

## PhD position (or research fellow) in Process Systems Engineering

The FACS (functional analyses of complex systems; <http://hknu.ac.kr/~limyi/index.htm>) laboratory of Hankyong National University in Korea has an immediate opening for a PhD candidate (or research fellow). The position will start from March 1<sup>st</sup>, 2010.

Hankyong National University (<http://www.hankyong.ac.kr>) is located at the Anseong city about 50 km south from Seoul, Korea. The FACS (functional analyses of complex systems) laboratory in Department of chemical engineering focuses on modeling, simulation and optimization of chemical and biological processes. The PhD candidate (or research fellow) will be funded with average 1,500 \$/month (= total 18,000\$ per year, in fact, 18,000 kWon/year) including taxes. Depending on your professional career, the amount of your grant is adjustable upto 2,500 \$/month. The social security is covered for him and his family by our university.

In order to receive consideration for this position, applicants should send by email to [limyi@hknu.ac.kr](mailto:limyi@hknu.ac.kr) within August 25<sup>th</sup>, 2009:

1) a full CV including the lecture name and its score obtained of all courses (undergraduate, master, or/and PhD courses), teaching experience (lecture name, duration, etc.), if any, publication lists (master or/and PhD theses, copy of journal publications in English, conference presentations, etc.) and project lists performed.

2) cover letter.

3) three professional references (name, address and email).

### **Responsibilities:**

In this position, you will carry out working tasks related to modeling and simulation of chemical processes (especially, [molecular simulation](#), and/or computational fluid dynamics).

### **Key accountabilities include:**

- Working on CFD (computational fluid dynamics) simulation using Fluent or [ComSol](#) of the chemical/biological processes.

- Scoping multi-scale simulation starting at the molecular level of the adsorptive separation. This task includes modeling of adsorption isotherms (Grand Canonical Monte-Carlo molecular simulation) and diffusivity prediction using molecular dynamics.

-Collaborating with multidisciplinary technical groups and communication skills in [English](#).

### **Requirements:**

To be considered for this position, the successful candidate will possess a Master degree in Chemical Engineering, Mechanical Engineering, or a closely related field. It is preferred to possess background in Process Systems Engineering (PSE) or/and CFD (computational fluid dynamics). You must speak English fluently and you have published several papers in the scientific journals.

### **Additional skills preferred:**

- Strong self-initiative and technical leadership skills

-Computer programming/development/tools/component skills related to Fortran, C++, VB, [MATLAB](#), etc.

### **Youngil Lim, Professor**

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