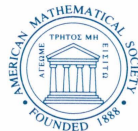


CONTEMPORARY MATHEMATICS

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Algebraic K -Theory,
Commutative Algebra,
and Algebraic Geometry



American Mathematical Society

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CONTEMPORARY MATHEMATICS

126

Algebraic K -Theory, Commutative Algebra, and Algebraic Geometry

Proceedings of the U.S.–Italy Joint Seminar
held June 18–24, 1989 at Santa Margherita Ligure, Italy
with support from the National Science Foundation
and Consiglio Nazionale delle Ricerche

R. Keith Dennis
Claudio Pedrini
Michael R. Stein
Editors



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Preface

In the mid-1960s several Italian mathematicians began to study the connections between classical arguments in commutative algebra and algebraic geometry, and the contemporaneous development of algebraic K -theory in the United States. These connections were exemplified by the work of Andreotti-Bombieri, Salmon, and Traverso on seminormality, and by Bass-Murthy on the Picard groups of polynomial rings. Interactions proceeded far beyond this initial point to encompass Chow groups of singular varieties, complete intersections, and applications of K -theory to arithmetic and real geometry.

With the joint support of the Consiglio Nazionale delle Ricerche (CNR) and the National Science Foundation (NSF), a joint seminar on Algebraic K -Theory, Commutative Algebra, and Algebraic Geometry was held at Santa Margherita Ligure, Italy from June 18 to June 24, 1989. In attendance were eighteen Italian and twelve U.S. mathematicians. Generous funding by the Comitato Nazionale per le Scienze Matematiche of CNR made it possible for several mathematicians from countries other than Italy and the United States to take part in the seminar.

The Conference was held in the seventeenth century palace, Villa Durazzo. Special thanks are due the Comune di Santa Margherita which made the villa and its magnificent park available to us.

This volume contains contributions from several of the participants in this seminar. Much of the typing and editorial correspondence was handled by Linda Hoppe of the Northwestern University Mathematics Department; we thank her for her efficient help.

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R. Keith Dennis, Claudio Pedrini, and Michael R. Stein, Editors

In the mid-1960s several Italian mathematicians began to study the connections between classical arguments in commutative algebra and algebraic geometry, and the contemporaneous development of algebraic K -theory in the United States. These connections were exemplified by the work of Andreotti-Bombieri, Salmon, and Traverso on seminormality, and by Bass-Murthy on the Picard groups of polynomial rings. Interactions proceeded far beyond this initial point to encompass Chow groups of singular varieties, complete intersections, and applications of K -theory to arithmetic and real geometry.

This volume contains the proceedings from a U.S.-Italy joint summer seminar which focused on this circle of ideas. The conference, held June 1989 in Santa Margherita Ligure, Italy, was supported jointly by the Consiglio Nazionale delle Ricerche and the National Science Foundation. The book contains contributions from some of the leading experts in this area.

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