PhD Researcher at University of Twente in the NWO project

'Comprehensive monitoring and prediction of seismicity within the Groningen gas field using large scale field observations'

(see also https://www.utwente.nl/en/organization/careers/!/727782/phd-project-comprehensive-monitoring-and-prediction-of-seismicity)

The induced seismicity of the Groningen gas field can only be understood through the relation between gas extraction and subsurface response. To understand the dynamics of the system new approaches are required that are based on observational data. In the project, we will monitor the seismicity and determine stress changes, reservoir compaction and deformation of the overlying layers from seismic data.
Advanced tools based on machine learning, model order reduction and supercomputing will be developed to model the recorded seismograms and to detect subsurface variations. Changes in earthquake risk due to changes in gas production will be assessed by stochastic modelling. The successful candidate will contribute to this last aspect by developing risk monitoring and decision support tools.

Your profile
- You have a Master's degree in mathematics or a related discipline and a solid background in probability, statistics and numerical mathematics;
- You have excellent grades, research talent (as proven by your Master's thesis)
- You have an affinity with engineering and applications and have excellent analytical skills and critical mindset;
- You have an affinity with writing scientific papers and technical reports;
- You are a team player with good communication skills and presentation skills;
- You are fluent in English, both spoken and written.

Organization
The PhD candidate will be employed at the chair Stochastic Operations Research at the University of Twente (see www.utwente.nl/eemcs/sor/ in the project `Comprehensive monitoring and prediction of seismicity within the Groningen gas field using large scale field observations', which is embedded in the national research programme DeepNL funded by the Dutch Research Council.

Contact
Please upload your application, with a detailed CV and a specific motivation letter, through the link below before May 1, 2019 via the webpage

https://www.utwente.nl/en/organization/careers/!/727782/phd-project-comprehensive-monitoring-and-prediction-of-seismicity

Please also upload a list of your BSc and MSc courses with grades and either a copy of your Master's thesis, if available or a copy of your Bachelor's thesis accompanied by an outline of your Master's thesis.

More information about this position can be obtained from Prof.dr. M.N.M. van Lieshout (email M.N.M.vanlieshout@utwente.nl)