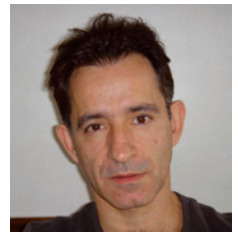


09:00 Principales avancées en théorie de la commande
Major advances in control theory
Germain Garcia, LAAS-CNRS, Toulouse



Mercredi 8 octobre

In this presentation, we develop the main lines of the research activities on control theory carried out at LAAS-CNRS, since its creation in 1968. While this presentation is by no means exhaustive, we detail the principal contributions, related for some of them, to the main Kalman's contributions published in the sixties on state space control design theory. We explain how the developments of informatics on the one hand, and spatial and aeronautical applications on the other hand, have influenced the research work conducted at LAAS in the domain of control theory design during the past years.

To illustrate their national and international impacts, we present the main philosophy and contributions in the domains of:

- Robust control,
- Control with limited actuators or sensors,
- Numerical methods for control design.

We end the presentation by providing some perspectives describing the recent orientations of the works in control theory and their relationship with some advances in related domains.

Germain Garcia graduated from the Engineering School INSA of Toulouse (INSAT) and obtained his "Habilitation à Diriger des Recherches" from University Paul Sabatier in Toulouse in 1997. He is currently Professor in the Department of Electrical Engineering and Computer Science department at INSAT and a member of the research group "Methods and Algorithms in Control" at LAAS-CNRS. His fields of interest are related to robust control and control of systems with bounded inputs. He published more than 150 journal and conference papers. From 2003 to 2006, he was Assistant Director of LAAS-CNRS, responsible of the Area "Modeling, Optimization and Control of Systems". He was or is involved in several international working groups (UECA, IFAC and IEEE).