Vincent Tavernier

Systems and computer graphics engineer

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Academic and professional experience

Postgraduate education – Université Grenoble Alpes

2020 – 2021 **Temporary Lecturer and Research Assistant**.

Summary: Teaching at university and continuing Ph.D preparation (see below).

Teaching: Advanced databases (9h) — Relational databases and applications (84h) — Software development basics: modularization, tests (67.5h) — Automata and languages (30h)

2017 – 2020 **Ph.D preparation: controlling the appearance of stochastic procedural textures**.

Summary: Development of optimized procedural texture generation methods and applications in additive manufacturing.

Responsibilities: System administration of the team's computers — Participation in technical and scientific presentations — Organization of the annual team seminar

Technologies: Rust, C++17, CMake, OpenGL 4, CUDA, Julia, Mathematica, Ansible, Docker

Teaching: Software architecture (41h) — Advanced databases (26h) — Algorithms and imperative programming (80h)

Graduate education – Grenoble INP – Ensimag

2014 – 2017 **Engineering diploma in applied mathematics and computer science**.
Information systems engineering major

2017 **Master internship: Studying artifacts arising from procedural textures given paradoxical requirements**.
Laboratoire Jean Kuntzmann — MAVERICK team

Summary: Study of the properties and resulting artifacts of various procedural texturing methods under paradoxical requirements.

Technologies: C++14, CMake, OpenGL 4

Summer 2016 **Engineering internship: Translation system for software products**.
Eaton

Summary: Evaluation and setup of a new translation management solution. Integration of the new solution into existing projects.

Technologies: Python, SQL, Perl, JavaScript

2016 **Introduction to do research: Rendering mountain panoramas**.
Laboratoire d'Informatique de Grenoble – IIHM team

Summary: Implementation of a texture mapping system for a research project about digitally rendering mountain panoramas in the style of Pierre Novat.
Technologies: Python, OpenGL

Undergraduate education

2012 – 2014 **PTSI Preparatory class**, *Lycée Rouvière*.

Skills

Languages	French (native), English (fluent, TOEFL iBT score: 106/120)
Programming languages	Rust, C, C++17, GLSL, Python, Julia, Mathematica, CMake, Make, Bash, Perl, Sed, AWK, SQL, Ruby, PHP, JavaScript, TypeScript, C#, Java, Ada
Software	Version control systems (Git) — GPU (CUDA) and real-time computing, optimization (measuring, profiling, cache, etc.) — Graphical APIs (OpenGL 4) — Distributed computing (OpenMPI) — Operating systems (Linux, Windows) — Testing and validation (unit, integration, fuzzing, coverage, etc.) — Continuous integration (GitLab CI, GitHub Actions, etc.) — System administration and deployment (Ansible, Docker, Linux, Cloud, Networks, Virtualization, Debian packaging etc.) — Open-source development model and licences

Publications

International conference with review committee

2020 **Freely orientable microstructures for designing deformable 3D prints**.
SIGGRAPH Asia 2020 – ACM Transactions on Graphics
Thibault Tricard, Vincent Tavernier, Cédric Zanni, Jonàs Martínez, Pierre-Alexandre Hugron,Fabrice Neyret, Sylvain Lefebvre
https://hal.inria.fr/hal-02524371v3

2019 **Making Gabor Noise Fast and Normalized**.
Eurographics Short Papers
Vincent Tavernier, Fabrice Neyret, Romain Vergne, Joëlle Thollot
https://hal.inria.fr/hal-02104389

National conference

2018 **Gabor Noise Revisited**.
j·FIG - Journées Françaises d'Informatique Graphique
Vincent Tavernier, Fabrice Neyret, Romain Vergne, Joëlle Thollot
https://hal.archives-ouvertes.fr/hal-01926451

Training courses attended

Technical **Introduction to parallel computing**, 36h.
Notions in distributed computing, OpenMPI, OpenMP and datacenters.

Introduction to the Julia language, 8h.
Getting started with Julia for scientific computing.

Pedagogy **Managing student behavior in class**, 21h.
Relation between pedagogy and behavior, methods in class management.

Personal projects

Since 2021 **Writing articles for my blog**, *Topics: programming, electronics, etc.*.
https://vtavernier.github.io/posts/

Since 2020 **glslt**, *Function template compiler for GLSL*.
https://github.com/vtavernier/glslt

Since 2020 **glsl-lang**, *LALR parser for GLSL*.
https://github.com/vtavernier/glsl-lang

And many others: https://vtavernier.github.io/projects/