Cyprien Plateau–Holleville

PhD Student in Computer Graphics

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PlathC

Education

2021 – 2024 **PhD student in Computer Graphics**, *XLIM Laboratory*, France
Efficient GPU computation of geometry for molecular surface

2018 – 2021 **Computer Science Engineering Diploma**, *University of Technology of Belfort-Montbeliard*, France
Image, Interaction, and Virtual Reality specialisation

2016 – 2018 **Diploma of Higher Education in Computer Science**, *University of Burgundy*, France

Work Experience

Mar 2024 – Apr 2024 **Research stay**, *University of Lyon*, LIRIS, Lyon (France)
Collaboration with Vincent Nivoliers for the design of a GPU framework for 3D Apollonius diagrams computation.

Apr 2023 – May 2023 **Research stay**, *University of Stuttgart*, Institute of applied mathematics and numerical simulations, Stuttgart (Germany)
Collaboration with Benjamin Stamm for the design of a mathematical framework targeting Apollonius diagrams.

Feb 2021 – Jul 2021 **End-of-study internship in Computer Science Engineering**, *University of Burgundy*, ImVia, Dijon (France)
GAN-based data augmentation for Inflammatory Bowel Diseases classification.

Papers

2024 *Plateau–Holleville C.*, Maria M., Mérillou S., Montes M., **Efficient GPU computation of large protein Solvent-Excluded Surface,** *IEEE Transactions on Visualization and Computer Graphics*

2023 *Plateau–Holleville C.*, Guionnière S., Boyer B., Jiménez-Garcia B., Levieux G., Mérillou S., Maria M., Montes M., **UDock2: interactive real-time multi-body protein–protein docking software,** *Bioinformatics*

2022 *Plateau–Holleville C.*, Benezeth Y., **Class-aware data augmentation by GAN specialisation to improve endoscopic images classification**, *2022 IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI)*

2021 *Plateau–Holleville C.*, Bonnot E., Gechter F. and Heyberger L., **French vital records data gathering and analysis through image processing and machine learning algorithms**, *Journal of Data Mining & Digital Humanities*

Projects

JFIG, *Shadertoy contest*
1st and 2nd prizes of the JFIG 2023, 2022 and 2021 Shadertoy contest, respectively with Toriversaire, Cannelés and JellyFish.

Vazteran
Vulkan abstraction library including wrappers for rasterization and raytracing pipelines.

Skills

Programming	C++, CUDA, GLSL, Python
Technologies	Vulkan, Opengl
Areas of interest	Rendering, GPGPU, Geometry, Machine Learning

English	BULATS : C1 level
German	Notions