

## PhD Proposal - Marie Curie Initial Training Network – IPROCOCOM

**Gross salary € 2875 per month**

**3 years, to start before the end of 2013**

### **The context and research field:**

The PhD position is funded by the European Community programme “Marie-Curie”, and will be carried out in the framework of the larger programme IPROCOCOM. IPROCOCOM (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.

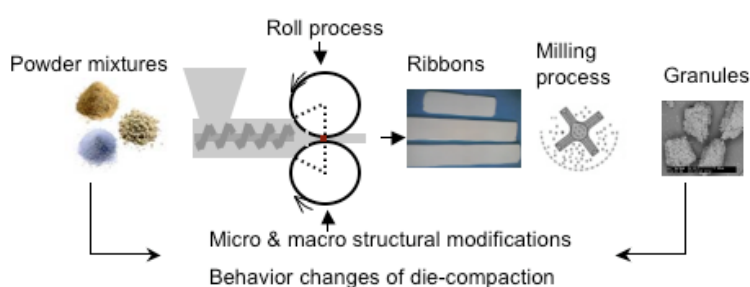
### **The position:**

#### ***Powder behavior modifications under roller-compaction-milling processes***

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 techniques 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, IPROCOCOM 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](mailto:michrafy@mines-albi.fr):

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

For more information, please, do not hesitate to contact one of the researchers of the group:

A. de Ryck, [deryck@mines-albi.fr](mailto:deryck@mines-albi.fr), D. Oulahna, [oulahna@mines-albi.fr](mailto:oulahna@mines-albi.fr) , O. Lecoq, [lecoq@mines-albi.fr](mailto:lecoq@mines-albi.fr), A. Michrafy, [michrafy@mines-albi.fr](mailto:michrafy@mines-albi.fr)