

Baptiste Girardin

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EDUCATION

Télécom Paris • Engineering School (MSc of Engineering) ·

Sep. 2024 - Now

Institut Polytechnique de Paris • Top French engineering school

Tracks: 3D & Interactive Systems, Computer Vision & Artificial Intelligence

Preparatory Classes for French Grandes Ecoles (MPSI/MP) ·

2022 - 2024

Lycée Camille Guérin • Poitiers

- Ranked top of class both years.
- Intensive program in Mathematics, Physics, Computer Science.

PROJECTS

Spectral & RGB Path Tracer ·

2026 - Now

github.com/SlyZ1/Path-Tracer

Interactive physically based renderer built with OpenGL and C++.

- MIS, NEE, BVH with SAH heuristic, EON diffuse, VNDF sampling, artistic fresnel for conductors.
- Physically based hair/fur scattering (Chiang et al.), artist-friendly roughnesses.
- Spectral rendering, Hero-wavelength sampling, dielectric dispersion, thin-film iridescence.
- (In progress) Polarization with Stokes-Mueller calculus.

PIC-FLIP GPU Solver ·

2026

github.com/SlyZ1/Fluid-Sim

PIC-FLIP solver on GPU with OpenGL. Hand-made GPU conjugate gradient solver for sparse matrices. Used in the incompressibility step.

Soft & Rigid Body Physics Simulation ·

2026

github.com/SlyZ1/Physics-Based-Bodies

Group project in Godot simulating real time soft-rigid body interactions using spring physics and soft constraints.

Real-Time Smoke Simulation & Rendering ·

2025

github.com/artishow-smoke/Smoke

Group project in Godot (C# & HLSL). Fluid simulation via LBM and ray-marching for single scattering.

Face Edition by Latent Code Manipulation ·

2026

github.com/SlyZ1/Latent-Space-Faces

Group project experimenting with StyleGAN2-ADA pre-trained models to generate and manipulate photorealistic faces (Python, PyTorch).

Echo Depths • Ludum Dare 57, ranked in the top 50 / 3,000 entries ·

2025

github.com/Protocol-Juice/echo-depths

48-hour game jam entry built on Unity with two teammates. Full game design, art, and programming.

EXPERIENCE

Industrial Internship ·

Jul. - Aug. 2025

SKF • Saint-Cyr-sur-Loire

- Reorganized and restructured digital file systems across departments
- Automated email workflows to streamline internal communications

Board Member - La Scène (Live Music Student Association) ·

2025 - 2026

Télécom Paris

- Designed promotional materials (event posters, merchandise) and managed ordering and sales
- Organized 6 music festivals (300+ attendees)
- Performed in a jazz band at association events

SKILLS

Languages: C++, C#, C, Python, PyTorch, GLSL / HLSL

Tools & Engines: OpenGL, Unity, Godot, Blender, Git, LaTeX, Typst

Human languages:

French (native), English (C2)

INTERESTS

Computer graphics • Piano & jazz improvisation • Game development • Rock climbing • Graphic design