

# Rémy Léone | Research engineer, PhD student

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## Research experience

### 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 Fénelon, 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

**Web** : flask, django, nginx, CouchDB, PostgreSQL, redis

**SCM** : SVN, git, CVS

**Scientific software** : pandas, numpy, matplotlib, ipython, L<sup>A</sup>T<sub>E</sub>X, R, Octave (~ Matlab)

**Virtualization** : VirtualBox, Docker, Vagrant

**Networking** : Routing and Quality of Service, network architecture and protocols, Wireless, TCP/IP, 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	21h	26 students	1st year eng.	FR	INF103 (Java programming)
TOTAL : 99.5 h					

## Publications

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- [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] 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.
- [3] Rémy LEONE, Paolo MEDAGLIANI et Jérémie LEGUAY. “Optimizing qos in wireless sensors networks using a caching platform”. In : *Sensornets 2013*. 2013, p. 56.
- [4] Rémy LEONE et al. “MakeSense : Managing Reproducible WSNs Experiments”. In : *Fifth Workshop on Real-World Wireless Sensor Networks* (2013).
- [5] Rémy LÉONE et al. “Demo Abstract : Automating WSN experiments and simulations”. In : *EWSN 2015*.
- [6] Rémy LÉONE et al. “Demo Abstract : MakeSense—Managing Reproducible WSNs Experiments”. In : *Real-World Wireless Sensor Networks*. Springer, 2014, p. 65–71.
- [7] 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.
- [8] Rémy LÉONE et al. “Tee : Traffic-based Energy Estimators for duty cycled Wireless Sensor Networks”. In : *ICC 2015*.

## Projects and collaborations

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### Ongoing projects.....

Year	Name and funding source	Description and comments
since 2012	IRIS (ANR) <a href="http://www.anr-iris.fr">http://www.anr-iris.fr</a>	<i>All IP Networks for the Future Internet of Smart Objects</i>

### Former projects.....

2011–2013	Calipso (EU/FP7) <a href="http://www.ict-calipso.eu/">http://www.ict-calipso.eu/</a>	<i>Connect All IP-based Smart Objects</i>
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## Community

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- 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

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