

On Monday 24/11/2008, from 14:00 to 17:30, **Prof. Lino Oliveira Santos** (Department of Chemical Engineering, University of Coimbra, Portugal) will give a seminar (in English or French depending on the attendance) titled:

### **State and parameter estimation using the unscented Kalman filter**

This two-part seminar (with a coffee break in between) will take place in the Seminar room of the Department of Electronics (Boulevard Dolez 31, 7000 Mons)

#### **Abstract**

The unscented Kalman filter (UKF) is a new generalization of the Kalman filter for nonlinear systems. It has significant advantages over its widely used predecessor, the extended Kalman filter (EKF).

This seminar provides a description of the UKF algorithm and of its application by simulation of two nonlinear examples. Its application within the scope of a MPC framework is pointed out as well.

**Prof. Lino Santos** is an active researcher in the field of nonlinear modelling, dynamic optimization and model predictive control (NMPC) of biochemical processes. He is Associate Professor in the Department of Chemical Engineering of the University of Coimbra, where he is involved in a broad range of lectures covering chemical processes, systems dynamics, optimization and control.