

# TABLE DES MATIÈRES DU TOME 1

## DOCUMENTS

Préparation du Congrès . . . . .	V
Donateurs . . . . .	IX
Séance inaugurale . . . . .	XI
Séance de clôture . . . . .	XIII
Liste des Congressistes. . . . .	XV

## MÉDAILLES FIELDS

ON THE WORK OF ALAN BAKER, by Paul TURÁN. . . . .	3
TRAVAUX DE HEISOUKÉ HIRONAKA SUR LA RÉSOLUTION DES SINGULARITÉS, par A. GROTHENDIECK. . . . .	7
ON THE WORK OF SERGE NOVIKOV, by M. F. ATIYAH. . . . .	11
ON THE WORK OF JOHN THOMPSON, by R. BRAUER. . . . .	15

## G - CONFÉRENCES GÉNÉRALES

A. BAKER. — <i>Effective methods in the theory of numbers.</i> . . . . .	19
RAOUL BOTT. — <i>On topological obstructions to intégrability</i> . . . . .	27
WILLIAM BROWDER. — <i>Manifolds and homotopy theory</i> . . . . .	37
SHIING-SHEN CHERN. — <i>Differential geometry; its past and its future</i> . . . . .	41
WALTER FEIT. — <i>The current situation in the theory of finite simple groups</i> . . . . .	55
I. M. GEL'FAND. — <i>The cohomology of infinite dimensional Lie algebras; some questions of integral geometry.</i> . . . . .	95
PHILLIP A. GRIFFITHS. — <i>A transcendental method in algebraic geometry</i> . . . . .	113
LARS HÖRMANDER. — <i>Linear differential operators.</i> . . . . .	121

TOSIO KATO. — <i>Scattering theory and perturbation of continuous spectra</i> . . . . .	135
H. JEROME KEISLER. — <i>Model theory</i> . . . . .	141
G. I. MARČHUK. — <i>Methods and problems of computational mathematics</i> . . . . .	151
L. PONTRYAGIN. — <i>Les jeux différentiels linéaires</i> . . . . .	163
E. M. STEIN. — <i>Some problems in harmonic analysis suggested by symmetric spaces and semi-simple groups</i> . . . . .	173
RICHARD G. SWAN. — <i>Algebraic K-theory</i> . . . . .	191
JOHN TATE. — <i>Symbols in arithmetic</i> . . . . .	201
C. T. C. WALL. — <i>Geometric topology: manifolds and structures</i> . . . . .	213

## A - LOGIQUE MATHÉMATIQUE

YU. L. ERŠOV. — <i>La théorie des énumérations</i> . . . . .	223
SOLOMON FEFERMAN. — <i>Ordinals and functionals in proof theory</i> . . . . .	229
YU. V. MATIJASEVIČ. — <i>Diophantine representation of recursively enumerable predicates</i> . . . . .	237
MICHAEL O. RABIN. — <i>Decidability and definability in second-order theories</i> . . . . .	239
ABRAHAM ROBINSON. — <i>Forcing in model theory</i> . . . . .	245
GERALD E. SACKS. — <i>Recursion in objects of finite type</i> . . . . .	251
PETR VOPĚNKA. — <i>The theory of semisets</i> . . . . .	255

## B - ALGÈBRE

### B<sub>1</sub> - ALGÈBRE GÉNÉRALE

S. I. ADJAN. — <i>Identités dans les groupes</i> . . . . .	263
S. A. AMITSUR. — <i>Some results on rings with polynomial identities</i> . . . . .	269
P. M. COHN. — <i>Free ideal rings and free products of rings</i> . . . . .	273
MAX KOECHER. — <i>Jordan algebras and differential geometry</i> . . . . .	279
A. I. KOSTRIKIN. — <i>Variations modulaires sur un thème de Cartan</i> . . . . .	285
B. H. NEUMANN. — <i>Properties of countable character</i> . . . . .	293
A. PFISTER. — <i>Sums of squares in real function fields</i> . . . . .	297

### B<sub>2</sub> - CATÉGORIES - ALGÈBRE HOMOLOGIQUE

MICHEL ANDRÉ. — <i>Homologie des algèbres commutatives</i> . . . . .	301
MICHAEL BARR. — <i>Non-abelian full embedding: outline</i> . . . . .	309
JEAN GIRAUD. — <i>Utilisation des catégories en géométrie algébrique</i> . . . . .	313

Z. HEDRLÍN. — <i>Extensions of structures and full embeddings of categories</i> . . . . .	319
PETER HILTON. — <i>Extensions of functors on groups and coefficients in a cohomology theory</i> . . . . .	325
F. W. LAWVERE. — <i>Quantifiers and sheaves</i> . . . . .	329
JOHN C. MOORE. — <i>Differential homological algebra</i> . . . . .	335
 B <sub>3</sub> - GROUPES FINIS	
RICHARD BRAUER. — <i>Blocks of characters</i> . . . . .	341
J. H. CONWAY. — <i>The subgroup structures of the exceptional simple groups</i> . . . . .	347
GEORGE GLAUBERMAN. — <i>Local and global properties of finite groups</i> . . . . .	349
DANIEL GORENSTEIN. — <i>Centralizers of involutions in finite simple groups</i> . . . . .	355
D. G. HIGMAN. — <i>A survey of some questions and results about rank 3 permutation groups</i> . . . . .	361
ZVONIMIR JANKO. — <i>A class of non-solvable finite groups</i> . . . . .	367
MICHIO SUZUKI. — <i>Characterizations of some finite simple groups</i> . . . . .	371
J. G. THOMSON. — <i>Quadratic pairs</i> . . . . .	375
 B <sub>4</sub> - CORPS LOCAUX ET GLOBAUX ANALYSE P-ADIQUE	
J. W. S. CASSELS. — <i>On cubic trigonometric sums</i> . . . . .	377
YASUTAKA IHARA. — <i>Non-abelian classfields over function fields in special cases</i> . . . . .	381
KENKICHI IWASAWA. — <i>On some infinite abelian extensions of algebraic number fields</i> . . . . .	391
TOMIO KUBOTA. — <i>Some results concerning reciprocity and functional analysis</i> . . . . .	395
Y. I. MANIN. — <i>Le groupe de Brauer-Grothendieck en géométrie diophantienne</i> . . . . .	401
I. R. SHAFAREVITCH. — <i>Le théorème de Torelli pour les surfaces algébriques de type K3</i> . . . . .	413
 B <sub>5</sub> - GÉOMÉTRIE ALGÉBRIQUE	
M. ARTIN. — <i>Construction techniques for algebraic spaces</i> . . . . .	419
PIERRE DELIGNE. — <i>Théorie de Hodge I</i> . . . . .	425
A. GROTHENDIECK. — <i>Groupes de Barsotti-Tate et cristaux</i> . . . . .	431
NICHOLAS M. KATZ. — <i>The regularity theorem in algebraic geometry</i> . . . . .	437

STEVEN L. KLEIMAN. — <i>Finiteness theorems for algebraic cycles</i> . . . . .	445
P. MONSKY. — <i>One dimensional formal cohomology</i> . . . . .	451
DAVID MUMFORD. — <i>The structure of the moduli spaces of curves and abelian varieties</i> . . . . .	457
A. N. PARŠIN. — <i>Quelques conjectures de finitude en géométrie diophantienne</i> . . . . .	467
MICHEL RAYNAUD. — <i>Variétés abéliennes et géométrie rigide</i> . . . . .	473
C. S. SESHADEVI. — <i>Quotient spaces modulo reductive algebraic groups and applications to moduli of vector bundles on algebraic curves</i> . . . . .	479

B<sub>6</sub> - THÉORIE DES NOMBRES,  
ÉLÉMENTAIRE ET ANALYTIQUE

JAMES AX. — <i>Transcendence and differential algebraic geometry</i> . . . . .	483
N. CHUDAKOV. — 1 <sup>o</sup> <i>On the generalized characters</i> . . . . .	487
— 2 <sup>o</sup> <i>The effective methods in the theory of quadratic fields</i> . . . . .	489
A. SCHINZEL. — <i>Reducibility of polynomials</i> . . . . .	491
WOLFGANG M. SCHMIDT. — <i>Some recent progress in diophantine approximations</i> . . . . .	497
V. G. SPRINDŽUK. — <i>New applications of analytic and p-adic methods in diophantine approximations</i> . . . . .	505
H. M. STARK. — <i>Class-number problems in quadratic fields</i> . . . . .	511
PAUL TURÁN. — <i>Diophantine approximation and analysis</i> . . . . .	519