Advanced Materials Modelling and Characterization

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ABSTRACT

Objective

The modeling and Characterization workshop has the aim to facilitate the knowledge and available tools at different scales (nano to macroscale) **in order to make easier to predict the behavior of the products and process at design phase.**

Attendance: The workshop will be open to any interested **researchers and students** that would like to upgrade their skills for learning new tools for modeling and characterization.

When: Sunday, 20th September 2015

Duration: 3 hours presentations + 2 hours hands on session (there is not poster session planned for this tutorial)

Introduction

The tutorial will start with the **presentation of the European Materials Modelling Council (EMMC)** by **Prof. Pietro Asinari from Politécnico do Torino.** He will present the structure and activities of the European Materials Council, and also some basic classifications towards a common **vocabulary in modelling.**

The tutorial will continue by **Dr. Amaya Igartua,** Head of Tribology Unit from **IK4-TEKNIKER research Center in Spain.** She will introduce the **European Materials Platform Initiative EUMAT**, making emphasis in **modeling and characterization activities.** Their presentation will be illustrated by some **case studies performed by IK4-TEKNIKER** in modeling activities and **advanced characterization techniques.**

The third intervention will be performed by **Dr. Anssi Laukkanen,** responsible of modeling activities at the Research Institution, **VTT in Finland**. He will explain the modeling activities at VTT specially related to **friction and wear modeling tools** already developed, illustrating **with some examples.**

The fourth Intervention will be performed **by Prof. Ingo Steinbach from Ruhr-Univ. Bochum.** He will explain **Thermodynamic and kinetic simulations using the phase field method,** and their presentation will be supported by a **hands on Session** in phase-field simulation using OpenPhase by **Oleg Shchyglo.** To follow the practical session it is important that **the attendants** to the tutorial will **bring their computer.**

The participants will receive the book "Review of Materials Modelling. 4th version",

Edited by Anne F. de Baas and Lula Rosso, EU Commission, 2015.