

# Curriculum Vitae ir. Matthias Moulin

## Personalia

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Nationality: Belgian Birthdate: 15 January 1992  
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 Github <https://github.com/matt77hias> – <https://matt77hias.github.io/>

## Experience (in reverse chronological order)

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Oct 2025 – Present	<u>Advanced Micro Devices</u> (AMD), Brussels, Belgium – Remote MTS Rendering Software Development Engineer – GPU and Gaming Team • <b>Technologies:</b>
Dec 2023 – Jun 2025	<u>Frostbite</u> , <u>EA Digital Illusions CE AB</u> (DICE), Stockholm, Sweden – Remote Rendering Software Engineer III – Image Quality (Frostbite Rendering) • <b>Technologies++: Core Render Passes, Gbuffer Layouts</b>
Jun 2020 – Nov 2023	<u>Frostbite</u> , <u>EA Digital Illusions CE AB</u> (DICE), Stockholm, Sweden – Remote Rendering Software Engineer II – Image Quality (Frostbite Rendering) • <b>Technologies++: DRS, GI Material, Shader Graphs/Expression Shaders</b>
Feb 2019 – May 2020	<u>Frostbite</u> , <u>EA Digital Illusions CE AB</u> (DICE), Stockholm, Sweden – On-site Rendering Software Engineer I – Image Quality (Frostbite Rendering) • <b>Technologies: CPU/GPU Probes, Enlighten, Flux, GI Live Preview, PBR Materials</b>
Oct 2016 – Feb 2019	<u>Department of Computer Science</u> , <u>KU Leuven</u> , Leuven, Belgium – Hybrid Rendering Research Engineer – <u>Research Foundation – Flanders</u> (FWO) • <b>Fellowship: PhD Fellowship fundamental research</b>
Oct 2015 – Sep 2016	<u>Department of Computer Science</u> , <u>KU Leuven</u> , Leuven, Belgium – Hybrid Rendering Research Engineer – <u>Computer Graphics Research Group</u> (KU Leuven)

## Education (in reverse chronological order)

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

## Publications (in reverse chronological order)

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- 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 (*selected*)

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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*)

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Developer(s)	Game	Publisher	Release Date
<a href="#">EA DICE</a> , <a href="#">Criterion Games</a> , <a href="#">Motive</a> , <a href="#">Ripple Effect Studios</a>	<a href="#">Battlefield 6</a>	<a href="#">Electronic Arts</a>	Oct 2025
<a href="#">EA Vancouver</a> , <a href="#">EA Romania</a>	<a href="#">EA Sports FC 26</a>	<a href="#">Electronic Arts</a>	Sep 2025
<a href="#">Full Circle</a>	<a href="#">Skate</a>	<a href="#">Electronic Arts</a>	Sep 2025
<a href="#">EA Vancouver</a>	<a href="#">NHL 26</a>	<a href="#">Electronic Arts</a>	Sep 2025
<a href="#">EA Tiburon</a>	<a href="#">Madden NFL 26</a>	<a href="#">Electronic Arts</a>	Aug 2025
<a href="#">EA Tiburon</a>	<a href="#">EA Sports College Football 26</a>	<a href="#">Electronic Arts</a>	Jul 2025
<a href="#">BioWare</a>	<a href="#">Dragon Age: The Veilguard</a>	<a href="#">Electronic Arts</a>	Oct 2024
<a href="#">EA Vancouver</a>	<a href="#">NHL 25</a>	<a href="#">Electronic Arts</a>	Oct 2024
<a href="#">EA Vancouver</a> , <a href="#">EA Romania</a>	<a href="#">EA Sports FC 25</a>	<a href="#">Electronic Arts</a>	Sep 2024
<a href="#">EA Tiburon</a>	<a href="#">Madden NFL 25</a>	<a href="#">Electronic Arts</a>	Aug 2024
<a href="#">EA Tiburon</a>	<a href="#">EA Sports College Football 25</a>	<a href="#">Electronic Arts</a>	Jul 2024
<a href="#">EA Vancouver</a>	<a href="#">EA Sports UFC 5</a>	<a href="#">Electronic Arts</a>	Oct 2023
<a href="#">EA Vancouver</a>	<a href="#">NHL 24</a>	<a href="#">Electronic Arts</a>	Oct 2023
<a href="#">EA Vancouver</a> , <a href="#">EA Romania</a>	<a href="#">EA Sports FC 24</a>	<a href="#">Electronic Arts</a>	Sep 2023
<a href="#">EA Tiburon</a>	<a href="#">Madden NFL 24</a>	<a href="#">Electronic Arts</a>	Aug 2023
<a href="#">EA Tiburon</a>	<a href="#">EA Sports PGA Tour</a>	<a href="#">Electronic Arts</a>	Apr 2023
<a href="#">Motive</a>	<a href="#">Dead Space</a>	<a href="#">Electronic Arts</a>	Jan 2023
<a href="#">Criterion Games</a>	<a href="#">Need for Speed Unbound</a>	<a href="#">Electronic Arts</a>	Nov 2022
<a href="#">EA Vancouver</a>	<a href="#">NHL 23</a>	<a href="#">Electronic Arts</a>	Oct 2022
<a href="#">EA Vancouver</a> , <a href="#">EA Romania</a>	<a href="#">FIFA 23</a>	<a href="#">Electronic Arts</a>	Sep 2022
<a href="#">EA Tiburon</a>	<a href="#">Madden NFL 23</a>	<a href="#">Electronic Arts</a>	Aug 2022
<a href="#">EA DICE</a> , <a href="#">Criterion Games</a> , <a href="#">EA Gothenburg</a> , <a href="#">Ripple Effect Studios</a>	<a href="#">Battlefield 2042</a>	<a href="#">Electronic Arts</a>	Nov 2021
<a href="#">EA Vancouver</a>	<a href="#">NHL 22</a>	<a href="#">Electronic Arts</a>	Oct 2021
<a href="#">EA Vancouver</a> , <a href="#">EA Romania</a>	<a href="#">FIFA 22</a>	<a href="#">Electronic Arts</a>	Sep 2021
<a href="#">EA Tiburon</a>	<a href="#">Madden NFL 22</a>	<a href="#">Electronic Arts</a>	Aug 2021
<a href="#">EA Vancouver</a> , <a href="#">EA Romania</a>	<a href="#">FIFA 21</a>	<a href="#">Electronic Arts</a>	Oct 2020
<a href="#">Motive</a>	<a href="#">Star Wars: Squadrons</a>	<a href="#">Electronic Arts</a>	Oct 2020
<a href="#">EA Tiburon</a>	<a href="#">Madden NFL 21</a>	<a href="#">Electronic Arts</a>	Aug 2020
<a href="#">Ghost Games</a> , <a href="#">Criterion Games</a>	<a href="#">Need for Speed Heat</a>	<a href="#">Electronic Arts</a>	Nov 2019
<a href="#">PopCap Games</a>	<a href="#">Plants vs. Zombies: Battle for Neighborville</a>	<a href="#">Electronic Arts</a>	Oct 2019
<a href="#">EA Vancouver</a> , <a href="#">EA Romania</a>	<a href="#">FIFA 20</a>	<a href="#">Electronic Arts</a>	Sep 2019
<a href="#">EA Tiburon</a>	<a href="#">Madden NFL 20</a>	<a href="#">Electronic Arts</a>	Aug 2019
<a href="#">EA DICE</a>	<a href="#">Battlefield V</a>	<a href="#">Electronic Arts</a>	Nov 2018
<a href="#">EA DICE</a>	<a href="#">Star Wars Battlefront II</a>	<a href="#">Electronic Arts</a>	(post-release) Nov 2017 (post-release)

## Past projects (*selected*)

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