



# CRM

# INTENSIVE RESEARCH PROGRAMMES

## Advances in Nonsmooth Dynamics



**February to April 2016**

This program will take stock of progress in Nonsmooth Dynamics, from recent advances to open challenges. Nonsmooth Dynamics has always been strongly informed by applications. By bringing theoretical and practical insights together at a time of rapidly growing interest, we will try to solve some major outstanding problems in an intensive but open forum.



The *Foundations* theme will review fundamental theory and its key tools, from its basic assumptions to breakthroughs in the study of stability and bifurcations. Particular attention will be paid to open challenges and the need for new numerical methods.

The *New Directions* theme will attempt to solve models of diverse scientific applications, with the overarching aim of asking how nonsmooth dynamics can best contribute to forming new and better models of real world dynamics. There will be no restriction on the applications of interest, but they will certainly include climate, economics, life sciences, networks, chemical reactions, mechanics of rigid bodies, and control electronics.

**The following activities will be organized within the programme:**

- A conference from February 1 to 5, 2016
- 3 short courses from February 29 to March 4, 2016
- A workshop from April 25 to 29, 2016

**Organizing Committee:**

- |                    |                                      |
|--------------------|--------------------------------------|
| Mike Jeffrey       | University of Bristol                |
| Alessandro Colombo | Politecnico di Milano                |
| J. Tomás Lázaro    | Universitat Politècnica de Catalunya |
| Josep M. Olm       | Universitat Politècnica de Catalunya |

**Scientific Committee:**

- |                        |                                      |
|------------------------|--------------------------------------|
| Berard Brogliato       | INRIA Grenoble                       |
| Jaume Llibre Saló      | Universitat Autònoma de Barcelona    |
| Tere Martínez-Seara    | Universitat Politècnica de Catalunya |
| Gerard Olivar Tost     | Universidad Nacional de Colombia     |
| Petri Piiroinen        | University of Ireland at Galway      |
| Enrique Ponce Núñez    | Universidad de Sevilla               |
| Marco Antonio Teixeira | Universidade Estadual de Campinas    |
| Nathan van de Wouw     | Technische Universiteit Eindhoven    |

For inquiries about the program contact the research program's coordinator, Neus Portet at [nportet@crm.cat](mailto:nportet@crm.cat)

<http://www.crm.cat/2016/Nonsmooth>



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