At the Faculty of Mathematics and Computer Science of the TU Bergakademie Freiberg the temporary position of a

Research assistant (m/f/d) – Position number 123-E/2020

can be filled at the earliest possible date. The position is associated with the interdisciplinary research project “Alternative fiber materials based on copper slags” and within the recently established research group „Applied mathematics“.

Salary: 13 TV-L
Position: 1,0 VZÄ (Full-time equivalent)
Termination: until December 31, 2022 (extension possible for up to 3 years)

Job description:
Within a joint research project with two other institutes of the TU Bergakademie Freiberg the recycling potential of copper slags is investigated, particularly as a potential resource for glass fiber production. Here, the phase separation within the heated slag is an important sub-process. This process, modelled mathematically by the Cahn-Hilliard equation, has to be simulated and studied. In particular, the main interest lies in the uncertainty quantification of this process, e.g., its duration, given the unknown varying chemical composition of the slag. Based on a stability analysis of the equation with respect to perturbations of the material coefficients, suitable approximation and surrogate methods have to be developed and applied to quantify the uncertainty in the process simulation efficiently. Experimental data provided by the project partners shall be used to verify the simulations and to construct stochastic models for the uncertain material coefficients. The position does not involve any teaching duties.

What we offer:
– interdisciplinary scientific research within a small, highly motivated team,
– experienced collaborators for the theoretical as well as practical aspects of the project,
– participating in international conferences and support for research stays abroad,
– working at a family-friendly university with flexible office hours,
– competitive salary according to the German public service scale

We expect:
– a PhD, diploma or masters degree (university level) in mathematics or a related subject,
– profound knowledge in numerical mathematics and stochastics,
– experience with methods for uncertainty quantification, phase separation models, as well as stochastic modelling and statistics are preferable,
– a high motivation, the ability to perform research independently and to work in interdisciplinary teams, interest in scientific computing and programming, and a proficiency in written and spoken English (a basic level of German is advantageous)

For further information, please contact Jun.-Prof. Dr. Björn Sprungk, Tel.: +49 3731/392382, E-Mail: bjoebern.sprungk@math.tu-freiberg.de

Applicants (m/f/d) must meet the employment requirements for temporary employment contracts in accordance with the Wiss-ZeitVG. The TU Bergakademie Freiberg is committed to increase the number of women in teaching and research positions. Qualified female scientists are therefore invited to apply. Severely disabled applicants will be given preferential consideration in the event of equal suitability.

Please send your application and relevant documents with reference to the position number 123-E/2020, until June 30, 2020, to:

TU Bergakademie Freiberg - Dezernat für Personalangelegenheiten - 09596 Freiberg, Germany

Your application documents will not be returned, therefore please send only copies. Interview costs will not be covered. TU Bergakademie Freiberg is further looking for scientific personnel of diverse specialization. For further information: http://tu-freiberg.de/wirtschaft/karriere/stellenausschreibungen