OPEN POSITION – SOFTWARE SCIENTIST/ENGINEER

An open position for a software scientist/engineer is available at EPFL (Lausanne, Switzerland) in the group of Prof. Nicola Marzari, supported by the H2020 Centre of Excellence MaX on "Materials Design at the eXascale", and in close collaboration with the MARVEL NCCR, the Swiss National Centre on "Computational Design and Discovery of Novel Materials".

Excellent candidates are sought with experience in the development of complex software architectures to support the development and deployment of AiiDA (Automated Interactive Infrastructure and Database for Computational Science, www.aiida.net), a framework that acts as a flexible and scalable infrastructure enabling high-throughput computational materials science. AiiDA is the main materials' informatics infrastructure underpinning the efforts of MaX and MARVEL; the software engineer would work with a team of 10+ PhDs/postdocs contributing to the AiiDA project, and a web engineer dedicated to the data sharing and dissemination portal.

Major duties and responsibilities

Maintain and develop the AiiDA Python infrastructure, including some or all of the following:

- software design and development of core functionality
- plugins for community codes and scientific workflows
- database storage, query efficiency, and scalability
- remote resource management (supercomputers and storage)
- REST APIs and GUI front-ends
- communicate with users for support, feedback, and strategic development

Skills and experience

- managing large codes/projects in a team (version control systems, issue trackers, unit test, continuous integration and other good software practices)
- knowledge of software design (UML, design patterns, agile development, etc.)
- database systems (SQL/NoSQL, triggers, transactions, …); handling large datasets
- at least one object-oriented programming language; Python an obvious plus
- web (HTML5, JavaScript, AJAX, jQuery) and app design would be a plus
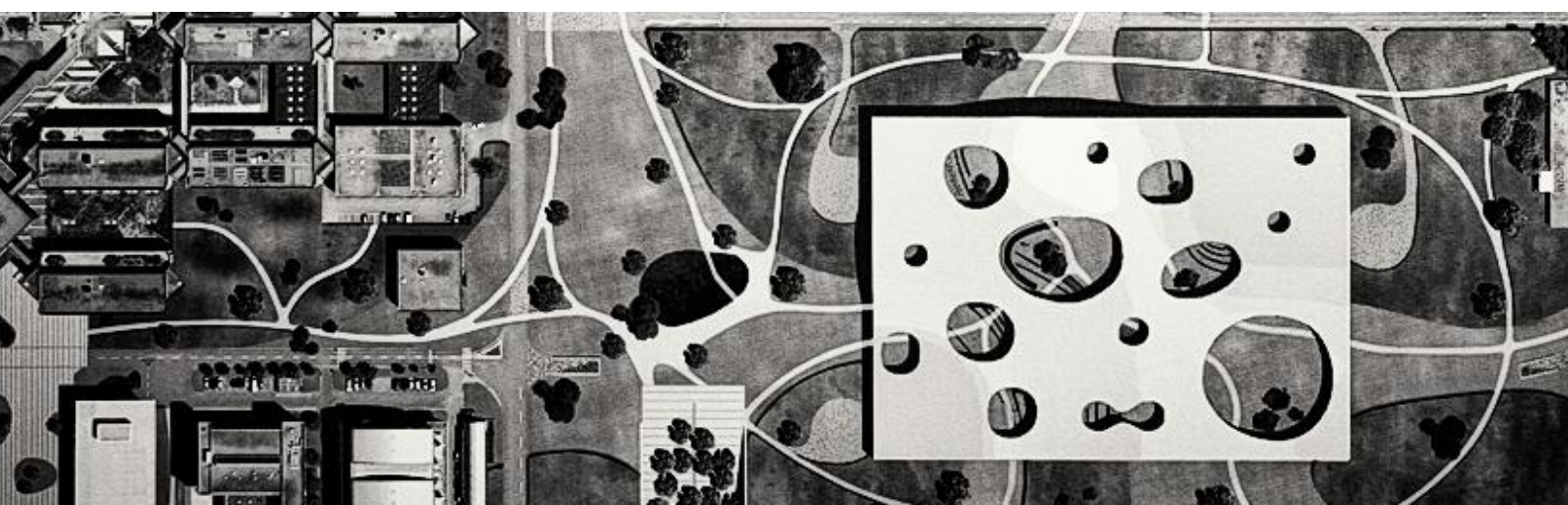
A scientific background (e.g. physical or engineering sciences) is welcome, but not required. For interested applicants, scientific research challenges can be incorporated in the effort.

Typical candidates will be independent, motivated and passionate, and have a MSc in computer science or comparable skills and experience; a PhD in science or engineering would be appropriate for research-oriented applicants. Preference will be given to candidates with previous experience in similar subjects.

The environment

The position will be hosted in the Laboratory for Theory and Simulation of Materials, led by Prof Nicola Marzari (see http://theossrv1.epfl.ch). EPFL offers a thriving intellectual environment, outstanding computational resources and facilities, and a very lively and active community. It is located in Lausanne, on the shores of Lake Geneva and in close proximity to the Swiss and French Alps.

Applications

Candidates should submit 1) a full CV, including contacts for at least two references, and 2) a cover letter of intent to both martin.uhrin@epfl.ch and nicola.marzari@epfl.ch, with "MARVEL Software Engineer" in the subject line (PDF attachments only). For best consideration applications should be submitted by **July 31st,** but the position will remain open until filled. Shortlisted candidates will be contacted individually for interviews, usually over Skype videoconferencing.

Appointments at EPFL are on a yearly renewable basis, typically for 2 to 4 years. Salaries for a freshly minted MSc start at ~75,000 CHF, and for a PhD at ~82,000 CHF.