

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

The FACS (functional analyses of complex systems; <http://facs.maru.net>) laboratory of Hankyong National University in Korea has an immediate opening for a PhD candidate (or master candidate, or research fellow). The position will open from March 1<sup>st</sup>, 2012.

Hankyong National University (<http://www.hankyong.ac.kr>) is located at the Anseong city about 50 km south from Seoul, Korea. The FACS lab. in the Department of chemical engineering focuses on modeling, simulation and optimization of chemical and biological processes.

The candidate will be funded with average 1,500\$/month (in fact, 1,500 kWon/month) for PhD, and 1,000\$/month (in fact, 1,000 kWon/month) for Master including taxes. Depending on professional career for research fellow, the amount of your grant is adjustable upto 2,500 \$/month (in fact, 2,500 kWon/month). The medical insurance 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 January 2<sup>nd</sup>, 2011:

- 1) a full CV including the lecture name and its score obtained in 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 so far.
- 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, [process simulation and CFD \(computational fluid dynamics\)](#))

### **Key accountabilities include:**

- Working on GCMC (grand canonical Monte Carlo), EMD (equilibrium molecular dynamics), and NEMD simulations using Material Studio (Accelrys, 2010) or other molecular simulation tools.
- Scoping multi-scale simulation starting at the molecular level in the adsorption process. This task includes modeling of adsorption isotherms, CFD using Fluent or Comsol Multiphysics, and adsorption process simulation using Matlab or ASPEN Plus/Hysys.
- 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 (or bachelor degree, or PhD degree) in Chemical Engineering, or a closely related field. It is preferred to possess background in Process Systems Engineering (PSE) or/and molecular simulation. 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 C++, [MATLAB](#), etc.

### **Youngil Lim, Professor**

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## Admission procedure to PhD/Master course at HKNU

The PhD/Master candidates have to prepare the following documents for the admission of the Spring semester of 2012 (March 1<sup>st</sup>, 2012 – June 30, 2012) to Hankyong National University in Korea.

### Important dates:

- Application due date: Jan. 4 – 6, 2012
- Document screening process: Jan. 13-15, 2012.
- Enrollment to Graduate school: Jan. 30-31, 2012.
- Submission of original certificates: by Jan. 25, 2012.

### Documents for application:

1. Application form (provided by HKNU).
2. Recommendation letter (I will make it for you, if you want).
3. Certificate of graduation in undergraduate and/or master courses (in English).
4. Certificate of academic records (lecture scores) in undergraduate and/or master courses (in English).
5. Copy of your passport (or certificate of your birth in English)
6. Plan of your study in the PhD/Master course in English (see attached sample file).
7. Self-introduction in English (see attached sample file).
8. Certificate of the financial guarantee (I will guarantee you and I will make it).

### Note:

- Every certificate which is not written in English or Korean should be notarized in Korean by an authentication office of the applicant country and applicants should send us the original one, its notarial translation and its notarial deed.
- Sample files or document provided by HKNU will be sent by email, if you are selected as a candidate.
- You have to apply the visa to Korean Embassy in your country, after your enrollment in Jan 30-31, 2012.
- In the stage of application to HKNU admission, you can submit all certificates in copy. But, you have to send the originals by airmail to get the visa to Korea.

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