



**ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ**  
**ΣΧΟΛΗ ΧΗΜΙΚΩΝ ΜΗΧΑΝΙΚΩΝ**

ΕΚΤΑΚΤΟ ΣΕΜΙΝΑΡΙΟ ΣΧΟΛΗΣ ΧΗΜΙΚΩΝ ΜΗΧΑΝΙΚΩΝ

**Materials Science and Engineering in Europe:  
Bridging the Death Valley**

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Talk Outline:

- Presentation of the three affiliations
- The European Paradox
- The Materials for Key Enabling Technologies Document
- Selected cases serving as exemplary roadmaps
- Materials Scarcity

In the first part of my presentation I will introduce the Interuniversity Materials Research and Engineering Center of Toulouse (CIRIMAT), the Materials Science Interdisciplinary Programme of CNRS and the Materials Science and Engineering Expert Committee of the European Science Foundation. In addition to facts and numbers, this presentation will allow me to sketch the position of Materials Science and Engineering (MSE) in the landscape defined by the traditional disciplines and by the exploration to innovation to the market axis. Then, I will resume the position of Europe with regard to the latter axis; i.e. the reduced capacity of European countries to transform the scientific results to market products. I will show that here is actually a “The Valley of Death” between them, which is mandatory to bridge if we want Europe to remain a key player in the global competition. To achieve this, the contribution of MSE has recently been described in a document entitled Materials for Key Enabling Technologies. I will resume main conclusions from this generic document. Translating this strategic frame to a roadmap for MSE in Europe is an extremely ambitious task. Instead, I will exemplify such a roadmap by considering selected fields, in the domains of Biomaterials, of Metals and of Ceramics. Last but not least, I will provide some insight in raw materials and on the need of Europe to maintain a secure and sustainable access to them.

**Τρίτη, 30/10/2012, ώρα 1:00 μμ**  
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