

## CONTRIBUTIONS TO IMPROVE THE STEEL QUALITY

**Author: Ana Virginia SOCALICI**

### Abstract

The habilitation thesis is a summary of the scientific concerns and activities carried out after sustaining the PhD Thesis at Politehnica University of Timișoara.

The results of scientific work falls in the field of materials engineering, being approached the following research directions:

- Modern methods and technologies applied in steelmaking;
- Technologies used to recover the ferrous waste and scrap for greening the industrial environment.

The development of a solid research grounding in the field of materials engineering, supported by the teaching foundation of the modern technologies applied for materials making and processing, is a very topical issue in the contemporary society, and this could be primarily achieved through the professional and academic experience of the professors involved in this field.

The scientific work carried out led to the development of competencies in: technologies used for making and casting metal alloys, optimization of steel making and casting, modelling and simulation of steel solidification processes, application of greening technologies on bulk ferrous waste recovery and processing and interpretation of the research results. Given the results obtained so far, the research will continue in the areas of research presented above, this research being intended to complement the existing achievements and focusing on two strategic approaches, i.e. *education and research*.

Here is the summary of the strategies adopted to implement each objective: developing new research topics related to obtaining composite materials and advanced materials applicable in the industrial practice and development of new collaborations.



The full abstract at:

[http://www.upt.ro/img/files/2015-2016/doctorat/abilitare/socalici/Rezumat\\_teza\\_en\\_A\\_Socalici.pdf](http://www.upt.ro/img/files/2015-2016/doctorat/abilitare/socalici/Rezumat_teza_en_A_Socalici.pdf)

### Habilitation Commission

Prof.Dr.Ing. Ioan VIDA-SIMITI  
Universitatea Tehnică din Cluj-Napoca;  
Prof.Dr.Ing. Cristian PREDESCU  
Universitatea Politehnica din București;  
Prof.Dr.Ing. Ion MITELEA  
Universitatea Politehnica Timișoara.