Alexandre Bléron

Software Engineer · PhD in Computer Graphics

Skills

Rust, C++
Shader programming (GLSL, Slang)
Low-level GPU APIs (Vulkan)
Qt+QML for GUI development
C#, Javascript, Lua

Languages

French — Native
English — Fluent

Interests

I like tinkering with electronics.
I am currently learning piano.
I enjoy reading science fiction.

Links

linkedin.com/in/ableron
github.com/ennis
ennis.github.io

Contact

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About Me

I can write code and do research, with a specialization in computer graphics.
My interests revolve mostly around computer graphics, and more specifically non-photorealistic – or *expressive* – rendering: finding new ways to render 3D scenes that give more freedom to artists, and allow visual styles that deviate significantly from the usual photorealistic goal of computer graphics. In doing so, I also gained experience in working with low-level graphics APIs and performance profiling tools.

Professional Experience

2021 - Ongoing **R&D Engineer**
Left Angle — Grenoble, France
Developed features for Autograph, a cross-platform VFX+compositing+motion design application (Windows/macOS/Linux)
- Developed the tool for text rendering and animation
- Integrated Filament (google.github.io/filament) for real-time 3D rendering in Autograph, as a USD Hydra render delegate
- Developed various visual effects (blur, color keying, tiling, etc.)
- Developed an OpenFX plugin for integrating Autograph in other applications (Autograph Live Link)
- Set up automatic visual regression testing for the renderer
- Co-supervised a PhD student within the company

2019 - 2021 **Lead Developer**
Artineering — Tallinn, Estonia
- Developed real-time (in-viewport) stylized rendering pipelines for Autodesk Maya, in collaboration with artists & animation studios
  - Warped edges, Hatching/stippling, and "paper cutout" styles
- Prototyped a real-time hair & fur rendering pipeline for an animation studio client
- Prototyped a graph-based compositing GUI for the company's Maya plugin
- Assisted in the creation of the company

Education

2015 - 2018 **PhD in Computer Graphics**
Université Grenoble Alpes — Grenoble, France
Thesis: **Real-time stylized rendering of 3D animated scenes**
- Proposed a method for the temporally-coherent stylization of animated 3D scenes with screen-space image filters, inspired by digital painting techniques and appearances
- Developed a tool to explore and create stylized shading models on 3D objects

2012 - 2015 **Master's degree in Computer Science and Applied Mathematics**
Grenoble INP - Ensimag — Grenoble, France
Specialization in Graphics, Computer Vision and Robotics

Personal Projects

- Stroke-based rendering experiment: a small application that renders 3D models made of many 3D strokes, using Vulkan with mesh shaders
- GUI framework in Rust
- Vulkan API wrapper for synchronization and resource management (used in personal projects)

Publications

2025 Farhat, A., **Bléron, A.**, Vergne, R. and Thollot, J.. Motion ribbons: Parametrized surfaces for depicting motion effects. *Computers & Graphics 129*, 104227 (2025). doi: *10.1016/j.cag.2025.104227*

2018 **Bléron, A.**, Vergne, R., Hurtut, T. and Thollot, J.. Motion-coherent stylization with screen-space image filters. in *Expressive '18 - The Joint Symposium on Computational Aesthetics and Sketch Based Interfaces and Modeling and Non-Photorealistic Animation and Rendering* 1–13 (2018). doi: *10.1145/3229147.3229163*

Bléron, A., Vergne, R., Hurtut, T. and Thollot, J.. A workflow for designing stylized shading effects (Research Report, Inria Grenoble Rhône-Alpes). (2018).