

***PhD position available***  
***Department of Geology and Geochemistry, Stockholm University***

**Fundamentals of subgrain nucleation, growth and interaction:  
Linking numerical modelling and in-situ experiments**

**Framework of the project**

This project is part of a large European wide network of 10 mineral and material science partners with the aim to significantly improve our knowledge of the dynamics of substructure formation and evolution in rocks and metals. The student will have the unique opportunity to gain expertise in a wide range of experimental and numerical techniques through joint short courses, multilateral supervision and exchanges between the hosts. Therefore, the student must be willing to spend at least 2-3 months per year in another European institution (and enjoy it!).

**The project**

This exciting project aims to develop a sound understanding of how subgrains nucleate, grow and interact in crystalline materials. To achieve this, the student will use two main techniques:

1) numerical simulations: here the student will use and further develop the existing microstructure simulation *Elle* code ([www.microstructures.info](http://www.microstructures.info)) concentrating on substructure development at the nano- to micrometer scale.

*This will be done in close cooperation with a sister project in Lille, France.*

2) in-situ experiments: here the student will conduct and analyse in-situ heating experiments himself/herself, during which it is possible to observe in real time changes in the microstructure!!

*This will be done in close cooperation with 2 additional sister projects in Liverpool, UK and Tuebingen, Germany.*

In addition, depending on the progress of the project and interest of the student, comparison with microstructures developed in rock samples from selected “natural laboratories” may be integrated in the research project.

**Requirements**

A BSc/MSc or equivalent in Earth Sciences or Material Science, training in microtextural characterization and processes and/or numerical simulations will be of advantage.

**Conditions**

Fully funded, full-time position of four years duration. The position is available from March 2006 and should be filled by 1 June 2006 at the latest.

**Union representatives** are Bo Ekengren, SACO, Liseth Häggberg, ST and Birgitta Carlén, SEKO, Phone: + 46 8 162000.

**Applications**

Applications, including curriculum vitae, course transcript, a list of at least 2 referees (with fax and/or email contact info) and a description of motivation and experience relevant to the research project, should be sent to:

Referencenumber: 617-2612-05, Stockholms universitet, Registrator/PÄ, 106 91 Stockholm,

Or e-mail to: [registrator@su.se](mailto:registrator@su.se)

The deadline for applications is **24 February 2006**.

**Contact**

For more information contact: Dr. Sandra Piazzolo (+46 8 164894, e-mail: [sandra.piazzolo@geo.su.se](mailto:sandra.piazzolo@geo.su.se)).

See also: <http://www.geo.su.se/sandrapiazzolo>

[http://www.geo.su.se/index.php?group\\_ID=2087](http://www.geo.su.se/index.php?group_ID=2087)

[http://www.geo.su.se/index.php?group\\_ID=2413](http://www.geo.su.se/index.php?group_ID=2413)