



# Characterization and modeling of ferromagnetic components

**Keywords :** ferromagnetic alloys, finite element modeling, experimental characterization

## I. Desired skills and experience

The candidate must have a taste for experimental characterization and numerical modeling, autonomy and writing skills in English. The following skills are desirable:

- Phase field modeling
- Finite element modeling
- Coding skills

## II. How to apply

Interested applicants please send an email to Sabeur Msolli ([sabeur.msolli@utbm.fr](mailto:sabeur.msolli@utbm.fr)) with the subject line “Ph.D. student position application”. In the email, please attach your curriculum vitae (including publications, and names and contact info of three references) and transcripts.

### Contact person:

Sabeur Msolli

Assistant Professor

University of Technology of Belfort-Montbéliard

Sevenans Campus - 90010 Belfort cedex

Tél +33 (0) 3 84 58 36 77

[sabeur.msolli@utbm.fr](mailto:sabeur.msolli@utbm.fr).

## III. About laboratory ICB-PMDM-LERMPS

Since January 01, 2017, the LERMPS (Laboratory for Studies and Research on Materials, Processes and Surfaces – created in 1986) is a team of the PMDM axis (Metallurgical processes, Durability, Materials) of the Carnot Interdisciplinary Laboratory of Bourgogne (ICB). It is a Joint Research Unit of the CNRS (UMR 6303). The team is based on the Sevenans (90) site of the Technological University of Belfort - Montbéliard (UTBM). The main areas of research of the team are:

- Thermal spray coating and diagnostics
- Additive manufacturing by laser micro-fusion on a powder bed
- The development of powders by gas atomization and by drying agglomeration
- Characterization of surfaces/materials

The general objective of our activities is to achieve better control of the structures and properties of the materials developed to obtain new performances. The areas covered are very numerous given the great diversity of materials used. Indeed, it can be resistance to corrosion and wear, insulation or electrical conductivity, mechanical properties, possibility of shaping, etc.

Much of the research developed in the laboratory is now applied directly in industry. This allows our partners to implement, in their manufacturing process, the innovations necessary for competitiveness.

Please visit our website for more informations : <https://lermps.utbm.fr/>