

# PREFACE

The *International Conference Zaragoza-Pau on Mathematics and its Applications* was organized by the *Departamento de Matemática Aplicada*, the *Departamento de Métodos Estadísticos* and the *Departamento de Matemáticas*, all of them from the *Universidad de Zaragoza* (Spain), and the *Laboratoire de Mathématiques et de leurs Applications*, from the *Université de Pau et des Pays de l'Adour* (France). This conference has normally been held every two years since 1989. The aim of this conference is to present recent advances in Applied Mathematics, Statistics and Pure Mathematics, putting special emphasis on subjects linked to petroleum engineering and environmental problems.

The Thirteenth Conference took place in Jaca (Spain) from 15th to 18th September 2014. The official opening ceremony was graced by the presence of the Chancellor of the University of Zaragoza, Rector Mgfc. D. Manuel J. López Pérez, and the Chancellor of the University of Pau, M. le Président Mohamed Amara. During those four days, 86 mathematicians, coming from different universities, research institutes or the industrial sector, attended 11 plenary lectures, 45 contributed talks and a poster session with 8 posters. This edition had a special event. Some of the plenary conferences and a mini-symposia were in honour of Jacqueline Fleckinger, Professor of the Université Toulouse 1, for her seventieth birthday. She belongs to the group of French and Spanish researchers who are deeply involved in the scientific cooperation between the Université Toulouse 1, the Université de Pau et des Pays de l'Adour and the Universidad de Zaragoza.

The principal talks were about theoretical and numerical analysis of deterministic models described by partial differential equations, statistics and stochastic processes, surface approximation and image analysis. At the same time, there was also a discussion session and problems in Algebra and Geometry. These proceedings contain 12 refereed research papers based on the corresponding contributions.

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The next Conference Zaragoza-Pau will be held in Jaca from 12th to 15th September 2016. All of you are cordially invited to participate in this event.

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The Editors

María Cruz López de Silanes  
Manuel Palacios  
Departamento de Matemática Aplicada  
Universidad de Zaragoza

Gerardo Sanz  
Departamento de Métodos Estadísticos  
Universidad de Zaragoza

Étienne Ahusborde  
Chérif Amrouche  
Laboratoire de Mathématiques et de leurs  
Applications  
Université de Pau et des Pays de l'Adour