Pierre Mézières

PhD in computer graphics

Latest International publications

- Recursive analytic spherical harmonics gradient for spherical light
Pierre Mézières, Nicolas Mellado, Loïc Barthe, Mathias Paulin
In Computer graphics Forum (Presented at Eurographics 2022)

More information on pierremezieres.github.io

Work experience

Since July 2022

Postdocal researcher / INRIA Talence
Work on La Coupole with Romain Pacanowski :
Reconstruction of SV-BRDF (**S**patial **V**arying **B**idirection **R**eflectance **D**istribution **F**unction) from many photos (several terabytes).

Education

From 2019 to 2022

PhD thesis / STORM - IRIT / Université Paul Sabatier Toulouse
- Lighting modeling and simulation for real-time spherical harmonics based rendering.
- Advisor: Pr. Mathias Paulin.

From 2017 to 2019

Master Degree - Computer Graphics and Image Analysis / Université Paul Sabatier Toulouse
- Computer graphics: rendering, geometry, animation.
- Image analysis and processing.
- Major of promotion. I received the CIMI excellence scholarships for both years.

From 2014 to 2017

Licence Degree in computer science / Université Paul Sabatier Toulouse
- Graduated with honors.
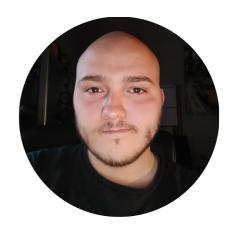- Major in the second and third year of the licence.

Portfolio

Design of a real-time 3D engine "Rogue" (C++/OpenGL)
- Creation from scratch started during my master's degree.
- Oriented efficient prototyping for rendering.
- Main development platform for my PhD thesis.

Moment Based Rendering (C++/OpenGL)
- Implementation and comparison of six methods to compute shadows and transparency in real-time to highlight the moment-based rendering.
- Graduation project realized in group.

See more on pierremezieres.github.io

📅 Date of birth 11/25/1996

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🔗 https:/pierremezieres.github.io/

Profile

PhD Candidate in computer graphics from IRIT (Institut de Recherche en Informatique de Toulouse). My PhD thesis focus on an efficient use of the spherical harmonics applied to real-time shading.

My current contributions cover direct and indirect lighting, including a little bit of differentiable rendering. An efficient use of the spherical harmonics for differentiable rendering sounds like a solid and promising avenue of research.

Research interests

- Efficient rendering
- Spherical harmonics
- Global illumination
- Differentiable rendering

Common use

- C / C++
- OpenGL
- glsl / hlsl
- Python

Other

Tennis, Bicycle, Piano, Drums, Saxophone, Video games...