

At the University of Duisburg-Essen, the Department of Mechanical and Process Engineering and the Center for NanoIntegration Duisburg-Essen (CeNIDE) invite applications for

A Full Professorship (Bes.-Gr. W 3 BBesG) in the Department of Mechanical and Process Engineering **Chair in Fluid Mechanics and Simulation of Reactive Flows**

University of Duisburg-Essen, Germany

We are seeking an internationally renowned scientist with an outstanding track record of scientific achievements, who will establish a highly-visible research program in the field of simulation and modeling of reactive flows, preferably in one or more of the following areas:

- Simulation of flows with complex homogeneous and heterogeneous gas-phase reactions and aerosol dynamics
- Multiscale simulations of reactive flows
- Nanoparticle synthesis and thin film deposition by gas-phase reactions
- Combustion and materials synthesis in flames

This position is appointed by the University of Duisburg-Essen's (UDE) School of Engineering, Department of Mechanical and Process Engineering in close collaboration with CeNIDE (Center for NanoIntegration Duisburg-Essen), and it has been identified as part of the University's strategic appointments. As a result, competitive start-up packages will be made available, including office and laboratory space in UDE's new Nano-Energy Technology Center (NETZ). The successful candidate will be explicitly invited to play a leading role in the further development of the broad nano-initiative of the University of Duisburg-Essen, represented by CeNIDE and the Center of Scientific Computing (CCSS).

The candidate is expected to teach relevant courses in Fluid Mechanics and Numerical Fluid Dynamics in the various B.Sc. and M.Sc. study programs at the department.

CeNIDE, established in 2005, is the University's strategic framework for cross-disciplinary research and teaching in nanosciences. It brings together forty research groups from Chemistry, Electrical Engineering, Physics and Mechanical Engineering, with a total of approximately 200 scientists. CeNIDE research groups are well funded by state, federal and European funding agencies. The German Research Foundation has recognized the strength of nanosciences at the University of Duisburg-Essen by granting three Collaborative Research Centers and a Research Training Group with a combined annual budget of 5.5 million EUR. One of the research focuses is

on nanomaterials for energy applications, supported by a 12 million EUR research grant and a dedicated lab building (43 million EUR) that will start its operation in 2012.

The Department of Mechanical and Process Engineering attracts approximately 500 new students every academic year, has a faculty of 25 tenured professors and approx. 150 PhD students. It runs an international graduate program with presently 160 PhD students. Research strongholds are in materials, automotive technologies, logistics, ship technology, combustion, environmental technology, and energy. Fundamental research on the synthesis of nanoscaled materials (from the lab scale to pilot-plant scale) linked to the CeNIDE nanosciences activities is one research focus and is of particular importance with regard to the position to be filled. Various research activities focusing, e.g. on the determination of kinetics data of high-temperature gas-phase reactions in shock tubes, laser-based in-situ diagnostics, particle growth and sintering, and materials synthesis in reactors from lab- to pilot-plant scale can provide input for the development and validation of models and simulations.

The Universität Duisburg-Essen is located in the Ruhr area, Europe's third largest cosmopolitan center, named European Capital of Culture 2010. We are an equal-opportunity employer committed to excellence through diversity and therefore explicitly encourage applications from women. Disabled persons with equivalent qualifications will be considered preferentially.

Candidates are invited to submit their application before August, 31, 2010, including curriculum vitae, publication list, statement of research interests and future research plans at UDE, teaching and fund raising records, as well as documentation of their academic degrees, to the Dean of the School of Engineering:

**Dekan der Fakultät für Ingenieurwissenschaften der Universität Duisburg-Essen,
Univ.-Prof. Dr.-Ing. Dieter Schramm, Forsthausweg 2, 47057 Duisburg, Germany.**

An electronic version (CD) should be included. For questions concerning this announcement, contact Prof. Christof Schulz (christof.schulz@uni-due.de).