Charlier Maximilien

PhD Student in Computer Science

contact@maximilien-charlier.be

Education

2017 - University of Mons
- **Master in Computer Science**
  Obtained with great distinction
  Reward of the best master thesis in Computer Science
- **Bachelor in Computer Science**
  Obtained with distinction

2012 - Athénée Royal de Mons 1
- Complementary year in mathematics

2011 - Certificate of higher secondary education (CESS)

Languages

French (Mother tongue)
English
Reading: Good
Writing: Scientific
Speaking: Scientific

Hobbies

- 🎹 Programming
- 📷 Photography
- 🔧 Do it yourself
- 🌲 Green building

Professional experiences

UMONS, FRIA-FNRS, PhD Student `17-21`
🕐 Current job, started on the first of October 2017, Mons.
PhD Student in Computer Science, in the Networking and Telecommunications Lab at the University of Mons (Be). My research focused on the conception of a large scale indoor positioning system using IEEE 802.15.4 Ultra WideBand (UWB) wireless technology.
In other word, the conception of a GPS like systems that work inside a building to locate people, moving objects or robots with a centimeters accuracy. Ultra WideBand (UWB) transceiver allow very high temporal resolution when transmitting messages and allow, using specific message exchanges, to measure the time of flight between transceivers.
My thesis focus on the conception of protocols that improve the usage of the UWB spectrum, reduce consumption and schedule communications, all in all, theses protocols increase the overall localization rate achievable in large area.

FEDER - IDEES, Research assistant `2017`
🕐 From 16 August to 29 September 2017, Mons.
Research about RPL, an IPv6 Routing protocol for Low-Power and Lossy Networks (LLN). The research focused on wirelss connectivy problems in linear topology.

Numeca International, Internship `2016`
🕐 3 months, July to October 2016, Brussels.
Numeca Intl is active in the Computational Fluid Dynamics field. My internship consisted in a comparison of two 3D rendering libraries. During my stay, I developed a prototype for scientific visualization in Qt3D using C++ and the Qt framework. I also developed GLSL shaders.

UMONS, Student Assistant `16-17`
🕐 For march to may in 2016 and 2017, Mons.
Help students in practical sessions, these sessions cover the development on a prototyping platform using assembly language (MIPS) and C. These practical sessions also introduced some concepts like Timer, Interrupt, and the use of a library.

Skills

OOP: Python   Java   C++
Procedural: C
WEB: PHP   HTML5   CSS3   JavaScript
Databases: MySQL   XML   XSLT   XQUERY
Operating System: Linux   Windows   Contiki
Version Control System: Git
Writing: LaTeX   Office Suite

Web version
https://maximilien-charlier.be/cv/

Student jobs

Printemps des Sciences, Student job — 2017
🕐 From 25 to 26 March 2017, Mons.
I have presented a localization system based on ultra wideband (a wireless technology) and the time of flight. This system was developed during my master thesis. I also presented some industrials usages of indoor localization and how work the GPS.

UMONS, Student job — 15-17
🕐 2015-2016, Mons.
Student for the catering service and the restaurant of the University of Mons.

UMONS, Student job — 15-16
🕐 2015-2016, Mons.
Welcoming participants to conferences of the Extension department of the University of Mons.

VDH Photo, Student job — 15-16
🕐 3 days in 2015 and 2016, Brussels.
Expert advisor at the Imaging Days a photo show for the VDH Photo stand.

BNB, Student job — 2012
🕐 1 month, August 2012, Brussels.
Maintenance service of the National Bank of Belgium.

BNB, Student job — 2011
🕐 1 month, August 2011, Brussels.
Responsible for the exchange of currency to the Central Cash Office of the National Bank of Belgium.

Publications

2019

- Maximilien Charlier, Bruno Quoitin, David Hauweele. (2019, June). **UWB-TSCH : Time and Frequency Division Multiplexing for UWB Communications.** In *Rencontres Francophones sur la Conception de Protocoles, l'Évaluation de Performance et l'Expérimentation des Réseaux de Communication (CORES2019)*, *Saint Laurent de la Cabrerisse, France*.
- Maximilien Charlier, Bruno Quoitin, and David Hauweele. (2019, April). **Challenges in using Time Slotted Channel Hopping with Ultra Wideband communications.** In *Proceedings of the International Conference on Internet of Things Design and Implementation (IoTDI '19)*. (pp. 82-93). ACM. *Montreal, Quebec, Canada*.

2016

- Maximilien Charlier, Bruno Quoitin, Sébastien Bette, et al. (2016, November). **Support for IEEE 802.15. 4 ultra wideband communications in the Contiki operating system.** In Symposium on *Communications and Vehicular Technologies (SCVT)*. (pp. 1-6). IEEE. *Mons, Belgium*.