

# DIANA MARIN

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<https://di-marin.github.io/>

## EDUCATION

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**Technische Universität Wien**

September 2021 - February 2025

Doctoral Programme in Engineering Sciences

Thesis: Proximity-Based Point Cloud Reconstruction

**University of Leeds**

2017 - 2021

Master of Engineering and Bachelor of Science with Honours Class I

Computer Science with High Performance Graphics and Games Engineering

## PUBLICATIONS

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- “*SING: Stability-Incorporated Neighborhood Graph*” - **Diana Marin**, Amal Dev Parakkat, Stefan Ohrhallinger, Michael Wimmer, Steve Oudot, and Pooran Memari. In: SIGGRAPH Asia 2024 Conference Papers (SA '24). doi: 10.1145/3680528.3687674.
- “*Reconstructing Curves from Sparse Samples on Riemannian Manifolds*” - **Diana Marin**, Filippo Maggioli, Simone Melzi, Stefan Ohrhallinger and Michael Wimmer. In: Computer Graphics Forum (Symposium on Geometric Processing 2024). doi: 10.1111/cgf.15136.
- “*SIGDT: 2D Curve Reconstruction*” - **Diana Marin**, Stefan Ohrhallinger and Michael Wimmer. In: Computer Graphics Forum (Pacific Graphics 2022, Kyoto, Japan). doi: 10.1111/cgf.14654.
- “*Parameter-Free Connectivity for Point Clouds*” - **Diana Marin**, Stefan Ohrhallinger and Michael Wimmer. In Proceedings of the 19th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, 2024, Rome, Italy. doi: 10.5220/0012394900003660.
- “*Parameter-Free and Improved Connectivity for Point Clouds*” - **Diana Marin**, Stefan Ohrhallinger and Michael Wimmer. In: Eurographics 2023 - Posters. doi: 10.2312/egp.20231023.
- “*SIG-based Curve Reconstruction*” - **Diana Marin**, Stefan Ohrhallinger and Michael Wimmer. In: Eurographics 2022 - Posters. doi: 10.2312/egp.20221013.
- “*Visualizing Group Structure in Compound Graphs: the Current State, Lessons Learned, and Outstanding Opportunities*” - Henry Ehlers, **Diana Marin**, Hsiang-Yun Wu and Renata Raidou. In Proceedings of the 19th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, 2024, Rome, Italy. doi: 10.5220/0012431200003660.
- “*Distributed Surface Reconstruction*” - **Diana Marin**, Patrick Komon, Stefan Ohrhallinger and Michael Wimmer In: Eurographics 2024 - Posters. doi: 10.2312/egp.20241037.
- “*SCAN2BEAMS: Moving towards Automated Modelling and Analysis of Structural Industrial Building Stock*” - Julia Reisinger, **Diana Marin**, Philipp Ruffinatscha, Peter Kán. 2025 European Conference on Computing in Construction. doi: 10.35490/EC3.2025.194.
- “*SIGNificant Outlier Removal*” - **Diana Marin**, Filip Ilic, Stefan Ohrhallinger, Michael Wimmer. Computer Vision, Imaging and Computer Graphics Theory and Applications. VISIGRAPP 2024. Communications in Computer and Information Science, vol 2548. Springer, Cham. doi: 10.1007/978-3-032-07623-6-4.

- “*Projection-Based Structural Element Extraction from Point Clouds*” - **Diana Marin**, Julia Reisinger, Peter Kán, Hannes Kaufmann. GMP-X Proceedings 2026.
- “*PoleArina: Pole-Arina: A Privacy-Preserving Dataset and Benchmark for Static Pole Tricks*” - **Diana Marin**, Katharina Scheucher, Peter Kán. Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops 2026.

## EXPERIENCE

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### Technische Universität Wien

September 2024 - Present

*Postdoctoral Researcher - Virtual & Augmented Reality Group*

I am part of the *RE:STOCK* project, developing methods to extract finite element models of structural elements from real-life scans, that can be directly used with structural analysis tools, enabling the reuse of industrial buildings and vertical expansions. I am also part of the *PostDisaster* project, where we use Gaussian Splatting to quickly reconstruct large areas for efficient post-disaster analysis and planning.

### École Polytechnique Paris

February 2024 - April 2024

*Visiting Researcher*

I was part of the Geomerix group, under Dr. Pooran Memari’s supervision. We developed a new neighborhood graph rooted in topological data analysis, which became a SIGGRAPH Asia paper.

### Technische Universität Wien

September 2021 - September 2024

*Project Assistant - Rendering Group*

I worked as part of the *Modeling the World at Scale* project, which is concerned with developing point cloud surface reconstruction algorithms that can be used in real-time applications, with a focus on real data and change detection. I contributed to the area of proximity-based connectivity and reconstruction.

### University of Leeds

October 2020 - March 2021

*Teaching Assistant*

As a teaching assistant for the third-year Computer Graphics module, I assisted students with personal tutorials to help them better understand graphics concepts, and I marked part of the coursework.

### University of Leeds

March 2020 - September 2020

*Research Assistant*

Under Dr. He Wang’s supervision, I worked on an interactive visualisation of laser-scanned data to make historical scenery available in museums in virtual reality, and a design tool that would help architects, using crowd simulation, assess the safety of environments in the current COVID-19 pandemic.

### University of Leeds

June 2019 - September 2019

*Summer Intern*

During the *Topological detection of meteorological vortices* internship, I worked under Dr. Hamish Carr’s supervision on finding a method to discover vortex rings in simulated meteorological data.

### MD Lab Games

2015 - 2021

*Co-Founder and Software Engineer*

We created VR, educational and business applications with different partners (Collider Visuals), for various clients (Mercedes Benz, Procter & Gamble, Alexander McQueen and Bottega Veneta).

## ACHIEVEMENTS

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- My masters' student's paper (Ole Siemers - Image Based Level-of-Detail Optimization for Large-Scale 3D Reconstruction) received the **best paper award** at CESC.
- Selected as **WiGRAPH Rising Star 2025** - a competitive award for outstanding early-career researchers.
- **KUWI Study Abroad Grant 2024** - 1500 EUR supporting the École Polytechnique research stay.
- **Doktorandinnen der Informatik ans Rednerpult 2022-2024** - 1000 EUR each year to present accepted work at a conference.
- **Cook Prize** in 2021 - awarded to the student from the School of Computing who achieves the best performance in the master's year.
- **Hutchinson Prize** in 2019 - awarded to the student from the School of Computing achieving the best performance in the second year.
- **Faculty of Engineering's Dean's List** in 2018 and 2019 - awarded to top 5% of 1<sup>st</sup> and 2<sup>nd</sup> year students in the Faculty of Engineering.
- Four-time recipient of the **Dean of Engineering Scholarship** - awarded to students achieving A\*AA at A-level or equivalent and maintaining an average above 60% in each year.
- **First Place** - FinTech Hackathon, University of Leeds Hackathon and Leeds Hackathon (2018, 2019).
- **Gold Medal Infomatrix**, National and International Level, Romania.

## CONFERENCE AND EVENT ORGANISATION

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- **International Program Committee Member** for the VMV 2025, ICVR 2026.
- **Reviewer for multiple conferences**, including: Eurographics, 3DV, VMV, CAGD, Graph Drawing.
- **Organizer and International Program Committee Member** for the Central European Seminar on Computer Graphics - CESC (2022 - present).
- **Organizer of game development events**: yearly jam sites for the Global Game Jam (2018 - present), and one instance of Game Jam Plus.

## TEACHING

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- Programming Techniques for Visual Computing, *TU Wien*, 2024-2025.
- Computer Graphics Lab, *TU Wien*, 2022-2023.
- Teaching Assistant for Computer Graphics, *University of Leeds*, 2021.
- Supervised multiple students with projects, Bachelor's theses, Master's theses, and publications.