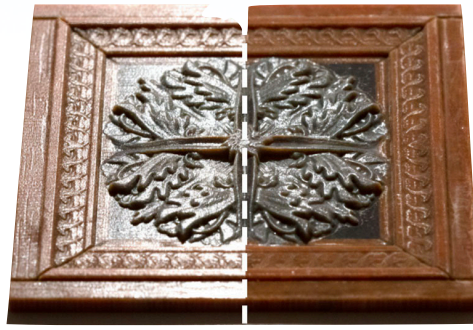


Ph.D. positions in Switzerland

Computer Graphics and Computational Fabrication



The Perception, Display, and Fabrication Group at the Università della Svizzera italiana (USI) in Switzerland is looking for Ph.D. candidates to work at the intersection of computer graphics, fabrication, and perception. The project is funded by the Swiss National Science Foundation and will be carried out by two Ph.D. students in a collaboration with external partners at the MIT and the University of Toronto and support of other group members.

Research area and goals: Current multi-material 3D printers can deposit different materials with extremely high precision, creating objects with unseen geometrical details and mechanical properties. These new capabilities make additive manufacturing a key enabler for many applications. At the same time, the fascinating capabilities open up many computational challenges. The goal of this project is to develop new computational fabrication techniques which will drive future 3D printers to control how fabricated objects look and feel. Achieving this goal requires new algorithms for optimizing both the geometry of the objects as well as the distribution of 3D printing materials to produce complex appearance and tactile properties. For more information about our group and research activities see <https://www.pdf.inf.usi.ch/>.

Requirements:

- Master's degree in computer science or related field
- Interest, coursework, and research experience in at least one of the following areas: computer graphics, computational fabrication, appearance modeling and reproduction, haptics, geometry processing, machine learning
- Good math and programming skills
- Fluency in written and spoken English

We offer:

- Full-time position as a Ph.D. student at USI
- Collaboration and research visits at our research partners: **MIT** and **University of Toronto**
- Competitive salary in line with Swiss universities
- International, ambitious, and enthusiastic working environment
- Flexible starting date, but no later than spring 2022

Applications:

Applications should be sent to Piotr Didyk (piotr.didyk@usi.ch) with a subject starting with the phrase "[Application]" and include:

- CV & statement of purpose
- transcripts of records, both Bachelor and Master's degree
- complete list of publications, if any,
- contacts to 2-3 persons who agreed to write recommendation letters

Consideration of applicants will begin on June 1, 2021, and continue until the positions are filled.



Our group conducts research in the fields of computational display and computational fabrication. We combine computational techniques with human perception and hardware design to create display and fabrication techniques for the future. In what we do, we strive for excellent research publishing regularly at top computer graphics venues, such as ACM SIGGRAPH.

The Faculty of Informatics at the USI is defined by its passion for scientific research. Around 200 international researchers work in several areas with tens of millions of Swiss francs in competitive funding. Over the years, the Faculty has become one of the leading research centers in Switzerland and an international point of reference in many fields.

Lugano is a city in southern Switzerland. The unique mixture of Swiss and Italian culture together with surrounding the city lake and mountains create a unique atmosphere as well as endless opportunities for spending free time.