

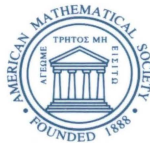
CONTEMPORARY MATHEMATICS

220

Homotopy Theory via Algebraic Geometry and Group Representations

Proceedings of a Conference on
Homotopy Theory
March 23–27, 1997
Northwestern University

Mark Mahowald
Stewart Priddy
Editors



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This volume contains the proceedings of a conference on homotopy theory held at Northwestern University on March 23–27, 1997.

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This volume is dedicated to Mark Mahowald in gratitude for his many wonderful and continuing contributions to homotopy theory. Only the fact that he is an editor of this volume prevents me from saying more. For those who know Mark nothing more need be said.

S. Priddy

Contents

Preface	ix
Plenary talks	xi
Buildings, group extensions and the cohomology of congruence subgroups ALEJANDRO ADEM	1
Hecke algebras acting on elliptic cohomology ANDREW BAKER	17
Some root invariants and Steenrod operations in $\text{Ext}_A(F_2, F_2)$ ROBERT R. BRUNER	27
Toward homology operations for mapping class groups F. R. COHEN AND ULRIKE TILLMANN	35
Spanier-Whitehead duality and critical points OCTAVIAN CORNEA	47
Comparing completions of a space at a prime PAUL GOERSS	65
Toward the homotopy groups of the higher real K -theory EO_2 VASSILY GORBUNOV AND PETER SYMONDS	103
Skew symmetric bundle maps DANIEL HENRY GOTTLIEB	117
The Adams spectral sequence for Minami's theorem WEN-HSIUNG LIN AND MARK MAHOWALD	143
Applications of the Minami-Webb formula to splitting classifying spaces JOHN MARTINO AND STEWART PRIDDY	179
Brave new worlds in stable homotopy theory J. P. MAY	193
The stable splitting of $B_{M_{12}}$ and related groups R. JAMES MILGRAM AND C. OVERTON	213
On the Kervaire invariant problem NORIIHIKO MINAMI	229

Schur Q -functions and a Kontsevich-Witten genus JACK MORAVA	255
Stable splittings of classifying spaces of amalgams of finite groups DANIEL JUAN-PINEDA	267
What we still don't know about loop spaces of spheres DOUGLAS C. RAVENEL	275
A topological calculus for formal power series NIGEL RAY	293
Notes on the Hopkins-Miller theorem CHARLES REZK	313
Commutative Morava homology Hopf algebras HAL SADOFSKY AND W. STEPHEN WILSON	367
Problems	375

Preface

The academic year 1996–97 was designated as a special emphasis year in Algebraic Topology at Northwestern University. In addition to visitors and special courses, an international conference entitled “Current trends in algebraic topology with applications to algebraic geometry and physics” was held during the period March 23–27. A series of plenary lectures, listed on the following page, indicates the great breadth of the conference and the attempt made to promote interaction between various areas of mathematics. We gratefully acknowledge the generous support provided by the National Science Foundation and Northwestern University. Approximately 120 mathematicians participated in the conference.

Conference participants were invited to submit original research papers related to the theme of the conference. All submissions were refereed to usual journal standards. One special feature is the paper prepared by Charles Rezk which covers the topics of his emphasis year course. A set of problems presented at a special problem session is given at the end of the volume. We thank Ran Levi, who generously agreed to conduct this session and collect the problems.

Finally, we thank Ms. Melanie Rubin for her editorial support in preparing this volume and for her many hours of assistance in arranging the conference.

Mark Mahowald
Stewart Priddy

Plenary Talks

- Lars Hasselholt, MIT, “Topological cyclic homology”
- Ruth Charney, Ohio State University, “CAT(0) geometry and Artin groups”
- Michael Hopkins, MIT, “Formal groups, spectra, and orientability”
- Nicholas Kuhn, University of Virginia, “Cohomological stability and generic representation theory”
- R. James Milgram, Stanford University, “The interaction of finite simple groups and stable homotopy theory”
- William Dwyer, University of Notre Dame, “Duality in homotopy theory”
- Douglas Ravenel, University of Rochester, “What we still don’t know about loop spaces of spheres”
- J. Peter May, University of Chicago, “Brave new worlds of stable homotopy theory”
- Ulrike Tillmann, Oxford University, “Moduli space of Riemann surfaces—a K -theory approach”
- Fred Cohen, University of Rochester, “Applications of group theory to classical homotopy theory”

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