

Eric M. Friedlander
Daniel R. Grayson

Editors

Handbook of *K*-Theory



Editors

Eric M. Friedlander
Department of Mathematics
Northwestern University
Evanston, Illinois 60208
USA
e-mail: eric@math.northwestern.edu

Daniel R. Grayson
Department of Mathematics
University of Illinois
at Urbana-Champaign
Urbana, Illinois 61801
USA
e-mail: dan@math.uiuc.edu

Library of Congress Control Number: 2005925753

ISBN-10 3-540-23019-X Springer Berlin Heidelberg New York
ISBN-13 978-3-540-23019-9 Springer Berlin Heidelberg New York

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilm or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable for prosecution under the German Copyright Law.

Springer is a part of Springer Science+Business Media

springeronline.com

© Springer-Verlag Berlin Heidelberg 2005
Printed in Germany

The use of general descriptive names, registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Typesetting and Production: LE-TEX Jelonek, Schmidt & Vöckler GbR, Leipzig
Cover design: deblik, Berlin
Printed on acid-free paper 41/3142/YL 5 4 3 2 1 0

Table of Contents – Volume 2

III. K-Theory and Geometric Topology

III.1 Witt Groups

Paul Balmer 539

III.2 K-Theory and Geometric Topology

Jonathan Rosenberg 577

III.3 Quadratic K-Theory and Geometric Topology

Bruce Williams 611

IV. K-Theory and Operator Algebras

IV.1 Bivariant K- and Cyclic Theories

Joachim Cuntz 655

IV.2 The Baum–Connes and the Farrell–Jones Conjectures

in K- and L-Theory

Wolfgang Lück, Holger Reich 703

IV.3 Comparison Between Algebraic and Topological K-Theory

for Banach Algebras and C*-Algebras

Jonathan Rosenberg 843

V. Other Forms of K-Theory

V.1 Semi-topological K-Theory

Eric M. Friedlander, Mark E. Walker 877

V.2 Equivariant K-Theory

Alexander S. Merkurjev 925

V.3 K(1)-Local Homotopy, Iwasawa Theory and Algebraic K-Theory	
<i>Stephen A. Mitchell</i>	955
V.4 The K-Theory of Triangulated Categories	
<i>Amnon Neeman</i>	1011

Appendix: Bourbaki Articles on the Milnor Conjecture

A Motivic Complexes of Suslin and Voevodsky	
<i>Eric M. Friedlander</i>	1081
B La conjecture de Milnor (d'après V. Voevodsky)	
<i>Bruno Kahn</i>	1105
Index	1151