

SADCO Partners:

Academic partners

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 - **Inria - INRIA**
FR Saclay
Project coordinator: Hasnaa Zidani
ESRs: Albert Altarovici, Christopher Hermosilla, Athena Picarelli, Teresa Scarinci
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 - **Katholieke Universiteit Leuven - KUL**
BE Leuven
Team coordinator: Moritz Diehl
ESR: Mario Zanon
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 - **Universität Bayreuth - UBT**
DE Bayreuth
Team coordinator: Lars Grüne
ESRs: Huijuan Li, Vryan Gil S. Palma
ERs: Cédric Martínez Campos, Roberto Guglielmi
- 
 - **Université Pierre et Marie Curie, Paris 6 - UPMC**
FR Paris
Team coordinator: Hélène Frankowska
ESRs: Juan Pablo Maldonado Lopez, Hayk Sedrakyan
ERs: Marco Mazzola, Daniela Tonon
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 - **Università degli Studi di Padova - USP**
IT Padova
Team coordinator: Fabio Ancona
ESRs: João Meireles, Nguyen Van Luong
ER: Maria Soledad Aronna
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 - **Sapienza - Università di Roma - ROME**
IT Rome
Team coordinator: Maurizio Falcone
ESRs: Smita Sahu, NGoc Quoc Thuong NGuyen
ERs: Dante Kalise, Francisco Silva
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 - **FEUP - UPORTO**
PT Porto
Team coordinator: Maria do Rosário de Pinho
ESR: Igor Kornienko
- 
 - **Imperial College London - ICL**
UK London
Team coordinator: Richard Vinter
ESRs: Andrea Boccia, Michele Palladino
ER: Adriano Festa

Industrial partners

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 - **Astos Solutions GmbH - ASTOS**
DE Stuttgart
Team coordinator: Andreas Wiegand
ESR: Sonja Rauski
- 
 - **Volkswagen AG - vw**
DE Wolfsburg
Team coordinator: Oskar Ries
ESR: Ilaria Xausa
- 
 - **EADS Astrium - ASTRIUM**
FR Les Mureaux
Team coordinator: Max Cerf
ESRs: João Saude, Achille Sassi

In association with

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 - **ENSTA ParisTech - JRU with Inria**
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 - **CNRS - JRU with UPMC**



<http://itn-sadco.inria.fr>

-  **Training & Research:**
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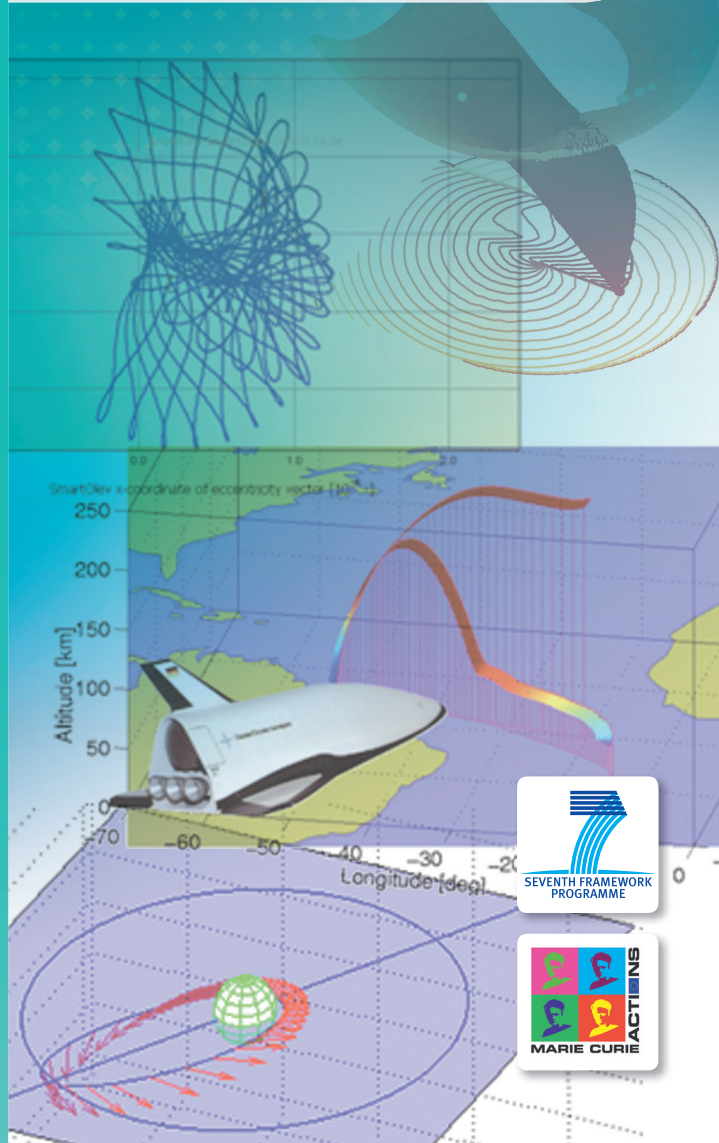
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ITN SADCO

Initial Training Network
Sensitivity Analysis for Deterministic Controller Design

Duration: 01/01/2011 – 31/12/2014
Grant Agreement n°264735



The SADCO Initial Training Network

SADCO establishes a collaborative **research and training network** of 11 partners from **academia** and **industry**, gathering participants with expertise in complementary disciplines in **mathematics** and **engineering**.

The SADCO project aims at:

➔ Training young researchers in the field of control theory

➔ Advancing the theory and developing new numerical methods

➔ Conveying fundamental scientific contributions within European industrial sectors

SADCO is funded by the EU under the «FP7-People-ITN» programme.



Training:

20 PhD students (Early-Stage Researchers - ESRs) and 8 postdocs (Experienced Researchers - ERs) are recruited within the network.

They benefit from a **complete range of multidisciplinary theoretical, practical and complementary training** including:

- ✓ Individual training-through-research projects
- ✓ Summer schools & scientific events
- ✓ Industrial workshops
- ✓ Secondments
- ✓ Complementary skills training
- ✓ Regular meetings & active networking

Many SADCO events are open to external participants (check on the web site for further information).

SADCO milestone events

Title	Location	Date	Organizer(s)
Kick-off Meeting & 1st Industrial Workshop	Paris, FR	2011	Inria
1st Summer School	London, UK	2011	ICL & Porto
2nd Industrial Workshop	Stuttgart, DE	2012	Astos
1st Doctoral Days	Paris, FR	2012	Inria
2nd Summer School	Ravello, IT	2012	Rome & USP
1st Internal Research Review	Madeira, PT	2013	Uporto
2nd Doctoral Days	Palaiseau, FR	2013	Inria
3rd Summer School	Bayreuth, DE	2013	UBT & KUL
3rd Industrial Workshop	Wolfsburg, DE	2013	VW
2nd Internal Research Review	IT	2014	Rome
Final Conference	Tours, FR	2014	Inria & UPMC

Additional network-wide events can be found on the SADC website.

Research Programme:

The scientific programme builds the foundation of a **long-term European research & training network in the field of optimal control theory, with emphasis on:**

➔ **Sensitivity analysis**, which is concerned with the robustness of optimal control strategies to changes in the underlying optimization problem

➔ **Deterministic controller design** based on real-time solution of optimal control problems.

The research programme includes:

- ✓ Necessary and Sufficient Optimality Conditions
- ✓ Hamilton-Jacobi Theory
- ✓ Stabilization of Nonlinear Systems
- ✓ Perturbed and Large Scale Systems
- ✓ Differential Games



Optimal control contributes to the theoretical foundations for future, much-needed **technological developments**, in numerous industrial sectors, including transportation, power systems and chemical processing, and in such areas as resource economics, to improve energy efficiency against a background of stringent environmental constraints.

