## Contents

Preface	ix
Conference lectures	х
Conference participants	xii
Conference photo	xiv
Galois cohomology of the classical groups EVA BAYER-FLUCKIGER	1
Symplectic lattices Anne-Marie Bergé	9
Universal quadratic forms and the Fifteen Theorem J. H. CONWAY	23
On the Conway-Schneeberger Fifteen Theorem Manjul Bhargava	27
On trace forms and the Burnside ring MARTIN EPKENHANS	39
Equivariant Brauer groups A. FRÖHLICH AND C.T.C. WALL	57
Isotropy of quadratic forms and field invariants DETLEV W. HOFFMANN	73
Quadratic forms with absolutely maximal splitting OLEG IZHBOLDIN AND ALEXANDER VISHIK	103
2-regularity and reversibility of quadratic mappings ALEXEY F. IZMAILOV	127
Quadratic forms in knot theory C. KEARTON	135
Biography of Ernst Witt (1911–1991) Ina Kersten	155
Generic splitting towers and generic splitting preparation of quadratic forms  MANFRED KNEBUSCH AND ULF REHMANN	173

viii CONTENTS

Local densities of hermitian forms  MAURICE MISCHLER	201
Notes towards a constructive proof of Hilbert's theorem on ternary quartics VICTORIA POWERS AND BRUCE REZNICK	209
On the history of the algebraic theory of quadratic forms WINFRIED SCHARLAU	229
Local fundamental classes derived from higher $K$ -groups: III VICTOR P. SNAITH	261
Hilbert's theorem on positive ternary quartics RICHARD G. SWAN	287
Quadratic forms and normal surface singularities C.T.C. WALL	293