

Phd position

- **Last application date:** 2011-03-31 11:55
- **Department:** WE13 - Department of Geology and soil science
- **Contract:** bepaald
- **Degree:** Master degree in Geology, Computer Science, Mathematics, Physics, Engineering,...
- **Occupancy rate:** 100%
- **Vacancy Type:** wp

Description

Multi-disciplinary 3D characterisation of complex pore-networks and minerals of geomaterials from sub-micron to centimeter scale.

The ultimate goal of this research project is the 3D characterisation of minerals and pore-structures at a pore-scale level through linking with the 2D information obtained from classical microscopical techniques like optical microscopy and SEM-EDX. Next to the 3D structural information, emphasis will be put as well on the 3D geochemical composition. By combining different imaging techniques, structural and chemical information will allow to characterise geomaterials in a multi-disciplinary way as each technique provides complementary data to the specimen under investigation. Data fusion of the 3D structural characteristics obtained through HRXCT and the petrophysical rock properties obtained through micro-XRF, optical microscopy and SEM-EDX will be the aim of this project proposal. It is expected that this data-fusion will largely contribute to process and mechanism characterisation as it will provide both chemical and physical information at the same time.

Profile

We are looking for a highly motivated individual with an MSc (or equivalent degree) in geology, computer science, mathematics, physics, engineering, etc. and with a strong interest in software and data-fusion. Research activities will include the use of highly advanced imaging techniques, like X-ray CT, scanning micro-XRF, etc. in combination with traditional microscopical techniques (like optical microscopy and SEM-EDX). Fluency in spoken and written English is required. Candidates should be able to work independently and in a team.

The successful candidate will be offered a full-time Ph.D. position for four years in the research project plus a working grant. The applicant must be eligible for PhD studies and will enroll in the Doctoral School Program of the Ghent University. The candidate shall devote his or her time primarily to their own research studies.

The research will be carried out at the Research Unit Sedimentary Geology and Engineering Geology, which is also member and co-founder of the Centre for X-ray Tomography (www.ugct.ugent.be) at Ghent University. The successful applicant will work in close collaboration with geologists, civil engineers and physicists of the Centre for X-ray Tomography.

Apply

Please send a description of your past work, a statement of your research interests, a curriculum vitae (including grades, courses followed, the title of your master thesis and a list of publications) as well as mail and email addresses of two referees. Send these by email to veerle.cnudde@ugent.be

The applications should be received before March 31st, 2011. Students currently finishing their MSc are also invited to apply. The research project must commence at the latest on the 31th of October 2011 (but can always be started earlier).

For further informal enquiries on the position please contact:

Prof. Dr. Veerle Cnudde
Research Unit Sedimentary Geology and Engineering Geology – WE13
Krijgslaan 281/S8
9000 Gent
Belgium

veerle.cnudde@ugent.be