

Rémy Léone | Research engineer

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🐦 remyleone • in remyleone • 🌐 sieben • French, 26 yo

Research experience

Inria Paris - EVA team

Feb 2016 - ~ Feb 2018

Post-doc

Working on F-Interop, a 3-year European research project which aims at studying, designing and implementing a Cloud-based service to test the compliance and interoperability of IoT products and implementations.

- Design, specification, development and maintenance of a complex and distributed test environment
- Targetted protocols : IEEE802.15.4, 6TiSCH, 6LoWPAN, RPL, CoAP, OneM2M, ETSI M2M
- Agile methodology

(advisor : Thomas Watteyne)

Telecom Paris Tech & Thales Communication and Security

Jan 2013 - ~ Jan 2016

PhD Candidate

Title : Smart gateways for low-power and lossy networks.

- Workflow for WSN reproducible research with an open source prototype <http://github.com/sieben/makesense>
- Worked on gateway caching proxy servers
- Active & passive monitoring of constrained networks
- Contiki (C), Java, Wireshark, numpy, matplotlib, pandas, IPython

(advisor : Jean-Louis ROUGIER, Vania CONAN)

Thales Communications & Security - Colombes

2012

Final year's internship

Design and implementation of a proxy server for low power and lossy networks with an adaptive cache policy that match lifetime constraints with acceptable network traffic

Contiki (C), Java, CouchDB (advisor : Jeremie LEGUAY, Paolo MEDAGLIANI)

CEA - DAM - Bruyères-le-Châtel

2010

Intern

Re-factored and debug of a Fortran nuclear physics application

gfortran, Sun OS, Red Hat Enterprise Linux, Shell (advisor : Thierry Granier)

Education

ENSIIE, Evry, France

2010 - 2012

Degree in Computer Science engineering

major in Operating Systems and Network Administration, Routing and Quality of service, Software certification and System Security.

Lycée Fénélon, Paris, France

2008 - 2009

Preparatory school (French CPGE)

major in Mathematics and Physics.

Knowledge and skills

Theory : Data Analysis, Database Design, Statistics, Optimization, Numerical Analysis ; language and compilation theory ; graphs and operational research

Administration : GNU/Linux : System and network administration, Computer Architecture, Operating System

Backend : flask, django, nginx, CouchDB, PostgreSQL, redis, RabbitMQ, ansible, gitlab

SCM : SVN, git, CVS

Scientific software : pandas, numpy, matplotlib, ipython, L^AT_EX, R, Octave (~ Matlab)

Virtualization : VirtualBox, Docker, Vagrant

Networking : Routing and Quality of Service, network architecture and protocols, Wireless, TCP/IPv4/IPv6, VPN, Wireshark

Programming : C, Java, ASM (Intel, 68k), Python, SQL, OCaml, Shell, Concurrent Programming, several contributions to free software

Teaching

Type	Hours	Audience	Level	Language	Description
Tut/Lab	60.5h	~ 30 students	1st year eng.	FR	RES101 (BCI Réseaux)
Tut/Lab	18h	~ 10 students	International M2	EN	RES841 (Computer Networks)
Tut/Lab	42h	26 students	1st year eng.	FR	INF103 (Java programming)

TOTAL : 120.5 h

Publications

- [1] Fadwa BOUBEKEUR et al. “Bounding Degrees on RPL”. In : *Proceedings of the 11th ACM Symposium on QoS and Security for Wireless and Mobile Networks*. ACM. 2015, p. 123–130.
- [2] Keoma BRUN-LAGUNA et al. “(Not so) intuitive results from a smart agriculture low-power wireless mesh deployment”. In : *Proceedings of the Eleventh ACM Workshop on Challenged Networks*. ACM. 2016, p. 25–30.
- [3] Simone CIRANI et al. “A scalable and self-configuring architecture for service discovery in the internet of things”. In : *Internet of Things Journal, IEEE* 1.5 (2014), p. 508–521.
- [4] Rémy LEONE, Paolo MEDAGLIANI et Jérémie LEGUAY. “Optimizing qos in wireless sensors networks using a caching platform”. In : *Sensornets 2013*. 2013, p. 56.
- [5] Rémy LEONE et al. “MakeSense : Managing Reproducible WSNs Experiments”. In : *Fifth Workshop on Real-World Wireless Sensor Networks* (2013).
- [6] Rémy LEONE et al. “Technical Overview of F-Interop”. In : *Conference on Interoperability in IoT (Inter-IoT)*. 2016.
- [7] Rémy LÉONE et al. “Demo Abstract : Automating WSN experiments and simulations”. In : *EWSN 2015*.
- [8] Rémy LÉONE et al. “Demo Abstract : MakeSense—Managing Reproducible WSNs Experiments”. In : *Real-World Wireless Sensor Networks*. Springer, 2014, p. 65–71.
- [9] Rémy LÉONE, Paolo MEDAGLIANI, Jérémie LEGUAY et al. “Optimisation de la qualité de service par l’utilisation de mémoire cache”. In : *15èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel)* (2013), p. 1–4.
- [10] Rémy LÉONE et al. “Tee : Traffic-based Energy Estimators for duty cycled Wireless Sensor Networks”. In : *ICC 2015*.

Projects and collaborations

Ongoing projects

Year	Name and funding source	Description and comments
since 2015	F-interop (H2020) http://www.f-interop.eu/	<i>Remote Interoperability, Conformance, and Performance Tests for the Internet of Things</i>

Former projects

2012–2015	IRIS (ANR) http://www.anr-iris.fr	<i>All IP Networks for the Future Internet of Smart Objects</i>
2011–2013	Calipso (EU/FP7) http://www.ict-calipso.eu/	<i>Connect All IP-based Smart Objects</i>

Community

- Multiple contributions on code quality and continuous integration in Contiki
- Support on open source mailing list
- IT administration in a science association (Paris Montagne)

Additional information

Languages : French (native), English (fluent), Spanish (high-school level),