Simon RODRIGUEZ

France
Web: simonrodriguez.fr — Born in 1993, french nationality
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Interests

Real-time rendering, procedural generation, graphics programming, visual effects.

Professional experience

since 2020 **Rendering engineer** at **Spiders Games**
Graphics features, optimization and maintenance for the in-house 3D game engine. DX12, Xbox Series and PS5 support. Lighting models (sheen, anisotropy, scattering), SSR and cubemaps integration, lighting pipeline, order-independent transparency for particles, DLSS integration. Games: *Steelrising* (2022), *GreedFall 2* (TBD)

2016-2020 **PhD thesis** in the **GraphDeco research group, Inria, UCA University**
Thesis in computer graphics. Topic: "Image-Based Methods for View-Dependent Effects in Real and Synthetic Scenes", supervisor: *George Drettakis*.

2016-2018 **Teaching assistant** at **Polytech Nice engineering school**
Provided lectures, exercises and exams for *Algorithmic & data structures* (1st year bachelor) and *Software engineering* (3rd year bachelor) courses. Evaluated programming semester projects (1st year master).

2016 **Master thesis intern** at **Dassault Systèmes**
6 months internship. Exploratory R&D in the *Augmented Realities* team.
Topic: *"*Template-based Shapes Synthesis and Recombination*", supervisor: Alexandru State*.

Education

2013-2016 **Ecole Centrale Paris, France**
Engineering degree in Applied Mathematics and Data Science. *Courses: computer graphics, machine learning, computer vision, probabilities, statistics, algorithmic, object oriented programming.*
In parallel: **ENS Cachan**, Master M2 "Mathematics, Computer Vision, Machine Learning" (MVA).

2015 **Ecole Polytechnique Fédérale de Lausanne, Switzerland**
Exchange semester, Computer science faculty. *Courses taken : Big Data, Computer Graphics, Digital 3D Geometry Processing, Computer Vision, Mobile Networks.*

2011-2013 **Lycée Saint-Louis, Paris, France**
French "classes préparatoires". Intensive foundation courses preparing to the most selective French scientific institutions. Specialization in Mathematics, Physics, Computer Science.

2011 **Lycée Saint-Charles, Athis-Mons, France**
Scientific "Baccalauréat" (French final high school exam) with honors.

Languages

French: native speaker - **English:** TOEFL ITP 600 points - **German:** B1 certification (DSD Level I)

Programming skills

Languages: C++, HLSL, GLSL, Swift, Objective-C, Java, Python, Bash, HTML, CSS
Frameworks & tools: OpenGL, Vulkan, DX12, Visual Studio, Renderdoc, PIX, Xbox and Playstation SDKs, Xcode, OpenCV, LaTeX, Photoshop, Git, Svn, Premiere, Illustrator, Microsoft Office

Personal information

Reading, bouldering, gaming, drawing.
Involvement in engineering school community life: graphic design and book clubs, yearly musical event.

Projects: *Rendu* (Vulkan rendering framework), *MIDIVisualizer* (MIDI viewer with visual effects), *Here Be Dragons* (rendering APIs and hardwares comparison). More projects at github.com/kosua20

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Publications

2018 ***Exploiting Repetitions for Image-Based Rendering of Facades***,
S. Rodriguez, A. Bousseau, F. Durand, G. Drettakis. In Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering), 37(4). Talk presented at EGSR 2018
http://www-sop.inria.fr/reves/Basilic/2018/RBDD18/

2020 ***Image-Based Rendering of Cars using Semantic Labels and Approximate Reflection Flow***,
S. Rodriguez, S. Prakash, P. Hedman, G. Drettakis. In Proceedings of the ACM on Computer Graphics and Interactive Techniques, 3(1). Talk presented at I3D 2020.
http://www-sop.inria.fr/reves/Basilic/2020/RPHD20/

2020 ***Glossy Probe Reprojection for Interactive Global Illumination***,
S. Rodriguez, T. Leimkühler, S. Prakash, C. Wyman, P. Shirley, G. Drettakis. In ACM Transactions on Graphics (Vol. 39(6)). Talk presented at SIGGRAPH Asia 2020.
http://www-sop.inria.fr/reves/Basilic/2020/RLPWSD20/

2020 ***Image-Based Methods for View-Dependent Effects in Real and Synthetic scenes***
Simon Rodriguez, 2020, doctoral thesis from Université Côte d'Azur, under the supervision of George Drettakis in the GraphDeco team at Inria.
http://www-sop.inria.fr/reves/Basilic/2020/Rod20/