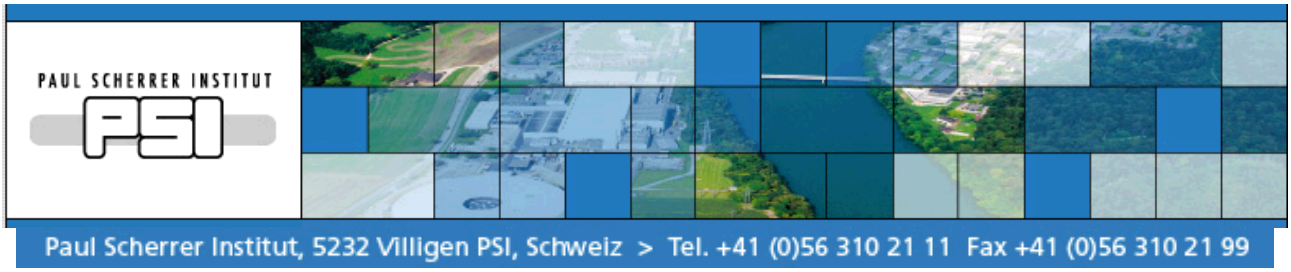

The Paul Scherrer Institut is a centre for multi-disciplinary research and one of the world's leading user laboratories. With its 1300 employees it belongs as an autonomous institution to the Swiss ETH domain and concentrates its activities on solid-state research and material sciences, elementary particle physics, energy and environmental research as well as on biology and medicine.

The group Material Science and Simulations (MSS) performs research in the structural and mechanical properties of metals, alloys and composites using in-situ testing facilities at the Swiss Light Source (SLS) and at the Neutron Spallation Source (SINQ), meanwhile exploiting synergies with computational material science.

MSS opens for the duration of three years a

PhD Position in material science modelling

Your tasks

To undertake research into dislocation mediated plasticity in interface dominated microstructures. This inherently multi-scale problem requires a range of simulation techniques and the present project concentrates on a systematic study of the grain boundary/dislocation interaction using atomistic modelling methods. From such atomistic simulations, empirical rules will be developed for use in mesoscopic simulation techniques such as dislocation dynamics. To ensure the success of such a multi-scale approach, the doctoral student will also work closely together with the group of Prof. Peter Gumbsch (IZBS, University of Karlsruhe, Germany).

Your profile

We are looking for a candidate with a university degree in physics, materials science or mechanical engineering with an emphasis on theory and/or simulation. Written as well as spoken English are required. The main part of the research will be carried out at PSI. The candidate will have to enroll in the doctoral school of the Swiss Federal Institute of Technology Lausanne (EPFL). The successful candidate will receive his/her PhD degree from the EPFL.

For further information please contact Prof. H. Van Swygenhoven, e-mail: **helens.vs@psi.ch**.

Please send your application to: Paul Scherrer Institut, Human Resources, Mr. Thomas Erb, ref. code 3402-01, 5232 Villigen PSI, Switzerland or **thomas.erb@psi.ch**.