

## Preface

The **Winter School on Commutative Algebra and Applications** was held from January 30 to February 3, 2006, at the *Institut de Matemàtica de la Universitat de Barcelona* (IMUB). The Winter School was a scientific activity of the (RTACA) *Red Temàtica de Algebra Conmutativa y Aplicaciones*<sup>1</sup>. The school consisted of three series of lectures surveying recent developments in commutative algebra and applications and some additional talks and communications. The series of lectures were: Tight Closure and Vector Bundles (Holger Brenner, University of Sheffield), Combinatorics and Commutative Algebra (Jürgen Herzog, University of Essen), Constructive Desingularization (Orlando Villamayor, Universidad Autónoma de Madrid). This volume collects an enlarged version of these series of lectures.

The School was organized by G. Colomé-Nin, T. Cortadellas-Benítez, J. Elias, and S. Zarzuela. It was sponsored by Institut de Matemàtica de la Universitat de Barcelona, Societat Catalana de Matemàtiques and Ministerio de Educación y Ciencia.

Gemma Colomé-Nin  
Teresa Cortadellas-Benítez  
Juan Elias  
Santiago Zarzuela

Barcelona, July 2007

---

<sup>1</sup>Spanish Net of Commutative Algebra and Applications