



+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

REVISION

GAMEBOY EMULATOR

SILEN

REFERENCES

MODEL-BASED MULTI-ATTRIBUTE COLLABORATIVE PRODUCTION CELL LAYOUT OPTIMIZATION

Pieter Lietaert, Niels Billen and Sofie Burggraeve

20th International Conference on Research and Education in Mechatronics

TEMPORAL COHERENCE FOR METROPOLIS LIGHT TRANSPORT

Joran Van de Woestijne, Roald Frederickx, Niels Billen and Philip Dutré

Eurographics Symposium on Rendering - Experimental Ideas & Implementations

LINE SAMPLING FOR DIRECT ILLUMINATION

Niels Billen and Philip Dutré

Proceedings of the 27th Eurographics Symposium on Rendering

VISIBILITY ACCELERATION USING EFFICIENT VISIBILITY CLASSIFICATION

Niels Billen and Philip Dutré

CW Report 695

EFFICIENT VISIBILITY HEURISTICS FOR KD-TREES USING THE RTSAH

Matthias Moulin, Niels Billen and Philip Dutré

Eurographics Symposium on Rendering - Experimental Ideas & Implementations

PROBABILISTIC VISIBILITY EVALUATION USING GEOMETRY PROXIES

Niels Billen, Ares Lagae and Philip Dutré

Proceedings of the 25th Eurographics Symposium on Rendering

PROBABILISTIC VISIBILITY EVALUATION FOR DIRECT ILLUMINATION

Matthias Moulin, Niels Billen and Philip Dutré

Proceedings of the 24th Eurographics Symposium on Rendering

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.

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 ...).

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

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

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