

- » **Status:** Postdoc Researcher at KU Leuven, DistriNet Team
- » **Fields:** Distributed Systems, Wireless Sensor Networks
- » **Bio:** French citizen born in 1986
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- » **Page:** <https://delbruel.net>

## »»» Experience

2017 - ...	<b>Postdoctoral Researcher</b>	KU Leuven, Belgium
	<ul style="list-style-type: none"><li>» Research on Wireless Sensor Networks and low-power wireless embedded platforms</li><li>» Research on architecture design for distributed LPWANs federations based on self-organizing distributed systems</li></ul>	
2013 - 2017	<b>PhD Student</b>	University of Rennes 1 - INRIA
	<ul style="list-style-type: none"><li>» Research on Distributed storage systems</li><li>» Research on caches provisioning and georeplicated content placement for proactive content distribution</li></ul>	
2011 - 2013	<b>Electronics Engineer</b>	Snootlab
	<ul style="list-style-type: none"><li>» Research and Development on Embedded wireless architectures and products, both hardware and software sides</li><li>» Research and Development of Optical backbone equipment provisioned in various Internet-Exchange points (AMS-IX, Tou-IX, ...)</li></ul>	
2010 - 2011	<b>Electronics Engineer</b>	LEGRAND S.A
	<ul style="list-style-type: none"><li>» Design and Development of Embedded safety central stations modules, pure analog and ultra-low power constraints</li><li>» Development of Embedded firmwares for safety appliances</li></ul>	
2008 - 2010	<b>Electronics Engineer</b>	Bull S.A.S
	<ul style="list-style-type: none"><li>» Design and Development of the CATS-150 interconnection basket used in the NH90 helicopter</li><li>» Design and Development of safe operational memory modules embedded in the NH90</li></ul>	
2005 - 2008	<b>Electronics Engineer by Apprenticeship</b>	Tenum, France
	<ul style="list-style-type: none"><li>» Design and Development of a wireless telemetry station establishing air-ground link for stratospheric meteorological balloons used by the CNES</li><li>» Development of sensors acquisition analog chains, RF modules and a control module for the Laser Mégajoule (LMJ) of CEA</li></ul>	

## »»» Education

- |           |                                                                                                                                                                                                                                                  |                             |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 2017 / 01 | <b>Graduated as Ph.D in Computer Science</b>                                                                                                                                                                                                     | University of Rennes 1      |
|           | <ul style="list-style-type: none"><li>» Thesis: Towards an architecture for tag-based predictive placement in distributed storage systems</li><li>» Supervisor: Pr. François TAÏANI, Assessors: Pr. Romain ROUVOY and Pr. Danny HUGHES</li></ul> |                             |
| 2008 / 07 | <b>Graduated as Electronics Engineer</b>                                                                                                                                                                                                         | CESI, Toulouse              |
|           | <ul style="list-style-type: none"><li>» Title: Ingénieur du CESI et de l'Université Toulouse III spécialité électronique en partenariat avec l'ITII Midi-Pyrénées</li><li>» Supervisors: Bernard CHATEAU - Gonzague BOSCH</li></ul>              |                             |
| 2005 / 07 | <b>Graduated as Higher Technician in Electronics</b>                                                                                                                                                                                             | Lycée Charles Carnus, Rodez |
|           | <ul style="list-style-type: none"><li>» Title: Brevet de Technicien Supérieur spécialité Génie Electronique</li><li>» Internship: University of Portsmouth, Creative Technologies Dept.</li></ul>                                                |                             |

## »»» Academic Service

- |             |                                                                                                                                                                                                                                        |                                   |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 2016        | <b>Visiting Researcher</b>                                                                                                                                                                                                             | University of Lugano, Switzerland |
|             | <ul style="list-style-type: none"><li>» Research on Contention-based Distributed Routing Protocols</li><li>» Advisor: Pr. Antonio Carzaniga</li></ul>                                                                                  |                                   |
| 2017 - 2020 | <b>Academic Involvement</b>                                                                                                                                                                                                            |                                   |
|             | <ul style="list-style-type: none"><li>» Co-organizer of GDR RSD and ASF Winter School on Distributed Systems and Networks</li><li>» Co-chair of M4IoT workshop collocated with ACM/IFIP/USENIX Middleware (2019, 2018, 2017)</li></ul> |                                   |
| 2017 - 2020 | <b>Review Committees</b>                                                                                                                                                                                                               |                                   |
|             | <ul style="list-style-type: none"><li>» Technical Program Committee Member for DFSD (2020, 2019)</li><li>» Shadow PC Member for EuroSys (2019, 2018)</li></ul>                                                                         |                                   |

## »»» Academic Teaching and Tutoring

- |             |                                                                                                                                                                                                                                      |                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 2018 - 2020 | <b>Tutoring Master Students Thesis</b>                                                                                                                                                                                               | KU Leuven, Belgium     |
|             | <ul style="list-style-type: none"><li>» Mobile blimps as transparent LoRa bridges (60h)</li><li>» Low-powered wireless bus protocol tailored for distributed machine learning (60h)</li></ul>                                        |                        |
| 2014 - 2016 | <b>Teaching</b>                                                                                                                                                                                                                      | University of Rennes 1 |
|             | <ul style="list-style-type: none"><li>» 2015-2016: Directed and Practical work sessions on Object-Oriented Programming (L3/M1 64h)</li><li>» 2014-2015: Practical work sessions on Object-Oriented Programming (L2/L3 64h)</li></ul> |                        |

## International Journals

- » **Simplifying CPS Application Development through Fine-grained, Automatic Time-out Predictions.** Stefanos Peros, Stéphane Delbruel, Sam Michiels, Wouter Joosen Danny Hughes. **ACM Transactions on Internet of Things**
- » **Chimera: A low-power reconfigurable platform for Internet of Things.** Emekcan Aras, Stéphane Delbruel, Fan Yang, Wouter Joosen, Danny Hughes. Submitted at **ACM Transactions on Internet of Things**

## International Conferences

- » **Tackling Contention Through Cooperation: A Distributed Federation in LoRaWAN Space.** Stéphane Delbruel, Nicolas Small, Emekcan Aras, Jonathan Oostvogels, Danny Hughes. **EWSN 2020**
- » **Expressive Feature-oriented Multicast for the Internet of Things.** Jonathan Oostvogels, Stefanos Peros, Stéphane Delbruel, Danny Hughes. **DCOSS 2019**
- » **Khronos: Middleware for Simplified Time Management in CPS.** Stefanos Peros, Stéphane Delbruel, Sam Michiels, Wouter Joosen, Danny Hughes. **BEST PAPER AWARD DEBS 2019**
- » **A Low-Power Hardware Platform for Smart Environment as a Call for More Flexibility and Re-Usability.** Emekcan Aras, Stéphane Delbruel, Fan Yang, Wouter Joosen, Danny Hughes. **EWSN 2019**
- » **Selective Jamming of LoRaWAN using Commodity Hardware.** Emekcan Aras, Nicolas Small, Gowri Sankar Ramachandran, Stéphane Delbruel, Wouter Joosen, Danny Hughes. **BEST PAPER AWARD MobiQuitous 2017**
- » **Mignon: A Fast Decentralized Content Consumption Estimation in Large-Scale Distributed Systems.** Stéphane Delbruel, Davide Frey, François Taïani **DAIS 2016**
- » **Exploring the Use of Tags for Georeplicated Content Placement.** Stéphane Delbruel, Davide Frey, François Taïani. **BEST PAPER AWARD IC2E 2016**

## International Workshops

- » **Expressive Data-Centric Multicast on RPL in Low-Power Networks.** Jonathan Oostvogels, Stefanos Peros, Stéphane Delbruel, Danny Hughes. **WOWMOM 2019**
- » **Decentralized view prediction for global content placement.** Stéphane Delbruel, Davide Frey, François Taïani. **ARM @ Middleware 2015**
- » **From views to tags distribution in Youtube.** Delbruel Stéphane, Davide Frey, François Taïani. **Proceedings of the Middleware'14 Posters & Demos Session (ACM/IFIP Middleware 2014)**