Keoma Brun-Laguna

✉ contact@kbl.netlib.re
🌐 kbl.netlib.re
📞 +33 (0)6 84 01 54 96
🐙 keomabrun

Developer Back-end & AdminSys

Positions

2019 (4 years)	**CTO & Co-Founder - Wattson Elements** System Design and Architecture Network Design Co-Founder of the company.
2016 (3 years)	**PhD Student - Inria** Deterministic Networking for Industrial Internet of Things. – Deployment and implementation of Real-World Wireless Sensor Networks. – Evaluating the limits and trade-offs of Time Slotted Channel Hopping. EVA team, Inria, Paris, France Supervised by Thomas Watteyne.
2017 (4 months)	**Internship - Dust Networks** Packet Dissection and Network Analysis (Wireshark) Building and Automation (Jenkins)
2015 (6 months)	**Internship - ICube** Multipath in 6TiSCH Networks, – Solution proposal and implementation in OpenWSN – Experimental analysis with IoT-Lab ICube Laboratory, Strasbourg, France Supervised by Fabrice Theoleyre.
2014 (3 months)	**Internship - LIP6** Energy Consumption in D2D Networks, – Testbed setup (Android, Adafruit INA219) LIP6 Laboratory, Paris, France Supervised by Marcelo Dias de Amorim.

Education

2016–2019	**PhD** Deterministic Networking for the Industrial IoT Sorbonne University
2015–2016	**Master of Science** (2nd year) in Computer Networks University Pierre et Marie Curie (UPMC, Paris 6) Jointly issued by Telecom ParisTech
2014–2015	**Master of Science** (1st year) in Computer Networks and Embedded Systems University of Strasbourg
2013–2014	**BSc (Hons)** in Computer Networks University of Abertay (Dundee, Scotland) Jointly issued by the University of Pau and Pays de l'Adour
2012–2014	**University Technology Degree** in Computer Science University Institute of Technology, (Bayonne, France)

Projects

SaveThePeaches

Predicting Frost Event in Peach orchards

I led the deployment of an 23-node SmartMesh IP network to monitor a peach orchard in Mendoza, Argentina. The network is connected to a back-end system that displays the data in real time.

🌐 http://savethepeaches.com

SnowHow

Monitoring the Sierra Nevada snow-pack

I helped update an existing SmartMesh IP network in the Sierra Nevada to monitor the montain snow-pack. This 48-node network now reports both network statistics and sensor values.

🌐 http://snowhow.io

SmartMarina

Monitoring the Cap d'Agde Marina

I will deploy a SmartMesh IP network in the Cap d'Agde Marina in the south of France. The network will provide a security, environment and resources management system.

🌐 http://smartmarina.org

SOLsystem

An End-to-end Solution for Real-World Remote Monitoring

I architected and developed the SOLsystem that is the back-end system used in the SaveThePeaches, SnowHow and SmartMarina project. It allows to easily manipulate, format and visualize the data produced by a wireless sensor networks.

🌐 http://solsystem.io

Teaching

ENSTA Paris, France	"Computer Networks Lab" Introduction to Unix network commands and development of an application using Sockets in C. January 2017 and January 2018
UCL London, England	"Introduction to Low-Power Wireless Mesh Networks" 3-hours hands-on tutorial on SmartMeshIP, Node-Red and IBM Bluemix. 1rst March 2017.
ENSTA Paris, France	"The Internet of Things: Theory, Standardization and Hands-On Experience" Introduction to the Internet of Things concepts, challenges and solutions. December 2016, April 2017, April 2018, 4 days, with Thomas Watteyne
S3++ Pojega, Croatia	"From a flower to the Internet" How to build an automated watering system. Sensing soil moisture, actuating a water pump, and publishing data online. July 2016, 10 days, Summer School of Science

Technical Experience

Tools:	IDE: PyCharm, CLion, IAR Administration: BOUML, GANTT, LaTeX, Git, vim
Programing:	C, Python, Perl, PascalScript, C++, Java, C#, HTML, PHP, Coldfusion, CSS, Javascript, Shell
Virtualization:	VirtualBox, Vagrant
OS:	GNU/Linux, OpenWSN, TinyOS
CD/CI:	Jenkins, Travis
Backend:	InfluxDB, MySQL, SQLite, Nginx, Graphana, Ansible, collectd, postfix, Dovecot

Technical Interests

Internet of (Important) Things, Low-Power Wireless Mesh Networks, .

Personal

Percussion	
2013	**Creation of a Percussion Association**, president role for a year.
Sports	Climbing: I like to climb on rocks.
	Capoeira
Computing	
2016	In charge of the Internet Cube project in a non-profit Internet Service Provider 🌐 https://internetcu.be/
2007	Creation of a social computing center in my home town (Parempuyre, France)
Languages	French (native), English (fluent), Spanish (fluent)

Rewards

2016	**Runner up IEEE SECON 2016 Best Demo Award with** "A Demo of the PEACH IoT-based Frost Event Prediction System for Precision Agriculture", Keoma Brun-Laguna et al., 28 June 2016.
2011	**Member of the "24h de l'innovation 2011"** (Engeneering School ESTIA, Bidart).