COHMAS
Composite and Heterogeneous Materials Analysis and Simulation

Position Available:

Development Research Engineer GRIII

- Accepting applications until position is filled –

Job description

A research engineer position is available in the *Composite and Heterogeneous Materials Modeling and Simulation Lab*oratory (COHMAS) at King Abdullah University of Science and Technology (KAUST).

This engineer will be engaged in two different activities.

First, he will act as the Lab manager from the computational and simulation side. He will support the students, post-docs and researchers in the development of their applications and in the use of High Performance Computing Facilities. The computing environment includes linux based workstations, clusters and the Shaheen Supercomputer, a 16-rack IBM Blue Gene/P System, equipped with 4 gigabytes of memory per node and capable of 222 teraflops — or 222 trillion floating-point-operations — per second, making KAUST's campus in Thuwal the site of one of the world's fastest supercomputers.

Second, the candidate should develop a strong personal research activity in computational solid mechanics. He will develop this research activity in coordination with the PI and be fully integrated and in charge of a collaborative research activity with the industry.

Qualifications

For this first duty, the ideal candidates is expected to have the following skills: team work, strong experience in commercial engineering software (Abaqus, Techplot, Ensight), strong experience in application development using FORTRAN/C++ (and associated classical scientific libraries), experience in parallel computing (at least on clusters, and with experience or learning potential for Blue Gene System). In the framework of this first duty, he will be fully integrated to the research team and to publications.

Considering the second duty, a successful candidate must have a Ph.D. in the field of computational solid mechanics. An experience in one or more of the following areas is expected: finite-element simulations, non-linear solid mechanics, meshless techniques, uncertainty quantification and non-convex optimization, multiscale and domain decomposition strategies.

This is an ideal position with a computational mechanical engineering doctor who has developed exceptional skills in programming and computational mechanics and who is interested in team activities.

Appointment, salary and benefits

Appointment period: One year, renewable annually for at least four years.

Salary: $80000 to $100000 depending on experience. No tax paid to the Kingdom of Saudi Arabia.

Other benefits: medical, dental, air transportation to KAUST, one round-trip airline ticket per year to visit home country.

Contacts, application material and deadlines:
Interested applicants should send a detailed C.V. with at least three professional references to

Professor Gilles Lubineau at gilles.lubineau@kaust.edu.sa

www.cohmas.org

The position will remain open until filled, but the candidate is expected to join the team as soon as possible. The CV should include at least: Professional experiences, Academic training, Publications, computational skills and experiences, architectures, Foreign languages.

About KAUST (http://www.kaust.edu.sa/)
King Abdullah University of Science and Technology (KAUST) is an international, graduate-level research university located on the Red Sea in the Kingdom of Saudi Arabia. Dedicated to inspiring a new age of scientific achievement that will benefit the region and the world, KAUST will exemplify the future of world-class research. It is the vibrant home to an international community of students, faculty and staff, researchers, and families, situated in a unique Red Sea coastal location near Thuwal, 80 kilometers (50 miles) north of Jeddah – Saudi Arabia's second largest city. The total area of the self-contained community spans more than 36 million square meters, including a unique coral reef ecosystem that the University will preserve as a marine sanctuary. At opening, KAUST will house the Shaheen Supercomputer, a 16-rack IBM Blue Gene/P System, equipped with 4 gigabytes of memory per node and capable of 222 teraflops — or 222 trillion floating-point-operations — per second, making KAUST's campus in Thuwal the site of one of the world's fastest supercomputers. KAUST will also be connected directly into the worldwide research networks, running 10 Gbps directly to networks such as Internet2 & GEANT2. The infrastructure is designed with future IT requirements and developments in mind, including installation of 100,000 Ethernet ports and 500 kilometers of cables, with abundant dark fiber ready to be activated when needed. More details are available at http://www.kaust.edu.sa/