

# CHRISTOPHE CROCHET

## Computer Scientist

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Wallonie , Belgium

063124846

Luxembourg , Luxembourg

31/10/1997



## EDUCATION

### Master Computer Science

Ecole Polytechnique de Louvain | UCLouvain

2018 - present

Louvain-la-Neuve, Belgium

- Options:
  - Security and computer networks
  - Artificial intelligence: massive data, optimization and algorithms
  - Software engineering and programming systems
- 155 credits
- Grade up to now: 15.5/20

### Bachelor Computer Science

Ecole Polytechnique de Louvain | UCLouvain

2015 - 2018

Louvain-la-Neuve, Belgium

### Secondary school

Institut Saint-Joseph

2013 - 2015

Carlsbourg, Belgium

Institut Saint-Benoit

2010 - 2013

Habay-la-Neuve, Belgium

## WORK EXPERIENCE

### University monitor INGI

Master course - LINGI2144

2020 - 2021

UCLouvain

- I was given the opportunity to give monitoring sessions of the course given by Legay Axel of LINGI2144: Secured System Engineering where the goal was to help students with their questions for the projects and the practical sessions, propose new exercises, and help the teacher.

### Website for cours

Master course - LINGI2144

2020 - 2021

UCLouvain

- As a student job, I create the website for the "LINGI2144- Secured System Engineering" course given by Pr. Axel Legay where the constraint was to use Sphinx and propose the solution of tutorials for the students where the teacher could activate/deactivate the tutorials. There are also videos with solutions to the exercises.
- My realization: <https://lingi2144.info.ucl.ac.be/>

### Student Interim at Thomas & Piron

Student Job of 40h/week

Aug. 2019 - sep. 2019

Paliseul, Belgium

- Job in the IT section of the Thomas & Piron main office where the goal was to help the team to initiate the transition of their current system into their new one.

### Foire de Libramont

Student Job of 10h-12h/day

July. 2018

Libramont, Belgium

- Student job of 4 intense days in the washing dishes sector of the stand of "Auberge de Rochehaut". It learns me how hard could be the work but it was a great experience.

## LOOKING FOR

" A first experience where I could apply both technical knowledge and practical skills acquired through projects at university while still learning new interesting things. "

## ABOUT ME



### Passionate

Constant learning of new tools and scientific papers. Very high interest for upcoming technologies to stay competitive.



### Team Work

Strong ability to easily integrate a team. Always listening to others and ready to help those who need it.

## TECHNICAL STRENGTH

Security Networks Paradigm  
Distributed Systems Algorithms  
OOP SOA Embedded Systems  
Design Pattern Machine Learning

## PERSONAL STRENGTH

Rigorous Hard-working Versatile  
Dynamic Team working Flexibility  
Adaptability Thirst for knowledge  
Teaching

## LANGUAGES

French  
English - B2  
German - Secondary level



## GITHUB ACCOUNT



ElNiak

<https://github.com/ElNiak>

## Secretary

### Student Job

📅 2013-2015

📍 Clemency

- I helped my mother by acting as a secretary and "assistant". I was making appointments for patients and greeting them. I cleaned the dental instruments and helped her when she asked me to. This was used to have my pocket money for summer.

## Babysitting

### Student Job

📅 2012-2016

📍 Belgium/Luxembourg

- It all started when my dentist mother asked me to take care of my little brother and sister when she was working. Then through her network of patients and friends, I then babysat their child for a few hours when needed.

## SCHOOL EXPERIENCE

### Google Hashcode

📅 2019 - 2020

📍 UCLouvain

### Capture The Flag

📅 2019 - 2020

📍 UCLouvain

### NRB data science hackathon

📅 2019 - 2020

📍 NRB

## MASTER THESIS TOWARD VERIFICATION OF QUIC EXTENSIONS

"Formal methods play an important role in validating networking protocols. During the development of TLS 1.3, formal methods have helped to identify several issues with draft versions of the protocol that have been fixed before finalising the protocol. In the transport layer, the QUIC protocol has been proposed to replace the HTTP/TLS/TCP stack. This protocol is being finalised within the IETF and deployed by Google, Cloudflare, Facebook and many others.

A first approach to verify the correctness of the QUIC protocol has been presented last year [1]. This specification covers the basics of QUIC but many extensions are being discussed with the quic-wg [2] of the IETF and proposed by researchers [3][4]. The objective of this thesis is to explore how the specification proposed in [1] can be extended to model and verify some of the new QUIC extensions."

- (1) Formal specification and testing of QUIC KL McMillan, LD Zuck - SIGCOMM 2019
- (2) <https://datatracker.ietf.org/wg/quic/documents/>
- (3) <https://www.multipath-quic.org>
- (4) <https://www.pquic.org>

With my teammate, we manage to find bugs in six famous QUIC implementations. We found that most of these errors were due to ambiguity or missing indication in the RFC. Some of these errors were correct and pull requests have been made. We plan to realize a paper on this subject during the end of fall.

## TOOLS & TECHNOLOGIES



## SCHOOL CONTRIBUTION

### Synthesis

📅 2015 - 2021

📍 UCLouvain

During my university career, I was led to create several syntheses that I shared with the community because it allowed me to study better and to refresh the old ones already present. Here are the best ones:

- LINGI2144: <https://www.overleaf.com/read/rjgzktmjdbhm>
- LINGI2266: <https://www.overleaf.com/read/jqqvvhgtrsw>
- LSINF1121: <https://www.overleaf.com/read/vppqjtsysnc>
- LINGI2142: <https://www.overleaf.com/read/pmmpqcbphvrh>
- ...

## HOBBIES



### Strategy Games

Nothing better than a good game of EU4 after the work but not too much. Nuclear Gandhi power.



### Fitness

Going to the gym to relax.



### Culture

Learning new tools and technologies.