

# PhD Student in Telecommunications Security - SU & ULB

## MSc, Electrical and Information Technology Engineering - ULB & VUB



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## EDUCATION

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- 2018 - 2021 | PhD in co-supervision between the GeePs Laboratory (Sorbonne University, Paris Saclay University) and the Wireless Communication Group (Free University of Brussels) - EDITE scholarship  
Research focus on **Physical Layer Security** for Wireless Communications - Supervisor: Pr. Julien Sarrazin.
- 2016 - 2018 | Master of Science in **Electrical Engineering** focus electronics and information technologies at **Brussels Faculty of Engineering** - *magna cum laude*  
Major: Information and Communication Technology Systems
- 2013-2016 | Bachelor of Science in Engineering focus Electronics and Information Technologies at **Brussels Faculty of Engineering** - *cum laude*

## PUBLICATIONS

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- Nov. 2020 | Author of *Physical Layer Security in a SISO Communication using Frequency-Domain Time-Reversal OFDM Precoding and Artificial Noise Injection*.  
Under Reviewing in *IEEE Transactions on Wireless Communications*
- MAR. 2020 | Co-author of *IQ Based Direct Sequence Spread Spectrum Spatial Data Focusing implemented over a 6 Ray Urban Canyon Channel Model*.  
Published in *URSI-France Conference* in Palaiseau, France.
- FEB. 2020 | Author of *Physical Layer Security in Frequency-Domain Time-Reversal SISO OFDM Communication*.  
Published in *ICNC 2020 Conference* in Big Island, Hawaii.
- OCT. 2019 | Author of *Influence du canal de propagation sur la sécurité d'une communication SISO utilisant le retournement temporel dans le domaine fréquentiel et l'ajout de bruit artificiel*.  
Published in *GDR Ondes 2019*, in Gyf-sur-Yvette, France.
- MAY 2019 | Author of *Focalisation Spatiale de Données via une approche temporelle*.  
Published in *XXIèmes Journées Nationales Microondes*, in Caen, France.
- MAY 2019 | Co-author of *Focalisation Spatiale de Donnée avec modulation à étalement de spectre*.  
Published in *XXIèmes Journées Nationales Microondes*, in Caen, France.
- FEB. 2019 | Author of *Spatial Data Focusing using time resources*.  
Published in *IRACON EURO-COST* meeting in Dublin, Ireland.
- JUL. 2018 | Co-author of *Spatial Data Focusing: an alternative to Beamforming for geocasting scenarios*.  
Published in *IEEE Antennas and Propagation Symposium conference* in Boston, USA.

## EXPERIENCE

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### Master Thesis

- 2017-2018 | **Research Thesis: Hyper Resolution Spatial Data focusing: a time domain approach.**  
2017-2018 Academic year - Theoretical development and experimentation with USRP of the Time Spatial Data Focusing theory.  
- *summa cum laude* .  
Supervisor: Pr. Philippe De Doncker

## Internship

2017 | **Research Internship at Pierre-and-Marie-Curie University, Paris VI.**  
From Aug. 2017 to Oct. 2017. Development of a **LabVIEW Communication 2.0** application using **NI USRP** to assess **Spatial Data Focusing** theory.  
Supervisor: Pr. Julien Sarrazin

## Certification

OCT. 2017 | *Wireless prototyping fundamentals using LabVIEW Communications 2.0 and NI SDR.*  
The certification was delivered by **National Instruments France SAS**. The formation took place at **ESIEE Paris, Noisy-le-Grand** to learn the fundamentals of LabVIEW Communication.

## Projects

2017-2018 | Implementation of a complete **SIMO OFDM** transceiver chain using **Matlab**.  
| Implementation of a Lossless Bilevel Image Codec using **C++**.  
2016-2017 | Crowd monitoring based on WiFi for the **Brussels Major Event** Company.  
| Design and simulation of the DVB-S2 communication chain using **Matlab**.

## Student jobs

2015-ONGOING | Teaching Assistant during summer exams at *Blocus Assistance*  
[40h/w, 3 weeks a year]. For bachelor students in physics, mathematics, mechanics, electricity, electromagnetism, algebra, statistics to prepare their retake exams.

## LANGUAGES

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FRENCH: Native speaker | ENGLISH: Advanced Knowledge | DUTCH: Basic Knowledge

## SOFTWARE SKILLS

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Advanced skills | Matlab, LaTeX, Git, LabVIEW Communication 2.0 System Design, Octave, Office 365.  
Skills | Python (TensorFlow), Java, C, C++, VHDL.

## INTEREST AND ACTIVITIES

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MUSIC: | Played piano for 14 years.  
Sport | Football, Tennis, Fitness, Padel.  
Other | Deep interests in Artificial Intelligence, Telecommunication, Machine Learning, IoT, scientific readings.  
Travelling, City Sightseeing.