



Curriculum Vitae ir. Matthias Moulin

Personalia

Nationality: Belgian Birthdate: 15 January 1992
Mobile: [REDACTED] Email: matthias[dot]moulin[at]gmail[dot]com
 LinkedIn <https://be.linkedin.com/in/matthias-moulin>
 Github <https://github.com/matt77hias> - <https://matt77hias.github.io/>

Experience (in reverse chronological order)

Dec 2023 – Present [Frostbite](#), [EA Digital Illusions CE AB](#) (DICE), Stockholm (Sweden)
Rendering Software Engineer III – Image Quality (Frostbite Rendering)
Jun 2020 – Nov 2023 [Frostbite](#), [EA Digital Illusions CE AB](#) (DICE), Stockholm (Sweden)
Rendering Software Engineer II – Image Quality (Frostbite Rendering)
• **Technologies:** DRS, Expression Shader pipelines, GI Material, Shader Graph pipelines
Feb 2019 – May 2020 [Frostbite](#), [EA Digital Illusions CE AB](#) (DICE), Stockholm (Sweden)
Rendering Software Engineer I – Image Quality (Frostbite Rendering)
• **Technologies:** CPU/GPU Probes, Enlighten, Flux, GI Live Preview, PBR Materials
Oct 2016 – Feb 2019 [Department of Computer Science, KU Leuven](#), Leuven (Belgium)
Rendering Research Engineer – [Research Foundation - Flanders](#) (FWO)
• **Fellowship:** PhD Fellowship fundamental research
Oct 2015 – Sep 2016 [Department of Computer Science, KU Leuven](#), Leuven (Belgium)
Rendering Research Engineer – [Computer Graphics Research Group \(KU Leuven\)](#)

Education (in reverse chronological order)

2013 – 2015 [KU Leuven](#), Leuven (Belgium)
Master of Science in Engineering (Computer Science) — **Magna cum laude** (84.46%)
• **Major:** Human Computer Interaction (Computer Graphics)
• **Thesis:** Hybrid Kd-trees for Photon Mapping and Accelerating Ray Tracing (18.5/20)
Supervisor: prof. dr. ir. Philip Dutré
2010 – 2013 [KU Leuven](#), Leuven (Belgium)
Bachelor of Science in Engineering — **Magna cum laude** (76.83%)
• **Major:** Computer Science
• **Minors:** Electrical Engineering and Business Management

Publications (in reverse chronological order)

MOULIN M., DUTRÉ P.: [On the use of Local Ray Termination for Efficiently Constructing Qualitative BSPs, BIHs and \(S\)BVHs](#), *The Visual Computer*, Volume 35, Issue 12, pp. 1809–1826, December 2019 (First online: July 2018).
MOULIN M.: [Hybrid Kd-trees for Photon Mapping and Accelerating Ray Tracing](#), *Master's thesis*, Department of Computer Science, KU Leuven, Belgium, June 2015.
MOULIN M., BILLEN N., DUTRÉ P.: [Efficient Visibility Heuristics for Kd-Trees Using the RTSAH](#), In *Eurographics Symposium on Rendering - Experimental Ideas & Implementations* (June 2015), Lehtinen J., Nowrouzezahrai D., (Eds.), The Eurographics Association, pp. 31–39.

Skills

Frameworks D3D11, D3D12, DXGI, (EA)STL, MPI, OpenCV, OpenGL, OpenMP
Markup languages HTML/CSS, Markdeep, Markdown, TeX/LaTeX
Modelling languages OCL, UML
Programming languages C (89/90, 99, 11/18, 23), C++ (98/03, 11/14, 17, 20, 23), C#, CUDA C/C++, Erlang, Haskell, J#, Java, JavaScript/TypeScript, Maple, Matlab/Octave, MIPS, Prolog, Python 2/3, Racket
Shading languages GLSL, HLSL
Version control Git, Mercurial, Perforce, SVN



Game credits and contributions *(in reverse chronological order)*

Developer(s)	Game	Publisher	Release Date
BioWare	Dragon Age: Dreadwolf	Electronic Arts	<i>Announced</i>
Full Circle	Skate	Electronic Arts	<i>Announced</i>
EA Vancouver	EA Sports UFC 5	Electronic Arts	October 2023
EA Vancouver	NHL 24	Electronic Arts	October 2023
EA Vancouver , EA Romania	EA Sports FC 24	Electronic Arts	September 2023
EA Tiburon	Madden NFL 24	Electronic Arts	August 2023
EA Tiburon	EA Sports PGA Tour	Electronic Arts	April 2023
Motive	Dead Space	Electronic Arts	January 2023
Criterion Games	Need for Speed Unbound	Electronic Arts	November 2022
EA Vancouver	NHL 23	Electronic Arts	October 2022
EA Vancouver , EA Romania	FIFA 23	Electronic Arts	September 2022
EA Tiburon	Madden NFL 23	Electronic Arts	August 2022
EA DICE , Criterion Games , EA Gothenburg , Ripple Effect Studios	Battlefield 2042	Electronic Arts	November 2021
EA Vancouver	NHL 22	Electronic Arts	October 2021
EA Vancouver , EA Romania	FIFA 22	Electronic Arts	September 2021
EA Tiburon	Madden NFL 22	Electronic Arts	August 2021
EA Vancouver , EA Romania	FIFA 21	Electronic Arts	October 2020
Motive	Star Wars: Squadrons	Electronic Arts	October 2020
EA Tiburon	Madden NFL 21	Electronic Arts	August 2020
Ghost Games , Criterion Games	Need for Speed Heat	Electronic Arts	November 2019
PopCap Games	Plants vs. Zombies: Battle for Neighborville	Electronic Arts	October 2019
EA Vancouver , EA Romania	FIFA 20	Electronic Arts	September 2019
EA Tiburon	Madden NFL 20	Electronic Arts	August 2019
EA DICE	Battlefield V	Electronic Arts	November 2018 <i>(post-release)</i>
EA DICE	Star Wars Battlefront II	Electronic Arts	November 2017 <i>(post-release)</i>

Languages

Dutch	Mother tongue
English	Fluent speaker and writer
French	Moderate speaker and writer
Swedish	Basic speaker and writer

Past projects *(selected)*

 MAGE v0	Rendering engine (C++17, D3D11, HLSL)
 MAGE v1 (WIP)	Improved and extended remake built from the ground up (C++23, D3D12, HLSL)

Teaching assistantship

2016 - 2018	Computer Graphics: Project	[B-KUL-H07Z5A]
2016 - 2017	Capita Selecta Computer Science: Man Machine Interface	[B-KUL-H05N2A]
2016 - 2017	Problem Solving and Engineering Design, Part 3	[B-KUL-H01D4B]
2015 - 2016	Problem Solving and Engineering Design: Computer Science	[B-KUL-H01Q3C]