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Algebra, *K*-Theory, Groups, and Education

On the Occasion of
Hyman Bass's 65th Birthday

T. Y. Lam
A. R. Magid
Editors



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Photo by Andy Magid

Hyman Bass delivering his Professional Autobiography,
Columbia University, November 6, 1997.

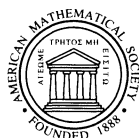
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American Mathematical Society
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A conference on Algebra, K-theory, Groups, and Education was held at Columbia University, New York, November 6–7, 1997 on the occasion of Hyman Bass's 65th birthday.

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Preface

Bismark is said to have chosen 65 for the retirement age of the federal pension system in nineteenth century Prussia because survival to that age was generally unlikely. Subsequently, 65 became enshrined as a traditional, even compulsory, age of retirement. Demographics made this increasingly irrelevant, and eventually law and custom came to recognize that vigor and productivity in the modern world do not come to a halt midway in the seventh decade. Hyman Bass is our favorite counterexample. Indeed, the reaction of many when informed that a conference was being organized on the occasion of Hyman Bass's 65th birthday was something like "Hyman turning 65? You've got to be kidding!" (The organizers' response: "We're not kidding. Teasing [Hyman], perhaps, but not kidding.")

Hyman Bass's 65th birthday, in October 1997, was an excellent excuse for his friends, colleagues, and students to express their appreciation for Hyman with a conference, held November 6 and 7, 1997, at Columbia University, on the subjects of Hyman's mathematical interests: Algebra, K-Theory, Groups, and Education. The conference organizers further divided those topics into areas and invited speakers to deliver expository addresses in those areas. A complete list of the lectures delivered at the Conference appears in these proceedings.

Most of the papers in this volume were subsequently prepared by the speakers based on their talks. We are also grateful to Deborah Ball, who was an invited speaker but unable to attend the conference, for her paper; to Irving Kaplansky, Hyman Bass's thesis advisor, for his paper; and to Peter Shalen, Edward Formanek, and Shahar Mozes, whose papers in this volume cover areas for which speakers did not have manuscripts. We are also very happy to include Hyman Bass's Mathematical Autobiography, delivered at the conference. Among other things, it serves as an excellent introduction to the mathematics that follows, so we have placed it first.

Finally, we would also like to use this space for some acknowledgments. The conference organizing committee consisted of Alexander Lubotzky, Andy Magid, and Henry Pinkham. Francine Brown and Dolores Cea of the Columbia Mathematics Department Staff handled local arrangements, including a birthday banquet. Michael Stein arranged the banquet program. At the time of the conference, Hyman Bass was Chair of the Board of Trustees of the American Mathematical Society, and we find it most appropriate that this volume appears in an AMS series. A poem composed by John Ewing, Executive Director of AMS, for the conference banquet, which pays humorous tribute to Hyman's work for the Society, as well as his work in Mathematics and Education, also appears here.

T. Y. Lam, Berkeley, CA

Andy R. Magid, Norman, OK

Columbia University - Department of Mathematics
November 6 and 7, 1997

**ALGEBRA, K-THEORY,
GROUPS, AND EDUCATION**
hb@65

Conference Program

- T.Y. Lam (Berkeley), "Ring Theory and Projective Modules"
Craig Huneke (Purdue), "Gorenstein Rings"
Robert Guralnick (USC), "(Linear) Algebra"
M.P. Murthy (Chicago), "Projective Modules Over Affine Algebras"
Charles Weibel (Rutgers), "Higher K-Theory"
David Wright (Washington U), "Automorphisms of Affine Space"
Hyman Bass (Columbia), "Automathography"
Andy Magid (Oklahoma), "Representation Varieties/Groups of Integral Representation Type"
John Morgan (Columbia), "Smith Conjecture Mathematics"
Alex Lubotzky (Hebrew U), "Groups and Lattices"
Andrei Rapinchuk (Virginia), "Congruence Subgroup Problem"

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This volume includes expositions of key developments over the past four decades in commutative and non-commutative algebra, algebraic K -theory, infinite group theory, and applications of algebra to topology. Many of the articles are based on lectures given at a conference at Columbia University honoring the 65th birthday of Hyman Bass. Important topics related to Bass's mathematical interests are surveyed by leading experts in the field. Of particular note is a professional autobiography of Professor Bass, and an article by Deborah Ball on mathematical education. The range of subjects covered in the book offers a convenient single source for topics in the field.

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