



Ostrava, January 14, 2014

## **POSITION ANNOUNCEMENT:**

### **Postdoctoral Fellow Position in the Constitutive Modeling of Geomaterials**

A postdoctoral fellow position in the constitutive modeling and computer simulation of the mechanical behavior of geomaterials is available at the Institute of Geonics of the Czech Academy of Sciences in Ostrava, the Czech Republic, with an initial appointment for one year and a negotiable start date.

The applicant should be a recent Ph.D (in the last three years) or should at least expect to finish such a degree by the end of April 2014. In both cases, the dissertation should be in Rock Mechanics, Geomechanics or Geotechnical Engineering or similar field. He/She is expected to have sound knowledge of the theory of plasticity, damage mechanics and failure criteria of rocks, soils and concrete. Experience in computer programming and/or using geomechanics-oriented computer codes such as COMSOL, FLAC, PFC or PLAXIS will also be an asset.

Candidates are sought who show enthusiasm and passion for taking on challenging problems and are capable of producing original research of a quality that is appropriate for publication in scholarly journals.

The main research task of the successful postdoctoral fellow will be using the tools of the theory of plasticity and damage mechanics to model the stress-strain behavior of rocks in the pre-failure and post-failure domains, with a special focus on the effects of stiffness reduction, dilatancy and strain localization under TM, HM and THM coupling conditions. The postdoctoral researcher will be expected to interact closely with the experimentalists at the Rock Mechanics Laboratory in order to verify the validity and limitations of the proposed models and to design experiments that will provide data for extending the models and tuning their predictive capability.

There are no teaching duties associated with this position.

Suitable, highly-motivated candidates should send their electronic applications to [konkurz@ugn.cas.cz](mailto:konkurz@ugn.cas.cz) . Possible further information can be also asked at this address or from Prof. J. Scucka (head, Department of geomaterials, [scucka@ugn.cas.cz](mailto:scucka@ugn.cas.cz)) or Prof. R. Blaheta (director, Math. modeling division, [blaheta@ugn.cas.cz](mailto:blaheta@ugn.cas.cz))

The application documents should include: (i) a curriculum vitae, (ii) a cover letter describing the interests and qualifications for the position and (iii) at least two letters of reference.

Applications will be reviewed immediately after February 15, 2014.