

Post-Doctoral Fellows at BIC-ESAT in Peking University

The Beijing Innovation Center for Engineering Science and Advanced Technology (BIC-ESAT) in Peking University (PKU) was founded in 2015 with a generous support from the Municipal Government of Beijing. The center focuses on the development of advanced manufacturing technology and energy and environmental technologies. Four research departments under the center are: 1) Advanced manufacturing and design; 2) Simulation and application of software; 3) Energy technologies; 4) Environmental technologies.

Each department of the newly established BIC-ESAT Center will continue to recruit with a target size of 15-20 PIs/Co-PIs and 30-50 post-doctoral fellows. Each PI of the laboratory will be responsible for its research activities as well as operation and management. The BIC-ESAT Center invites applications for post-doctoral fellow positions in following research areas:

Advanced Manufacturing and Design Department

1. Develop advanced materials/structures and metamaterials based on 3D printing technology;
2. Use 3D printing facilities of two photon direct writing, UV curing and droplet based inkjet techniques, explore new physical and mechanical material behaviors of designed microstructures;
3. Advanced robotics including dynamic bipedal walking, wearable robots and rehabilitation devices;
4. Human-robot systems including BCI based methods, bio-signal processing, neural systems.

Simulation and Application of Software Department

1. Computational Fluid Dynamics (CFD) related area;
2. Aerodynamics and heat transfer of turbomachinery, i.e. turbines and compressors;
3. CFD software development;
4. Unsteady flows and flow mixing for internal flows.

Energy Technology Department

1. Unconventional oil and gas (e.g., shale oil/gas, CBM, hydrate);
2. Mechanisms for flow in complex porous media;
3. Low carbon technologies;
4. Broadly defined energy technologies.

Environmental Technology Department

1. Measurement of radicals and trace components in the atmosphere with advanced optical and mass spectroscopy, experience with ultra-fast laser, QCL, CIMS, PTR-MS, HR-AMS or SPAMS preferred;
2. Using Raman Lidar to measure profiles of temperature, RH, and aerosol in the lower atmosphere;
3. On-line source apportionment of PM in the atmosphere;
4. Studies on health effects of air pollutants based on measurements of biomarkers and metabolomics, experience with UPLC-TOF-MS preferred.

Applicants must have a PhD degree in related fields and demonstrate a record of publication in peer-reviewed scientific journals of high international reputation. The applications should include a cover letter, a curriculum vitae with a list of publications, names and contact information of three references, and a statement of current and future research.

The initial contract for post-doctoral fellows is for a period of two years with the annual salary at US\$40,000-50,000, depending on qualifications. Long term research opportunities are possible at the

Center.

Kindly forward your applications to Ms. Tingting Li:

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