



Fondation de Coopération Scientifique  
Sciences et Technologies pour l'Aéronautique  
et l'Espace

**Advanced methods and perspectives  
in nonlinear optimization and control  
ENSIACET, Toulouse - February 3-5th, 2010**

**February Wednesday 3<sup>rd</sup>**

09:00 - 09:30      *Registration*

09:30 - 10:00      *Welcome session*  
Joël Bertrand - RTRA-STAE  
Jean-Claude André - RTRA-STAE  
Iain Duff - CERFACS

*Session 1*

10:00 - 10:45      Sven Leyffer - Argonne National Laboratory - USA  
Software for Integer and Nonlinear Optimization  
10:45 - 11:30      Michael Saunders - Stanford University - USA  
An active-set convex QP solver based on regularized KKT systems  
11:30 - 12:15      Stephen Wright - University of Wisconsin - USA  
Sparse Optimization Methods

*Lunch*

*Session 2*

14:00 - 14:45      Andrew Conn - IBM - USA  
Bilevel Derivative-Free Optimization and its Application to Robust  
Optimization  
14:45 - 15:30      Luis Nunes Vicente - University of Coimbra - Portugal  
New Results in Optimization Without Derivatives

*Coffee Break*

### *Session 3*

- 16:00 - 16:45 Philippe Toint - FUNDP - Belgium  
Inexact range-space Krylov solvers for linear systems arising from inverse problems
- 16:45 - 17:30 Jean-Bernard Lasserre - LAAS - Toulouse  
A “joint+marginal” approach to parametric polynomial optimization

## February Thursday 4<sup>th</sup>

### *Session 4*

- 9:00 - 9:45 Annick Sartenaer - FUNDP - Belgium - TBA
- 9:45 - 10:30 Frederic Bonnans - INRIA - Paris  
Interior-point algorithms for optimal control problems

### *Coffee Break*

### *Session 5a*

- 11:00 - 11:45 Enrique Zuazua - Basque Center for Applied Mathematics Bilbao -Spain  
Flow control in the presence of shocks
- 11:45 - 12:30 Moritz Diehl - K.U. Leuven - Belgium  
The Lifted Newton Method and its Use in Optimization

### *Lunch*

### *Session 5b*

- 14:00 - 14:45 Jean-Antoine Desideri - INRIA  
Cooperation and competition in multidisciplinary optimization
- 14:45 - 15:30 Anne Auger - INRIA  
New perspectives in stochastic derivative free optimization

## *Coffee Break*

### *Session 6*

16:00 - 16:45     Michel Thera - University of Limoges  
Minimizing irregular convex functions

## *Banquet at 20.00*

## **February Friday 5<sup>th</sup>**

### *Session 7*

9:00 - 9:45     Alfio Borzi - Universita degli Studi del Sannio - Italy  
Theoretical and numerical aspects of quantum control problems

9:45 - 10:30    Volker Mehrmann - TU Berlin and Matheon Germany  
Optimal control of descriptor systems

10:30 - 11:15   Shlomo Ta'asan - Carnegie Mellon University - USA  
Understanding The Immune System Using Optimization and Control

## *Coffee Break*

### *Panel meeting 11.30 - 12.30*

Eric Chaput- AIRBUS - Toulouse  
Pierre Degond - UPS - Toulouse

## *Lunch*