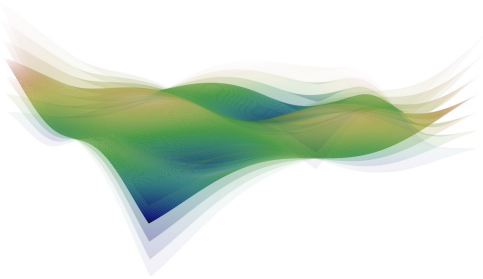
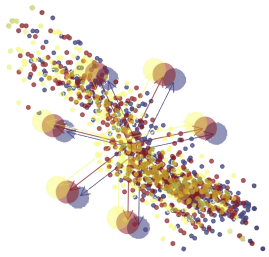
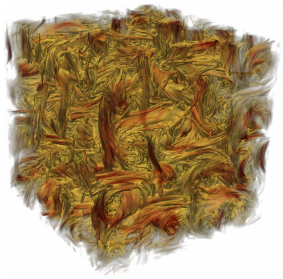
Research Assistant - PhD Student

in Computer Science (Data Visualization)

Job Summary

Open position for a PhD student in the area of multidimensional data analysis and visualization at the University of Zürich. This position is for a PhD student participating in a university funded project.

Description

The open position is for a research assistantship in a PhD program in computer science with a focus on interactive visualization and analysis of large scale multidimensional data. With the advent of ubiquitous parallel computing and graphics resources through many-core CPUs and GPUs, an increased emphasize is also put on parallel algorithms and computing, also in the context of real-time 3D graphics and interactive data visualization. This project is targeted at interactive visualization of large multidimensional datasets as well as (time-varying) scientific data, Increasingly we may also focus on in-time data processing and preparation for interactive visual data analysis in the context of specific application domains. Thus an interest in the task and data complexity of the targeted application is needed, and if possible collaboration with domain scientists and other institutions.

The project requires strong interest not only in visualization and 3D graphics, algorithms and data structures, but also in data processing methods, such as e.g. dimensionality reduction or data compression. Furthermore, good software programming skills are required as well as a strong willingness and ability to learn new mathematical methods and complex software frameworks or 3rd-party code is highly recommended, as the targeted research project also builds on previously developed code bases. Good C++, Python, Matlab and 3D graphics skills are needed.

The activities of the position not only include research and continuing education for PhD students, but also support in teaching and administrative tasks. The main goal is to conduct excellent research generating results which are published and presented in top international journals and conferences, and to eventually work towards achieving a PhD degree through the writing and defense of a doctoral dissertation.

Company

The University of Zurich (UZH) is a top internationally recognized research university with faculties in medicine, humanities, economics as well as mathematical and natural sciences. UZH is the largest university in Switzerland and regularly ranked among the top world leading research universities, e.g. according to the Academic Ranking of World Universities by Shanghai Jiao Tong University, and has recently been ranked 58th in the world (18th in Europe, 2nd in Switzerland) in 2017. The Department of Computer Science (Institut für Informatik – IFI) covers major computer science, software engineering and information management research and teaching topics, it offers BSc, MSc as well as PhD degrees in informatics/ computer science.

Workplace

The Visualization and MultiMedia Lab (VMML) and IFI, are located in the vibrant city of Zürich as part of the university's new Nord-Campus in Oerlikon in a renovated modern office building. The UZH Nord-Campus is conveniently located a short walk off the Max-Bill Platz, center of the new trendy living, shopping and business district in Oerlikon, as well as near the Oerlikon train, S-Bahn and tram stations. Also the Zürich international airport (ZRH) is reachable within minutes with public or private transportation.

Benefits

Research assistants, PhD students are remunerated according to local university regulations and standards from the funding agencies. Appointments will be made with respects to standard university rules, same applies for fringe benefits and vacation days. Appointments are expected to involve a full-time effort in research, teaching and administration.

It is the goal of UZH to offer an equal opportunity workplace environment and as part of this we strongly encourage women to apply. Specific benefits include flexible working hours, young scientist promotion opportunities, parental leave benefits, nursery services and care for dependents and much more.

Comment/web site for additional job details

For application and further information contact: Prof. Renato Pajarola, pajarola@ifi.uzh.ch

See also our research groups website at http://vmml.ifi.uzh.ch/.

Requirements

A Master degree in computer science or closely related area with a strong CS component from an internationally recognized research university is required to enter the PhD program of UZH. A prior focus on visualization or computer graphics, as well as good math skills and experience in programming are also required.

Specifically, prospective candidates are supposed to have an excellent background in computer science and programming, as well as practical experience in interactive visualization and 3D graphics. Significant exposure to applied mathematics and numerical linear algebra is explicit in this project, and prior experiences a significant plus. Strong interests in data analysis, numerical methods and collaboration with other researchers and scientists is of further importance.

Applications must include a detailed CV/resume, information of university level educational background, brief description of practical work and research experience in computer science, clear exposition of prior graphics or visualization experience, as well as a short statement of motivation and goals. Certified copies of transcripts, degrees and reference letters may eventually be required for admission to the PhD program.

Dates and More

- Entrance is estimated for first half of 2018 but subject to the successful evaluation of candidates
- Duration is expected to be about 4 to 5 years for PhD students

Contact

Prof. Dr. Renato Pajarola
Visualization and MultiMedia Lab
Department of Informatics, University of Zürich
Binzmühlestrasse 14
8050 Zürich
URL: http://vmml.ifi.uzh.ch/
email: pajarola@ifi.uzh.ch

VISUALIZATION AND MULTIMEDIA LAB