



# NIELS BILLÉN

## RESEARCH ENGINEER

+32 476 41 40 96  
niels.billen@gmail.com  
nielsbillen.github.io  
Bretheistraat 80, bus 2  
3600 Genk

### WORK EXPERIENCE

#### LUMINEX NETWORK INTELLIGENCE

apr. 2019 — present

#### FLANDERS MAKE

nov. 2017 — apr. 2019

### EDUCATION

#### KU LEUVEN

sep. 2013 — feb. 2018

#### KU LEUVEN

sep. 2011 — sep. 2013

#### KU LEUVEN

sep. 2008 — sep. 2011

### SKILLS

#### PROGRAMMING LANGUAGES

#### OPERATING SYSTEMS AND TOOLS

#### LANGUAGES

#### APPLICATION ENGINEER

Developing applications for visualizing, monitoring, and configuring largescale audio, video and lighting networks.

#### RESEARCH ENGINEER

Researching and implementing augmented and virtual reality techniques to support operators and process engineers in executing their job.

#### PHD IN ENGINEERING SCIENCE: COMPUTER SCIENCE

- **Topic:** Reducing the Noise in Illumination Algorithms
- **Promotor:** prof. dr. ir. Philip Dutré
- **Funding:** Institute agency for Innovation by Science and Technology (IWT)

#### MASTER OF SCIENCE IN ENGINEERING — CUM LAUDE (76,17%)

- **Major:** Human-Computer Interaction
- **Minor:** Secure software
- **Thesis:** Stochastic Visibility in Rendering Algorithms using the Occlusion Map

#### BACHELOR OF SCIENCE IN ENGINEERING — CUM LAUDE (69,74%)

- **Major:** Computer Science
- **Minor:** Electrical Engineering

#### *In order of proficiency:*

Java (9 years), C++ (5 years), HTML5-CSS-Javascript (3 years), C# (1 year), Bash, Python, Matlab

Windows, Ubuntu, The Standard Widget Toolkit (SWT), SVN, Git, Mercurial, Eclipse, Visual Studio (Code), Unity3D, Latex, Word, PowerPoint, Qt, QML

Dutch: native language

English: fluent (speaking, reading, writing)

French: basic

## PUBLICATIONS

IEEE XPLORE

May 2019

COMPUTER GRAPICS FORUM

July 2017

COMPUTER GRAPICS FORUM

July 2016

CW REPORT

July 2015

COMPUTER GRAPICS FORUM

July 2015

COMPUTER GRAPICS FORUM

July 2014

COMPUTER GRAPICS FORUM

July 2013

## PAST PROJECTS / HOBBIES

MUSIC

I have been a drummer for the past 15 years. I received a formal education at the “Stedelijke Academie voor Kunsten Maaseik”, where I also attended an optional six year course in composing.

REVISION

A ray tracer, written from scratch, capable of rendering scenes with several kinds of effects (e.g. anti-aliasing, soft shadows, motion blur, depth of field ...).

GAMEBOY EMULATOR

A hobby project in which I am writing an emulator for the original Gameboy in Java. Currently, the BIOS can be emulated.

SILEN

Extracurricular group project in which we wrote a cross platform music player written in Java using SWT and GStreamer.

## REFERENCES

PROF. DR. IR. PHILIP DUTRÉ

Full Professor and Vice-Dean

Department of Computer Science, Faculty of Engineering Science, KU Leuven

- e-mail: philip.dutre@kuleuven.be
- phone: +32 16 32 76 67

DR. IR. MAARTEN WITTERS

Core Lab Manager ProductionS at Flanders Make

- e-mail: maarten.witters@flandersmake.be