Open Doctoral Student Position in the EU project MIMESIS

*MIMESIS – Mathematics and Materials Science for Steel Production and Manufacturing* is a European Industrial Doctorate (EID) project in the programme *Innovative Training Networks (ITN) and part of Marie Skłodowska Curie Actions within the Horizon 2020 programme.*

Driven by the five partners EFD Induction in Norway; SSAB, Outokumpu, and the University of Oulu, in Finland; and Weierstrass Institute for Applied Analysis and Stochastics (WIAS, Germany), eight doctoral thesis projects will be jointly carried out, providing a unique interdisciplinary and inter-sectorial training opportunity. The research is focussed on simulation and optimisation of industrial processes applying novel mathematical methods. Three major topics are considered - induction heating, phase transformations in steel alloys, and gas stirring in a steelmaking ladle.

The doctoral degree programme offers tailored industrial on-site training, customized courses in physical modelling and testing of steels as well as numerical simulation of induction heating and fluid flow phenomena combined with scientific research on the interface of materials science and applied mathematics. It will provide the early stage researchers with excellent qualifications to pursue a career in academia or industry.

**For sub-project ESR2: Simulation and optimization of single- and multi-frequency induction hardening of helical and bevel gears,** we are looking for a post-graduate researcher (Early Stage Researchers - ESR), specialized in

**Applied Mathematics or Computational Engineering.**

Host institution for this project is WIAS. In EID projects a close cooperation with industry is mandatory, and hence a stay of 17 months with the industrial partner EFD Induction AS, Skien, Norway is expected and prescribed.

The position is offered for **3 years.**

**Requirements**

Potential candidates have a master degree in applied mathematics, computational engineering, or similar.

Preferred qualifications for candidates include excellent grades, research talent (as proven by the master thesis), affinity with mathematical modelling and simulation in engineering applications, and personal ambition.

Candidates are expected to have and prove an excellent command of English, together with good academic writing and presentation skills.

According to the regulations for mobility within the Marie Skłodowska Curie programme, at the time of recruitment researchers must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately prior to the reference date.
Terms and conditions

The doctoral student will be employed at WIAS with full social security and s/he will have all benefits provided for in the Marie Skłodowska Curie ITN fellowships regulations, including a highly competitive remuneration, living allowances and mobility expenses. As an Early Stage Researcher the candidate will register for a doctoral degree in Mathematics at Technische Universität Berlin.

Application

Applications should be sent before 10 January 2016 to jobs@wias-berlin.de, with subject ‘MIMESIS’. They should include a detailed CV, a motivation letter, a list of MSc courses and grades, a copy of the master thesis, and a list of publications, if applicable. For residents outside the EEA, a TOEFL English language test may be required.

For more information about the position, please check www.mimesis-eid.eu or contact the MIMESIS coordinator Prof. Dietmar Hömberg (dietmar.hoemberg@wias-berlin.de).