

**Position profile**
**Industrial Research Chair “Metallurgy of liquid metal”**

Equivalent to Professor at Université de Lorraine

 Research work to be performed at Institut Jean Lamour - IJL (<https://ijl.univ-lorraine.fr>)

5 year fixed-term contract. Possibility of evolution to a full Professor position

Direct research manager : Head of « Process Metallurgy » group at IJL

**Background**

Five important metallurgical companies, associated within the French Scientific Interest Group « Metallurgy », have decided to fund a chair on **Metallurgy of liquid metal** at the Université de Lorraine, with the aim to strengthen French scientific research in the field. The chair will be hosted at the research laboratory Institut Jean Lamour (IJL). It will include the continuous supervision of two PhDs in collaboration with industrial partners, as well as a teaching activity, with initial or/and continuing training.

**Mission of the Chair**

The chairholder will be in charge of a research activity linked to liquid metal processing.

More specifically, with the final goal of improving the production of metallic alloys with a high purity and inclusion cleanness, he will handle specific research works on liquid metal behavior, and chemical interaction between the metal and gas atmosphere, non-metallic inclusions, slags and refractories.

While **thermodynamic equilibrium** and **chemical kinetics** constitute the core of the research program, an application at the scale of industrial processes should be systematically kept in mind, which implies a constant collaboration with the “Process Metallurgy” research group at IJL, on issues of fluid mechanics and process engineering.

The research must associate a theoretical part, i.e. mathematical modeling and numerical simulation, and an experimental side based on the use of various equipment available in the Lorraine territory’s scientific platforms, at IJL as well as the Research and Technology Institute M2P and GIP MetaFensch.

The chairholder will maintain a teaching activity at a national level. Besides the supervision of post-graduate students, he/she will create and animate courses and lectures at the Université de Lorraine and develop a continuing training through a tight collaboration with the Chair industry partners and funders.

At IJL the Chair is part of the “Process Metallurgy” research group within the Department of Science and Engineering of Materials and Metallurgy - SI2M. The holder will have frequent relationships with all academic and industrial partners involved in the funding, as well as the scientific neighbourhood (IRT M2P, GIP MetaFensch, Institut Carnot ICEEL, European KIC “Raw Materials”, Competitiveness Cluster “Materialia”, etc).

Skills required					
Scientific knowledge		Project management		Additional skills	
- Large basic technical knowledge (materials science and engineering, heat and mass transfer, fluid flow) - Specific knowledge in the field of metallurgy of liquid metals, including : thermodynamics, thermochemistry, chemical reaction kinetics, process engineering, computational fluid dynamics		- Experience in managing collaborative contractual research, including theory and full-scale experiments - Experience in managing an academic or industrial research-oriented group - Excellent verbal and written expression		- Scientific rigor - Reactivity and adaptation ability - Full mastering of technical English. Fluency in French is a big plus - Open-minded and curious - Capability of long-term planning	
Profile		<ul style="list-style-type: none"> <li>• The applicant must hold at least a PhD degree, with a high level of expertise in his/her research area, including written publications. Equivalence of French HDR (Habilitation to Supervise Research) is highly desirable</li> <li>• Previous position in Industry, or in University with sustained relations with industry</li> <li>• Experience in the management of research projects in metallurgy, especially when they involve academic/industry collaborations</li> <li>• Previous teaching at the Graduation level is a plus</li> </ul>			
Salary		Equivalent to a French University professor, depending on the holder	Starting date		September 2018
Application		Applications must be sent to Alain JARDY, <a href="mailto:alain.jardy@univ-lorraine.fr">alain.jardy@univ-lorraine.fr</a> before the deadline of <b>31 May, 2018</b> . They must include the following: <ul style="list-style-type: none"> <li>- an application letter,</li> <li>- a short CV (1-2 pages),</li> <li>- a detailed report (5-10 pages) presenting the applicant's previous research activities and how they fit with the mission of the Chair,</li> <li>- a list of publications, communications, etc.</li> <li>- at least 3 recommendation letters, or the contact details of at least 3 reference persons who may be contacted.</li> </ul> After examination of the application files, short-listed applicants will be interviewed by the Selection Committee in June, 2018.			
Scientific contacts		Alain JARDY, <a href="mailto:alain.jardy@univ-lorraine.fr">alain.jardy@univ-lorraine.fr</a> Jean-Pierre BELLOT, <a href="mailto:jean-pierre.bellot@univ-lorraine.fr">jean-pierre.bellot@univ-lorraine.fr</a>			
Administrative contact		Michel FICK, <a href="mailto:michel.fick@univ-lorraine.fr">michel.fick@univ-lorraine.fr</a>			