Montavont & Dr. Laurent Toutain

2013–2014 **M.Sc. in Computer Science**, "Ingénierie des TIC pour les éco-activités", University of Rennes 1, Rennes, France - Mention: "Très Bien"

2005–2006 **M.Sc. in Electrical Engineering**, "Electronique, Domotique et Réseaux Intérieurs", University of Rennes 1, Rennes, France - Mention: "Bien"

Master Thesis: "A KNX web application for home remote control", supervised by Morgan Beaubras.

2003–2004 **B.Sc. in Electrical Engineering**, "*Ingénierie Electrique*", University of Rennes 1, Rennes, France - Mention: "Passable"

2001–2003 **DUT G.E.I.I.**, University of Rennes 1, Rennes, France - Mention: "Passable"

Languages

French Mother tongue
English Fluent

Skills

Network protocols

- IEEE 802.15.4 - IEEE P1901.2 - 802.11ad - ay
- 6tsch, CSMA, 6LoWPAN
- Reactive Routing protocols: AODV, LOAD, LOADng
- Proactive Routing protocols: RPL

Network simulators

- Riverbed Modeler
- Cooja
- Ns-3

Field protocols

- BACnet, LonWorks, KNX, ModBus, Zigbee, Z-wave, MS/TP, X3D

Languages **C, C++, Java, Python**

Operating systems **Linux, Contiki OS, Mac OS, Windows**

Others **Git, Subversion, Eclipse, L^AT_EX**

List of Refereed Publications

PhD Thesis

2019 [t5-t1] "*Multiple interface management in smart grid networks*", [F. Lemerrier](#).

Book Chapters

2017 [t4-b2] "*Communication architectures and technologies for advanced Smart Grid Services*", [F. Lemerrier](#), G. Habault, G. Z. Papadopoulos, P. Maille, P. Chatzimisios & N. Montavont, To appear in **Transportation and Power Grid in Smart Cities: Communication Networks and Services**, John Wiley, 2017.

Journals

2017 [t3-j1] "*Monitoring Traffic Optimization in Smart Grid*", G. Habault, M. LeFrancois, [F. Lemerrier](#), N. Montavont, P. Chatzimisios and G. Z. Papadopoulos, In **IEEE Transactions on Industrial Informatics**, 2017.

International Conferences

2018 [t2-p1] "*A New Objective Function for Hybrid Network in the Smart Grid.*", [F. Lemerrier](#), N. Montavont, L. Toutain & P. Chiummiento, In: 19th IEEE International Symposium on "A World of Wireless, Mobile and Multimedia Networks", **WoWMoM 2018**, Chania, Greece, June 12-15, 2018.

- 2018 [t2-p1] "*Performance Evaluation of a RPL Hybrid Objective Function for the Smart Grid Network.*", [F. Lemerrier](#) & N. Montavont, In: Ad-hoc, Mobile, and Wireless Networks - 17th International Conference on Ad Hoc Networks and Wireless, **ADHOC-NOW 2018**, Saint-Malo, France, September 5-7, 2018.
- 2016 [t2-p1] "*Support for hybrid network in RPL*", [F. Lemerrier](#), N. Montavont, L. Toutain, K. Vijayasankar, R. Vedantham & P. Chiumminto, In Proc. **IEEE Smartgridcomm** - Sydney, Australia, November 2016.

Books and Online Course

- 2014 [t1-b1] "*Usage de l'habitat*", [F. Lemerrier](#), C. Cappe, M. C. Godet, P. Barbel & E. Poilvet, **ENVAM** - www.envam.org, February 2014.

Scientific activities

PC Membership, Reviewer

- 2020 **IEEE ISCC 2020**, Rennes, France
- 2019 **IEEE DIPI '19**, Washington D.C., USA
- 2018 **AdHoc-Now 2018**, Saint-Malo, France

Other

- 2020 **Qualification aux postes de Maitre de conférence**

References

- Nada Golmie **Ph.D.**, *CTL, WND, NIST, USA*
nada.golmie@nist.gov, *Postdoc supervisor*
- Laurent Toutain **HDR**, *OCIF, IRISA, IMT Atlantique, FR*
laurent.toutain@imt-atlantique.fr, *Ph.D. thesis director*
- Nicolas Montavont **Professor**, *OCIF, IRISA, IMT Atlantique, FR*
nicolas.montavont@imt-atlantique.fr, *Ph.D. thesis supervisor*
- Olivier Barais **Professor**, *DiverSE, IRISA, University of Rennes 1, FR*
barais@irisa.fr, *Ph.D. thesis advisor*
- Philippe Chiumminto **R&D Manager**, *Itron, France, FR*
philippe.chiumminto@itron.com, *Ph.D. thesis advisor*

Interests & hobbies

- 2017-2018 **Secretary of ADER, Ph.D. students association of IMT Atlantique**, Rennes, France
- Reading, playing music, electronic / 3D printing, badminton, traveling.