



## Head of the Laboratory for Simulation and Modeling (LSM)

at the Paul Scherrer Institut (PSI)

and



## Professor of Applied & Computational Mathematics at the École polytechnique fédérale de Lausanne (EPFL)

The Paul Scherrer Institut (PSI) is Switzerland's largest research institute for natural and engineering sciences, and a world leading user laboratory. It develops and operates large-scale research infrastructures that require exceptionally high standards of knowhow and technology. With more than 2000 employees, it is an autonomous institution of the Swiss ETH domain.

EPFL is a leading university with a strong emphasis on basic science, engineering, and life sciences. Research and teaching within its School of Basic Sciences includes computational mathematics, high-performance computing, large-scale simulation, and scientific data analysis.

Together, we are jointly seeking to appoint a dynamic personality with strategic thinking abilities as Head of the Laboratory for Simulation and Modeling (LSM) at PSI, and as tenured Full Professor of Applied and Computational Mathematics at EPFL. This is a full-time position.

### **The Challenge**

As Head of the LSM, you will provide vision and strategic leadership in establishing LSM as PSI's central computational research and support unit for the simulation and modeling of complex dynamical systems, as they occur in advanced particle accelerators and innovative nuclear reactors, computational multiphase fluid dynamics in large-scale engineering applications, as well as modeling of catalytic and electrochemical processes in sustainable energy conversion and storage. An integral part of the LSM mission is supporting the design and interpretation of experiments conducted at the institute's research facilities, ranging from test rigs for renewable and nuclear energy applications to PSI's large-scale infrastructures, e.g. the Swiss Light Source (SLS), the Swiss Spallation Neutron Source (SINQ), and the Swiss Free Electron Laser (SwissFEL). Moreover, you will direct cutting-edge research performed at LSM with focus on (1) predictive and multi-scale simulation of complex multi-physics and time-dependent processes, and (2) the analysis of vastly growing amounts of experimental and simulation data, including the accompanying uncertainty and sensitivity quantification methods, and the latest developments in data science and machine learning techniques.

As Professor of Applied and Computational Mathematics at EPFL, you will provide strong academic leadership in applied/computational mathematics and simulation/data science with an emphasis on physics and engineering applications, and foster cooperation with other units at EPFL working in modeling, high-performance computing, and data science.

With the research activities being primarily located at PSI, demonstrated research excellence in the development and analysis of methods for data-intensive science and high-performance computing in a multi-physics context is expected. Due to the multi- and interdisciplinarity of the LSM, we are looking for a strongly integrative personality with a wide background in natural and engineering sciences. Demonstrated leadership experience and scientific management skills, as well as a strong interest for teaching and education are essential.

Applications including a motivation letter, a curriculum vitae with a list of research outputs, a statement of research (max. 3 pages) and teaching interests (max. 1 page), as well as the contact information of at least five references who are ready to supply their letter upon request, should be submitted in PDF format via

<https://facultyrecruiting.epfl.ch/position/33980418>

by **October 31 2021**.

Enquiries may be addressed to the Co-Chairs of the search committee:

**Prof. Victor Panaretos**, Director of the Institute of Mathematics, EPFL, e-mail: [direction.math@epfl.ch](mailto:direction.math@epfl.ch)

**Prof. Andreas Pautz**, Director of the Nuclear Energy and Safety Division, PSI, e-mail: [andreas.pautz@psi.ch](mailto:andreas.pautz@psi.ch)

Additional information is available at <https://www.psi.ch>, <https://www.epfl.ch>, <https://sb.epfl.ch>, <https://math.epfl.ch>

EPFL and PSI are equal opportunity employers and family friendly institutions. They are committed to increasing the diversity of their faculty and staff. They strongly encourage women and members of ethnic minorities to apply.