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Classification
of Irregular Varieties

Minimal Models and Abelian Varieties

Proceedings of a Conference held in
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PREFACE

The conference on "Classification of Irregular Varieties, Minimal Models and Abelian Varieties" was held in Villa Madruzzo, Cognola (Trento) from December 17 to 21,1990. The meeting has been sponsored and supported by C.I.R.M. (Centro Internazionale per la Ricerca Matematica, Trento), the Mathematical Department of the University of Trento and Centro Matematico Vito Volterra. This volume contains most of the works reported in the formal and informal lectures at the conference. The topics of the volume are:

Abelian varieties and related varieties (papers by Bardelli, Birkenhake - Lange, Ciliberto - Harris - Teixidor, Ciliberto - Van der Geer, Salvati Manni,Van Geemen);

Minimal models and classification of algebraic varieties (the papers by Andreatta - Ballico - Wisniewski and by Kollar - Miyaoka - Mori);

K-theory (the paper by Vistoli).

During the conference some "examples" were worked out by the participants. They are collected here under the heading " Trento examples". They are listed with the names of the discoverers, a discussion of the problems considered and, of course, the proofs. The two of us not connected with the "Trento examples" think that they are very interesting.

We liked the idea of inserting at the end of this volume a list of problems and questions. We collected this list mentioning the proposers of the questions and a few related references. We believe that publishing such lists may be a very useful contribution to the mathematical life, and hope this will be done more often. At the beginning of the list we described the fate of some of the problems in the list published in the Springer Lecture Notes in Mathematics 1389 (Proceedings of the conference on "Algebraic curves and Projective Geometry", Trento 1988, edited by two of us).

We are very grateful to all participants for their enthusiasm (and the "Trento examples" are a fruit of their enthusiasm), to the contributors of this volume, to the referees for their precious help, to the three organizations which supported and sponsored the meeting, to C.I.R.M. for his help and assistance in running the meeting and in editing this volume.

All the papers were refereed. They are in final form and will not be published elsewhere.

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