

MARCO FREIRE

GENERAL INFORMATION

ADDRESS: 615 rue du Jardin Botanique, 54600 Villers-lès-Nancy, France
WEBSITE: mfremer.github.io
EMAIL: marco.freire@inria.fr

4th year PhD student in the MFX team at LORIA, supervised by Sylvain Lefebvre. I am interested in computer graphics, generative design and procedural methods. I am also interested in mathematics and programming language theory.

WORK EXPERIENCE

OCTOBER 2020 - PRESENT Ongoing PhD in Computer Science
Université de Lorraine, Nancy, France
at the MFX team under the supervision of Sylvain Lefebvre
Layout problems and generative design for shape modeling

FEBRUARY 2020 - JUNE 2020 Intern in the MAVERICK team in *Inria Rhône-Alpes* in Grenoble; under the supervision of Nicolas Holzschuch
Fast next-event estimation for path tracing

MAY 2019 - AUGUST 2019 Summer Intern in the COMPUTER GRAPHICS GROUP at *Charles University* in Prague; under the supervision of Jaroslav Křivánek
LTBench: An automatic benchmark for physically-based rendering

SEPTEMBER 2018 - MAY 2019 Research project during the year in collaboration with *Inria Rennes*; under the supervision of Steven Derrien and Simon Rokicki
GhostBusters: Mitigating Spectre attacks on a DBT-based processor

MAY 2018 - JULY 2018 Summer Intern in the HYBRID team in *Inria Rennes*; under the supervision of Anatole Lécuyer
Design of novel pseudo-haptic techniques for tablets

EDUCATION

OCTOBER 2020 - PRESENT Ongoing PhD in Computer Science
Université de Lorraine, Nancy, France
at the MFX team under the supervision of *Sylvain Lefebvre*
Layout problems and generative design for shape modeling

SEPTEMBER 2018 - JULY 2020 Research Master's in Computer Science & Magistère in Computer Science
Université de Rennes, École normale supérieure de Rennes, Rennes, France

SEPTEMBER 2017 - JUNE 2018 Bachelor Degree in Computer Science
Université de Rennes, École normale supérieure de Rennes, Rennes, France

SEPTEMBER 2015 - JUNE 2017 CPGE MPSI/MP* **Lycée du Parc**, Lyon, France
Two years of hard work in maths, physics and computer science in order to join the ENS.

SEPTEMBER 2012 - JUNE 2015 Scientific high school **Lycée Français de Madrid**, Madrid, Spain
In tenth grade: Biology option, in senior year: Mathematics option.
French *Baccalauréat* grade: 19.7/20.
Spanish *Bachillerato* grade: 9.9/10.

LANGUAGES

ENGLISH: Fluent (TOEFL (2019, C1 level), FCE (2013, B2 level))
FRENCH / SPANISH: Mother tongue
GERMAN: Basic knowledge

PUBLICATIONS

- 2023 Marco Freire, Manas Bhargava, Camille Schreck, Pierre-Alexandre Hugron, Bernd Bickel, Sylvain Lefebvre. PCBend: Light Up Your 3D Shapes With Foldable Circuit Boards. *In ACM Transactions on Graphics (SIGGRAPH 2023)*.
- 2022 Marco Freire, Samuel Hornus, Salim Perchy, Sylvain Lefebvre. Procedural bridges-and-pillars support generation. *In Eurographics 2022 (Short papers)*.

TEACHING

Teaching assistant

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|--|---|
| 2022 - 2023: ENSMN (L3), Nancy, France | Programming and Data Structures Operations Research Algorithms and Complexity |
| 2021 - 2022: FST (L1), Nancy, France | Digital Culture and Tools Algorithms and Programming 2 Design Methodology and Programming |
| 2020 - 2021: Telecom Nancy (M1), Nancy, France | Models and Algorithms Algorithms for Parallel and Distributed Systems |

COMMUNICATION

- Article on PCBend on Inria's website: [english version](#), [french version](#)
- PCBend mention in an article by L'Usine Nouvelle (in french): [Deux bras robotisés agissant de concert grâce à l'IA... Et 4 autres avancées scientifiques](#)