

CONTENTS

Introduction	vii
Normal decompositions of semi-algebraic sets C. ANDRADAS	1
Some open problems G. BRUMFIEL	19
La topologie du spectre réel MICHEL COSTE AND MARIE-FRANÇOISE ROY	27
Semialgebraic topology over a real closed field H. DELFS AND M. KNEBUSCH	61
A finiteness theorem for open semi-algebraic sets, with applications to Hilbert's 17th problem C. DELZELL	79
An (almost) trivial local-global principle for the representation of -1 as a sum of squares in an arbitrary commutative ring L. BRÖCKER, ANDREAS DRESS AND R. SCHARLAU	99
The Nash ring of a real surface G. EFROYMSON	107
Extension of an order to a simple transcendental extension R. GILMER	113
Théorie des modèles et fonctions définies positives sur les variétés algébriques réelles D. GONDARD	119
Chains of higher level orderings J. HARMAN	141
Some properties of positive derivations on f -rings M. HENRIKSEN AND F. SMITH	175
Quadratic forms over fields with finitely many orderings J. MERZEL	185

Finitely generated groups of divisibility B. GLASTAD AND J. MOTT	231
On quadratic forms and Abelian varieties over function fields A. PFISTER	249
Order extensions and real algebraic geometry D. DUBOIS AND T. RECIO	265
Real points and real places H. SCHÖLTING	289
The strong topology on real algebraic varieties N. SCHWARTZ	297
The square class invariant for Pythagorean fields D. SHAPIRO AND T. LAM	327
Coherent algebraic sheaves in real algebraic geometry A. TOGNOLI	341
Digging holes in algebraic closures à la Artin—II A. ENGLER AND T. VISWANATHAN	351