Curriculum Vitae ir. Matthias **Moulin**

Personalia

Nationality:	Belgian	Birthdate:	15 January 1992
Mobile:	▮▮▮▮▮▮▮	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 – Remote
	Rendering Software Engineer III – Image Quality (Frostbite Rendering)
Jun 2020 – Nov 2023	Frostbite, EA Digital Illusions CE AB (DICE), Stockholm, Sweden – Remote
	Rendering Software Engineer II – Image Quality (Frostbite Rendering)
	• **Technologies**: *DRS, GI Material, Shader Graph/Expression Shader pipelines*
Feb 2019 – May 2020	Frostbite, EA Digital Illusions CE AB (DICE), Stockholm, Sweden – On-site
	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 – Hybrid
	Rendering Research Engineer – Research Foundation - Flanders (FWO)
	• **Fellowship**: *PhD Fellowship fundamental research*
Oct 2015 – Sep 2016	Department of Computer Science, KU Leuven, Leuven, Belgium – Hybrid
	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, 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
Full Circle	Skate	Electronic Arts	*Announced*
BioWare	Dragon Age: The Veilguard	Electronic Arts	Oct 2024
EA Vancouver	NHL 25	Electronic Arts	Oct 2024
EA Vancouver, EA Romania	EA Sports FC 25	Electronic Arts	Sep 2024
EA Tiburon	Madden NFL 25	Electronic Arts	Aug 2024
EA Tiburon	EA Sports College Football 25	Electronic Arts	Jul 2024
EA Vancouver	EA Sports UFC 5	Electronic Arts	Oct 2023
EA Vancouver	NHL 24	Electronic Arts	Oct 2023
EA Vancouver, EA Romania	EA Sports FC 24	Electronic Arts	Sep 2023
EA Tiburon	Madden NFL 24	Electronic Arts	Aug 2023
EA Tiburon	EA Sports PGA Tour	Electronic Arts	Apr 2023
Motive	Dead Space	Electronic Arts	Jan 2023
Criterion Games	Need for Speed Unbound	Electronic Arts	Nov 2022
EA Vancouver	NHL 23	Electronic Arts	Oct 2022
EA Vancouver, EA Romania	FIFA 23	Electronic Arts	Sep 2022
EA Tiburon	Madden NFL 23	Electronic Arts	Aug 2022
EA DICE, Criterion Games, EA Gothenburg, Ripple Effect Studios	Battlefield 2042	Electronic Arts	Nov 2021
EA Vancouver	NHL 22	Electronic Arts	Oct 2021
EA Vancouver, EA Romania	FIFA 22	Electronic Arts	Sep 2021
EA Tiburon	Madden NFL 22	Electronic Arts	Aug 2021
EA Vancouver, EA Romania	FIFA 21	Electronic Arts	Oct 2020
Motive	Star Wars: Squadrons	Electronic Arts	Oct 2020
EA Tiburon	Madden NFL 21	Electronic Arts	Aug 2020
Ghost Games, Criterion Games	Need for Speed Heat	Electronic Arts	Nov 2019
PopCap Games	Plants vs. Zombies: Battle for Neighborville	Electronic Arts	Oct 2019
EA Vancouver, EA Romania	FIFA 20	Electronic Arts	Sep 2019
EA Tiburon	Madden NFL 20	Electronic Arts	Aug 2019
EA DICE	Battlefield V	Electronic Arts	Nov 2018 *(post-release)*
EA DICE	Star Wars Battlefront II	Electronic Arts	Nov 2017 *(post-release)*

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]