Early Stage Researcher Fellowship / PhD studentship - Marie Curie Initial Training Network – IPROCOM

Powder behavior modifications under roller-compaction-milling processes

Gross salary € 2875 per month

3 years, to start by 1 September 2013

The context and research field:

You will join the RAPSODEE Research Center in Albi, full partner of the IPROCOM consortium (FP7-PEOPLE-2012-ITN European Commission Programme). RAPSODEE is a Centre of Excellence for Research in Particulate Solids, Energy and Environment, of the Graduate School of Engineering "Ecole des Mines d'Albi" (located at 40 min from Toulouse in the south-west of France) http://www.mines-albi.fr/recherche/rapsodee/presentation_centre-/switchLanguage/en.
Our laboratory carries out research in powder technology and processes including die and roll compaction, wet granulation, coating, fluidization, grinding and crystallization. The industrial sectors concerned by our research are typically the pharmaceutical, mineral and food industries. You will work in the Physics and Mechanics of Particulate Flows Research Group, where experimental and modeling approaches are developed.

The PhD position is funded by the European Community programme "Marie-Curie", and will be carried out in the framework of the larger programme IPROCOM. IPROCOM (The Development of in silico process models for roll compaction) is a multidisciplinary and inter-sectorial consortium aiming to develop robust *in silico* process models that can be used to predict the properties of intermediate ribbons/granules and final products tablets/pellets/components based on the properties of individual particles and to provide structured training for 15 researchers within a collaborative research network involving 10 full partners and 4 associate partners from 8 EU countries.

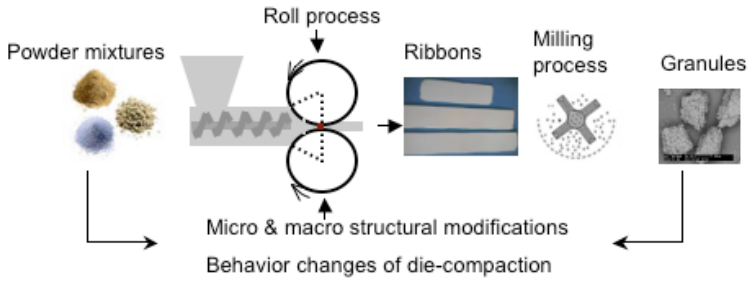
The position:

Powder behavior modifications under roller-compaction-milling processes

For this Fellowship, you will work on structural and mechanical behavior of powder modifications during the rolling and milling processes. You will perform a systematic experimental study, to explore how ribbon properties and milling conditions affect the microstructures and bulk behaviors of granules. You will use a wide range of characterization technics of microstructures and surfaces and die compaction experiments.

It is expected that you will be hosted for short periods by the partners AstraZeneca plc. (UK) and the Department of Chemical and Process Engineering (Univ. Surrey - UK) and work in close collaboration with others PhD students of the network.

It is expected that you will participate a wide range of networking activities including inter-sectorial secondments, IPROCOM training schools, workshops, short courses, dedicated sessions at international meetings, and network conference.



You:

- Have a MSc degree in a relevant field such as Mechanics, Materials Science, Physics or a related area,
- Have basic knowledge of materials characterization, continuum mechanics, and good English language skills,
- Have affinity and preferably experience in some characterization techniques of microstructures and surfaces of powders,
- Have excellent communication and organizational skills.

Conditions and eligibility:

This fellowship is offered in the context of a Marie Curie Initial Training Network and transnational mobility is a key element of eligibility. Therefore your eligibility for the position is determined by Marie Curie terms and conditions. Candidates may be either EU citizens or from outside the EU (subject to relevant immigration formalities), but applications will only be accepted from candidates who must not have resided or carried out their main activity (work, studies, etc) in France for more than 12 months in the 3 years immediately prior to the date of selection by the host institution (short stays such as holidays are not taken into account).

Contact:

If you are eligible and interested, please e-mail the following documents to michrafy@mines-albi.fr:

- a letter of application
- a detailed CV
- good level of English required (TOEFL or CAE level for example)
- Two recommendation Letters. Please provide recommendation letters from people acquainted with your work such as teachers, research advisors, or employers / supervisors.

Although the position will remain open until filled, applicants are encouraged to submit their applications *before July 10th, 2013.*
The PhD position is expected to start at the beginning of September 2013.

For more information, please, do not hesitate to contact one of the researchers of the group:
A. de Ryck, deryck@mines-albi.fr, D. Oulahna, oulahna@mines-albi.fr , O. Lecoq, lecoq@mines-albi.fr, A. Michrafy, michrafy@mines-albi.fr