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Optimal control theory and its applications. — Proceedings of the 14th biennial seminar of the Canadian mathematical congress, University of Western Ontario, August 12-25, 1973. Part 1. — Edited by Bruce J. Kirby. — Lecture notes in economics and mathematical systems, 105. — Un volume broché, 16,5 × 24, de vi, 425 pages, avec figures. — Prix: DM 35.00. — Springer, Berlin/Heidelberg/New York, 1974.

— *H. T. Banks*: Modeling of control and dynamical systems in the life sciences. — *H. Halkin*: Necessary conditions in mathematical programming and optimal control theory. — *J. L. Lions*: Various topics in the theory of optimal control of distributed systems. — *R. M. Thrall*: Game theory and some interfaces with control theory. — *W. M. Wonham*: Linear multivariable control.

Optimal control theory and its applications. — Proceedings of the 14th biennial seminar of the Canadian mathematical congress, University of Western Ontario, August 12-25, 1973. Part 2. — Edited by Bruce J. Kirby. — Lecture notes in economics and mathematical systems, 106. — Un volume broché, 16,6 × 24, de vi, 403 pages, avec figures. — Prix: DM 35.00. — Springer, Berlin/Heidelberg/New York, 1974.

— *H. T. Banks, M. Q. Jacobs, C. E. Langenhop*: Applications of the Fredholm alternative to controllability of functional differential equations. — *H. T. Banks and A. Manitius*: Convergence of projection series for functional differential equations with applications to control theory. — *R. G. Bodkin*: The CANDIDE model. — *C. W. Clark*: Optimal control theory and renewable resource management. — *F. H. Clarke*: Necessary conditions for nonsmooth variational problems. — *M. C. Delfour*: Linear hereditary differential systems and their control. — *F. D. Faulkner*: On finding solutions which dominate equilibrium solutions to some N -person differential games. — *W. B. Gearhart and F. Stenger*: An approximate convolution equation of a given response. — *F.-H. Hsu*: On reachable sets. — *V. Jurdjevic*: Attainable sets and controllability; a geometric approach. — *C. A. W. McCalla*: The quadratic criterion problem for systems governed by retarded functional differential equations and a modal analysis approximation procedure. — *R. E. O'Malley, Jr.*: Cheap control, singular arcs, and singular perturbations. — *H. Sagan*: Optimal control problems with a convex and compact control region. — *S. P. Sethi*: Optimal control problems in advertising. — *S. P. Sethi and T. W. McGuire*: An application of the maximum principle to a heterogeneous labor model with retarded controls. — *L. C. Young*: Remarks on some basic concepts of optimal control.

— *D. E. Boyce; A. Farhi; R. Weischedel*. — **Optimal subset selection: multiple regression, interdependence and optimal network algorithms.** — Lecture notes in economics and mathematical systems, 103. — Un volume broché, 16,5 × 24, de x, 187 pages, avec figures. — Prix: DM 20.00. — Springer, Berlin/Heidelberg/New York, 1974.

Introduction. — Optimal regression analysis. — Interdependence analysis. — Optimal network analysis. — Bibliography. — Index.

W. Murray WONHAM. — **Linear multivariable control: a geometric approach.** — Lecture notes in economics and mathematical systems, 101. — Un volume broché, 16,5 × 24, de x, 344 pages, avec figures. — Prix: DM 30.00. — Springer, Berlin/ Heidelberg/New York 1974.

Mathematical preliminaries. — Introduction to controllability. — Controllability, feedback and pole assignment. — Observability and dynamic observers. — Disturbance decoupling and output stabilization. — Controllability subspaces. — Tracking and regulation I: output stabilization. — Tracking and regulation II: internal stabilization. — Tracking and regulation III: structurally stable synthesis. — Noninteracting control I: basic principles. — Noninteracting control II: efficient compensation. — Noninteracting control III: generic solvability. — Quadratic optimization I: existence and uniqueness. — Quadratic optimization II: dynamic response.

Benjamin S. DURAN; Patrick L. ODELL. — **Cluster analysis: a survey.** — Lecture notes in economics and mathematical systems, 100. — Un volume broché, 16,5 × 24, de vi, 137 pages, avec figures. — Prix: DM 18.00. — Springer, Berlin/Heidelberg/New York, 1974.

The cluster problem and preliminary ideas. — Clustering by complete enumeration. — Mathematical programming and cluster analysis. — Similarity matrix representations. — Clustering based on density estimation. — Applications. — Historical comments.

J. BASS. — **Eléments de calcul des probabilités.** — 3^e édition revue et complétée. — Un volume broché, 16 × 24, de vii, 275 pages, avec figures. — Prix: FF 80.00. — Masson, Paris, 1974.

Introduction. — Probabilités finies. — Mesures et probabilités. — Variables aléatoires. Valeurs moyennes. — Fonction caractéristique. — Espaces produits. Probabilités conditionnelles. — Convergence en loi. Théorème central limite. — Convergence d'une suite de variables aléatoires. Loi des grands nombres. — Fonctions aléatoires. — Fonctions aléatoires stationnaires. — Notions sur les chaînes de Markov. — Notions de statistique. — Notions de statistique: les tests — Interprétation statistique de la mécanique quantique.

M. A. KAASHOEK; T. T. WEST. — **Locally compact semi-algebras.** — North-Holland mathematics studies, 9. — Un volume broché, 16,5 × 24, de ix, de 102 pages. — Prix: DFL 20.00. — North-Holland/American Elsevier publishing, Amsterdam/London/New York, 1974.

Compact monothetic semigroups. — Locally compact semi-algebras. — Semi-simple locally compact monothetic semi-algebras. — Positive operators.

Gérard HIRSCH; Jocelyne ROUYER. — **Intégrales simples.** — Collection « Comprendre et appliquer »: mathématiques pratiques et élémentaires, 2. — Un volume broché, 18 × 24, de vi, 73 pages, avec figures. — Prix: FF 24.00. — Masson, Paris, 1974.

Intégrale d'une fonction continue. — Rappels sur les fonctions logarithmes et exponentielles. — Fonctions trigonométriques inverses. — Fonctions hyperboliques et hyperboliques inverses. — Primitives classiques. — Intégration par changement de variable. —

Intégration par parties. — Intégration des fractions rationnelles. — Intégration des fractions rationnelles trigonométriques et hyperboliques. — Extension de la notion d'intégrale. — Calcul approché d'une intégrale par la méthode des trapèzes. — Tests généraux d'assimilation.

Applied statistics. — Proceedings of the conference at Dalhousie University, Halifax, May 2-4, 1974. — Edited by R. P. Gupta. — Un volume relié, $15,5 \times 23$, de x, 416 pages, avec figures. — Prix: DFL 80.00. — North-Holland/American Elsevier, Amsterdam/Oxford/New York, 1975.

Contient 28 exposés de: *D. F. Andrews*: Alternative calculations for regression and analysis of variance problems. — *W. T. Federer*: The misunderstood split plot. — *Alvan R. Feinstein*: Statistical models and medical reality. — *J. B. Garner*: Attribute regression on attributes. — *Z. Govindarajulu*: Best linear unbiased and invariant estimators for regression parameters based on ordered observations. — *R. P. Gupta*: On a certain MANOVA model. — *Shanti S. Gupta and Deng-Yuan Huang*: On subset selection procedures for Poisson populations and some applications to the multinomial selection problems. — *Irwin Guttman and C. G. Khatri*: A Bayesian approach to some problems involving the detection of spuriousity. — *Paul. B. Huber*: Educational measurement in the University: quantifying teaching quality and variations in grading standards. — *I. T. Jolliffe*: Cluster analysis as a multiple comparaison method. — *D. G. Kabe*. — Some results for the reduced form model. — *B. K. Kale*: Trimmed means and the method of maximum likelihood when spurious observations are present. — *C. G. Khatri and M. S. Srivastava*: On the likelihood ratio test for covariance matrix in growth curve model. — *André G. Laurent*: Structuralism: Remarks on spherical and hyperspherical structures. — *R. H. Loucks, D. J. Lawrence and D. V. Ingraham*: Note on estimation of plume and patch dispersion scales. — *P. D. M. Macdonald*: Estimation of finite distribution mixtures. — *I. B. MacNeill and R. G. Dowd*: Analysis of fish count data obtained using a digital echo counting system. — *E. C. Pielou*: Ecological models on an environmental gradient. — *J. R. Rutherford*: Design of experiments and data analysis: a scientific approach. — *S. M. Shah*: On the existence of affine μ -resolvable BIBD's. — *J. Singh and R. S. Gupta*: Derivation of a paired comparison model. — *R. Singh and D. Raghavarao*: Application of linked block designs in successive sampling. — *M. A. Stephens*: Axial and bimodal data on a sphere. — *T. W. F. Stroud*: Testing for equality of means in two gamma distributions. — *M. L. Tiku*: Laguerre series forms of the distributions of classical test-statistics and their robustness in non-normal situations. — *John W. Tukey*: Instead of Gauss-Markov least squares, what?. — *Arnold Zellner*: Time series analysis and econometric model construction. — *A panel discussion*: The universities' reponse to the increasing demand from government and industry for applied statisticians.

Linear operators and approximation II/Lineare Operatoren und Approximation II. — Proceedings of the conference held at the Oberwolfach mathematical research institute, Black Forest, March 30 — April 6, 1974/Abhandlungen zur Tagung in Mathematischen Forschungsinstitut Oberwolfach, Schwarzwald. — Ed. by/hrsg. von P. L. Butzer and/und B. Szökefalvi-Nagy. — International series of numerical mathematics, 25. — Un volume relié, $17,5 \times 25$, de xvii, 585 pages. — Prix: FS 82.00. — Birkhäuser, Basel/Stuttgart, 1974.

Operator theory : 4 exposés par H. F. Trotter; U. Westphal; B. Sz. -Nagy, C. Foias; J. T. Marti. — *Function algebras* : 5 exposés par W. Mlak; I. Suciu; G. K. Bragard,

R. J. Nessel; J. Boman; H. Günzler. — *Rearrangement invariant spaces and interpolation* : 6 exposés par C. Bennett; J. E. Gilbert; Y. Sagher; D. Gaspar, H. Johnen; F. Fehér; R. Sharpley. — *Harmonic analysis* : 4 exposés par P. R. Masani, M. Rosenberg; R.A. Hunt; F. Holland; L. Leindler. — *Orthogonal expansions and weighted approximation* : 4 exposés par B. Muckenhoupt; G. Freund; R. Askey; K. Tandori. — *Best approximation* : 5 exposés par J.-P. Kahane; W. Dahmen, E. Görlich; R. Devore; D. Leviatan; A. Schönhage. — *Korovkin-type theorems and saturation* : 5 exposés par H. Berens, G. G. Lorentz; D. Kershaw; S. Stadler; J. Szabados; G. Sunouchi. — *Differential equations and other applications* : 7 exposés par J. L. B. Cooper; G. Da Prato; R. P. Gilbert, R. J. Weinacht; G. G. Lorentz; J. W. Jerome, L. L. Schumaker; A. Ostrowski; Mitjagin. — *Sequences and summability theory* : 4 exposés par G. M. Petersen; K. Ishiguro, W. Meyer-König; W. Beekmann, K. Zeller; S. D. Chatterji.

Numerische methoden bei Differentialgleichungen und mit funktionalanalytischen Hilfsmitteln. — International series on numerical mathematics, vol. 19. — Vortragauszüge der Tagungen über Funktionalanalysis and numerische Mathematik vom 31. Mai bis 2. Juni 1972 in der Technischen Universität Clausthal-Zellerfeld und über Numerische Behandlung von Differentialgleichungen vom 4. bis 10 Juni 1972 am Mathematischen Forschungsinstitut Oberwolfach. — Herausgegeben von J. Albrecht und L. Collatz. — Un volume relié, $17,5 \times 24,5$, 231 pages, avec figures. — Prix: FS 59.00. — Birkhäuser Verlag, Basel/Stuttgart, 1974.

Contient 22 exposés de R. E. Barnhill, H. Brass, H. Brunner, J. C. Butcher, H. Engels, P. Forster, G. Hämerlin, J. Hersch, J. U. Keller, J. D. Lambert, F. Lempio, F. Locher, J. LL. Morris, W. Niethammer, A. Sachs, W. Schwartz, I. Toma, J. Werner, W. Wetterling, P. Wisskirschen.

A. KOLMOGOROFF. — **Grundbegriffe der Wahrscheinlichkeitsrechnung.** — Ergebnisse der Mathematik und ihrer Grenzgebiete hrsg. von der Schriftleitung des «Z. für Mathematik», 2. Band, 3. — Reprint of the 1933 ed. — Un volume broché, $15,5 \times 23$, de IV, 62 pages. — Prix: DM 22.00. — Springer Verlag, Berlin/Heidelberg/New York, 1973.

Die elementare Wahrscheinlichkeitsrechnung. — Unendliche Wahrscheinlichkeitsfelder. — Zufällige Größen. — Mathematische Erwartungen. — Bedingte Wahrscheinlichkeiten und Erwartungen. — Unabhängigkeit. Gesetz der grossen Zahlen.

Isabella Grigor'evna BASMAKOVA. — **Diophant und diophantische Gleichungen.** — Uni-Taschenbücher, 360. — Un volume broché, $12 \times 18,5$, de 97 pages, avec figures. — Prix: FS 11.70. — Birkhäuser Verlag, Basel/Stuttgart, 1974.

Diophant. — Zahlen und Symbole. — Diophantische Gleichungen. — Urteile von Wissenschaftshistorikern über die Methoden des Diophant. — Unbestimmte Gleichungen zweiten Grades. — Unbestimmte Gleichungen dritten Grades. — Diophant und die Zahlentheorie. — Diophant und die Mathematiker des 15. und 16. Jahrhunderts. — Die Methoden Diophant bei Viète und Fermat. — Diophantische Gleichungen bei Euler und Jacobi: die Addition von Punkten einer elliptischen Kurve. — Die geometrische Bedeutung der Addition von Punkten. — Die Arithmetik algebraischer Kurven. — Abschliessende Bemerkungen.

Isaac CHAVEL. — **Riemannian symmetric spaces of rank one.** — Lecture notes in pure and applied mathematics, 5. — Un volume broché, $18 \times 25,5$, de vii, 81 pages, avec figures. — Prix: \$10.75. — Marcel Dekker, New York, 1972.

Variational theory and comparison theorems: The first and second variation of arc length. — The analytic comparison theorems. — The geometry of Riemannian manifolds. — *1/4 pinched manifolds*: The cut locus and injectivity radius of Riemannian manifolds. — Even dimensional manifolds of minimum diameter. — Proof of M. Berger's theorem. — *Riemannian homogeneous spaces*: Lie groups and homogeneous spaces. — Riemannian homogeneous spaces. — The canonical connection and Jacobi's equations. — *Riemannian symmetric spaces of rank one*: Introduction. — Riemannian symmetric spaces of rank one. — Riemannian symmetric spaces of rank one as projective spaces. — Appendix.

R. B. BURCKEL. — **Characterizations of $C(X)$ among its subalgebras.** — Lecture notes in pure and applied mathematics, 6. — Un volume broché, $18 \times 25,5$, de vii, 159 pages. — Prix: \$12.75. — Marcel Dekker, New York, 1972.

Bishop's Stone-Weierstrass theorem. — Restriction algebras determining $C(X)$. — Werner's theorem on algebras with multiplicatively closed real part. — The work of Alain Bernard. — The theorems of Gorin and Čirka. — Bounded approximate normality, the work of Badé and Curtis. — Katzenelson's bounded idempotent theorem. — Characterization of $C(X)$ by functions which operate. — *Appendix*: Katzenelson's idempotent modification technique.

Ring theory. — Proceedings of the Oklahoma conference. — Edited by Bernard R. McDonald, Andy R. Magid, and Kirby C. Smith. — Lecture notes in pure and applied mathematics, 7. — Un volume broché, $18 \times 25,5$, de xvi, 295 pages, avec figures. — Prix: \$18.75. — Marcel Dekker, New York, 1974.

N. Jacobson: Pi-algebras. — *Robert Gilmer*: Dimension sequences of commutative rings. — Finite element factorization in group rings. — *Thomas S. Shores*: Bezout rings and their modules. — *F. R. DeMeyer*: Separable polynomials over a commutative ring. — *L. N. Childs*: Brauer groups of affine rings. — *E. Graham Evans, Jr.*: Basic elements and generators of modules. — *Joe W. Fisher*: Von Neumann regular rings versus v -rings. — *Melvin Hochster*: Constraints on systems of parameters. — *Stephen McAdam*: Finite coverings by ideals. — *Richard L. Tangeman*: Lower radical constructions in classes of rings. — *David J. Fieldhouse*: Aspects of purity. — *J. W. Brewer*: Flat ring extensions of a commutative ring. — *Raymond T. Hoobler*: Purely inseparable Galois theory. — *Robert Gordon*: Gabriel and Krull dimension.

Walter FEIBES. — **Introduction to finite mathematics.** — Un volume relié, $16,5 \times 24$, de xvi, 290 pages, avec figures. — Prix: £4.70. — Hamilton Publishing Co., Santa Barbara, 1974.

Elementary counting: permutations and combinations. — Probability. — Expected value and decision making. — The straight line for fun and profit. — Linear programming. — Games people play. — A bird's-eye view of high finance. — Appendices.

Peter HILTON; Yel-Chiang Wu. — **A course in modern algebra.** — Pure and applied mathematics. — Un volume relié, $15,5 \times 23,5$, de x, 249 pages, avec figures. — Prix: £9.20. — John Wiley & Sons, New York/London/Sydney/Toronto, 1974.

Groups : The definition of a group. Subgroups. Cosets, Lagrange's theorem, and normal subgroups. Homomorphisms. Direct and free products. Free groups and presentations. Exact sequences. — *Abelian groups* : Special features of commutative groups. Direct sums and products of abelian groups; The structure of finitely generated abelian groups. Projective and injective abelian groups. Exact sequences of abelian groups. The tensor product of abelian groups. — *Categories and Functors* : Categories, Functors. Natural transformations. Duality principle. Products and coproducts. Pullbacks and pushouts. Adjoint functors. Abelian categories. — *Modules* : Rings. Modules. The functor Hom. The functor \otimes . Projective modules. Injective modules. — *Integral domains* : Principal ideal domains. Unique factorization domains. Noetherian rings and modules. Modules over principal ideal domains. — *Semisimple rings* : The Morita theorem. Semisimple rings. — *The functors Ext and Tor* : Chain complexes, chain maps, and homology. Chain homotopy and the fundamental lemmas. The functor Ext. Properties of Ext. The functor Tor. Pullbacks and pushouts in $R\mathfrak{M}$, Ext^1 and extensions. — List of symbols.

Alston S. HOUSEHOLDER. — **Principles of numerical analysis.** — Revised ed. — Un volume broché, 14×21 , de viii, 274 pages. — Prix: \$4.00. — Dover publications, New York, 1974.

The art of computation. — Matrices and linear equations. — Nonlinear equations and systems. — The proper values and vectors of a matrix. — Interpolation. — More general methods of approximation. — Numerical integration and differentiation. — The Monte Carlo method.

L. KUIPERS; H. NIEDERREITER. — **Uniform distribution of sequences.** — Pure and applied mathematics. — Un volume relié, $16 \times 23,5$, de xiv, 390 pages. — Prix: £ 13.30. — John Wiley & Sons, New York/London/Sydney/Toronto, 1974.

Uniform distribution mod 1 : Definition. The Weyl criterion. Difference theorems. Metric theorems. Well-distributed sequences mod 1. The multidimensional case. Distribution functions. Normal numbers. Continuous distribution mod. 1. *Discrepancy* : Definition and basic properties. Estimation of discrepancy. Special sequences. Rearrangement of sequences. Numerical integration. Quantitative difference theorems. — *Uniform distribution in compact spaces* : Definition and important properties. Spaces with countable base. Equi-uniform distribution. Summation methods. — *Uniform distribution in topological groups* : Generalities. The generalized difference theorem. Convolution of sequences.

Monothetic groups. Locally compact groups. — *Sequences of integers and polynomials* : Uniform distribution of integers. Asymptotic distribution in Z_p . Uniform distribution of sequences in $GF[q,x]$ and $GF[q,x]$.

L. A. LUSTERNIK; V. J. SOBOLEV. — **Elements of functional analysis.** — Authorised 3d English translation from 2d extensively enlarged and rewritten Russian ed. — International monographs on advanced mathematics and physics. — Un vol. relié, 17×25 , de xvi, 360 p. — Prix: £11.60. — Hindustan publishing corp., Dehli/John Wiley & Sons, New York, 1974.

Metric spaces : Function spaces. Order relations. Metric spaces. Examples of metric spaces. Complete spaces. The completion of metric spaces. Theorems on complete spaces. The contraction mapping principle. Separable spaces. — *Normed linear space* : Linear spaces. Normed linear spaces. Linear topological spaces. Abstract Hilbert space. Generalized derivatives and spaces of S.I. Sobolev. — *Linear operators* : Linear operators. Linear operators in normed linear spaces. Linear functionals. The space of bounded linear operators. Inverse operators. Banach spaces with basis. — *Linear functionals* : Hahn-Banach extension theorem and its corollaries. The general form of linear functionals in certain functional spaces. Conjugate spaces and adjoint operators. Weak convergence of sequences of functionals and elements. — *Compacts sets in metric and normed spaces* : Definitions. General theorems. Criteria for compactness in some functional spaces. Finite dimension and compactness. The problem of the best approximation. Weak compactness. Universality of the space. $C[0,1]$. — *Completely continuous operators* : Completely continuous operators. Linear operator equations with completely continuous operators. Schauder principle and its applications. Completely continuous inclusion operators of Sobolev. — *Elements of spectral theory of self-adjoint operators on Hilbert spaces* : Self-adjoint operators. Unitary operators. Projection operators. Positive operators. Square roots of positive operators. Spectrum of self-adjoint operators. Spectral decomposition of self-adjoint operator. Non-bounded linear operators. Basic concepts and definitions. Self-adjoint operators and extension of symmetric operators. Deficiency indices. Spectral expansion of non-bounded self-adjoint operators. Functions of self-adjoint operators. Examples of non-bounded operators. — *Some problems of differential and integral calculus in normed linear spaces* : Differentiation and integration of abstract functions of real variables. The difference scheme and the theorem of P. Lax. Differential of an abstract function. Theorem of inverse operator. Newton's method. Homogeneous forms and polynomials. Differentials and derivatives of higher order. Differentials of functions of two variables. Theorems on implicit functions. Applications of implicit function theorem. Tangent manifolds. Extrema.

K. S. SIBIRSKY. — **Introduction to topological dynamics**. — Translated by Leo F. Boron. — Monographs and textbooks on pure and applied mathematics. — Un vol. relié, 15 × 23, de ix, 163 p. — Prix: DFL 55.00. — Noordhoff International Publishing, Leyden, 1975.

Introduction. — General properties of dynamical systems. — Limiting properties of dynamical systems. — Nonwandering points. Central motions. — Minimal sets and recurrent motions. — Almost periodic motions. Lyapunov stability. — Generalized theory of dynamical systems.

N. DINCULEANU. — **Integration on locally compact spaces**. — Monographs and textbooks on pure and applied mathematics. — Un vol. relié, 15 × 23, de xv, 626 p. Prix: DFL 195.00. — Noordhoff International Publishing, Leyden, 1974.

Measures on locally compact spaces : Definition of measure. Properties of measures. Dominated measures. The support of a measure. — L^p spaces. *Integrable functions* : The upper integral. Negligible functions and sets. Spaces. Integrable functions. — *Measurable functions*. The space L_∞ : Measurable functions and sets. Sequences of measurable functions. Integrability criteria. The space L_∞ . The lifting property. Relationship between L^p spaces — *Measures defined by densities* : Locally integrable functions. Measure defined by densities. Integration with respect to a measure defined by densities. Properties of measures defined by densities. Absolutely continuous measures. — *Sums of measures. Images of*

measures : Summable families of measures. Images of measures. Induced measures. Product of measures. — *Measures on locally compact groups* : Haar measure. Convolution. The group algebra. Representations. Harmonic analysis on locally compact commutative groups. — *Spaces of vector fields* : The L_A^p spaces. Orlicz spaces.

Numerische Behandlung von Differentialgleichungen. — Tagung im Mathematischen Forschungsinstitut Oberwolfach vom 9. bis 14. Juni 1974. — Tagungsleiter: R. Ansorge, L. Collatz, G. Hämerlin, W. Törnig. — International series of numerical mathematics, vol. 27. — Un vol. relié, 17×25 , de 355 p. — Prix: FS 52.00. — Birkhäuser Verlag, Basel und Stuttgart, 1975.

21 exposés de: E. Bohl, H. Brunner, R. Frank, I. Galliani, E. Gekeler, W. Gentzsch, R. B. Guenther, K. P. Hadeler, W. Höhn, C. Johnson, F. Locher, K. Merten, G. Micula, H. D. Mittelman, K. H. Müller, R. Rautmann, W. R. Richert, K. Schumacher, L. J. Shampine, J. Terray, P. Lancaster, B. Werner, J. R. Whiteman.

Numerische Methoden der Approximationstheorie, Band 2. — Vortragsauszüge der Tagung über numerische Methoden der Approximationstheorie vom 3. bis 9. Juni 1973 im Mathematischen Forschungsinstitut Oberwolfach (Schwarzwald). — Hrsg. von L. Collatz und G. Meinardus. — International series of numerical mathematics, vol. 26. — Un vol. relié, 17×25 , de 199 p. — Prix: FS 38.00. — Birkhäuser Verlag, Basel und Stuttgart, 1975.

20 exposés de: H. P. Blatt, E. W. Cheney, P. D. Morris, L. Collatz, H. Engels, W. Held, R. P. Hettich, I. Kolumban, K. Kubik, J. T. Marti, G. Opfer, T. Popoviciu, W. R. Richert, A. Sachs, G. Schmeisser, B. Sendov, D. D. Stancu, H. Strauss, B. Werner, J. Werner, L. Wuytack.

I. SZABO; K. WELLNITZ; W. ZANDER. — **Mathematik.** — 2. Aufl. — Hütte Taschenbücher der Technik. — Un vol. relié, 16×21 , de xviii, 373 p. — Prix: DM 48.00. — Springer-Verlag, Berlin/Heidelberg, 1974.

Tabellen. — Arithmetik. — Kreis- und Hyperbelfunktionen. — Differential- und Integralrechnung. — Lineare Vektoralgebra. — Vektoranalysis. — Analytische Geometrie. — Funktionen einer komplexen Veränderlichen. — Differentialgleichungen. — Praktische Mathematik. — Inhalte von Flächen und Körpern. — Wahrscheinlichkeitsrechnung und Statistik. — Rechnen auf digitalen Rechenautomaten.

Fritz NEISS; Heinz LIERMANN. — **Determinanten und Matrizen.** — 8. neubearb. Aufl. — Un vol. broché, $15,5 \times 23,5$, de vi, 182 p. — Prix: DM 19.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Grundlagen. — Vektorräume und Lineare Abbildungen. — Matrizen. — Determinanten. — Systeme linearer Gleichungen. — Euklidische Vektorräume. — Quadratische Formen.

Theodore J. RIVLIN. — **The Chebyshev polynomials.** — Pure and applied mathematics, a Wiley-Interscience series of texts, monographs and tracts. — Un vol. relié, $15,5 \times 23,5$, de vi, 186 p. — Prix: £8.60. — John Wiley and Sons, New York/London/Sydney/Toronto, 1974.

Definitions and some elementary properties. — Extremal properties: Uniform approximation of continuous functions; Maximizing linear functionals on \mathcal{P}_n . — Expansion of functions in series of Chebyshev polynomials. — Iterative properties.

Œuvres de Paul Lévy, vol. 1: Analyse. — Publiées sous sa direction par Daniel Dugué, avec la collab. de Paul Deheuvels et Michel Ibéro. — Un vol. relié, $18 \times 26,5$ de ix, 497 p., avec portr. — Prix: FF 150.00. — Gauthier-Villars, Paris/Bruxelles/Montréal, 1973.

Analyse fonctionnelle: 25 travaux publiés de 1910 à 1971. — *Théorie du potentiel*: 6 travaux publiés de 1910 à 1935. — *Calcul symbolique*: 2 articles, l'un publié en 1928, l'autre en 1945.

Œuvres de Paul Lévy, vol. 2: Analyse, géométrie, physique théorique. — Publiées sous sa direction par Daniel Dugué, avec la collab. de Paul Deheuvels et Michel Ibéro. — Un Vol. relié, $18 \times 26,5$ de 555 p. — Prix: FF 150.00. — Gauthier-Villars, Paris/Bruxelles/Montréal, 1974.

Séries: 17 travaux publiés de 1911 à 1934. — *Fonctions de variables réelles*: 11 travaux publiés de 1914 à 1940. — *Géométrie*: 14 travaux publiés de 1929 à 1969. — *Théorie de la mesure*: 9 travaux publiés de 1925 à 1966. — *Mathématiques appliquées et physique*: 4 travaux publiés de 1912 à 1951.

Chaim Samuel HOENIG. — **Volterra-Stieltjes integral equations.** — North-Holland mathematics studies, vol. 16. — Notas de matematica, vol. 56. — Un vol. broché, $16,5 \times 24$, de x, 157 p. — Prix: DFL 28.00. — North-Holland/American Elsevier, Amsterdam/Oxford/New York, 1975.

The interior integral: The Riemann-Stieltjes integral and the interior integral. — The Riemann integral and the Darboux integral. — Regulated functions. — Functions of bounded B -variations. — Representation theorems and the theorem of Helly. — Representation theorems on open intervals. — *The analysis of regulated functions*: The theorems of Bray and the formula of Dirichlet. — Extension to open intervals. — *Volterra-Stieltjes-integral equations with linear constraints*: The resolvent of a Volterra-Stieltjes-integral equation. — Integro-differential equations and harmonic operators. — Equations with linear constraints.

Maurice D. WEIR. — **Hewitt-Nachbin spaces.** — North-Holland mathematics studies, vol. 17. — Notas de matematica, vol. 57. — Un vol. broché, $16,5 \times 24$, de vii, 270 p. — Prix: DFL 40.00. — North-Holland Publishing Co./American Elsevier, Amsterdam/Oxford/New York, 1975.

Preface. — Embedding in topological products. — Hewitt-Nachbin spaces and convergence. — Hewitt-Nachbin spaces, uniformities, and related topological spaces. — Hewitt-Nachbin completeness and continuous mappings.

Jean-Pierre LAFON. — **Les formalismes fondamentaux de l'algèbre commutative.** — Collection « Enseignement des sciences », vol. 20. — Un vol. broché, $17 \times 24,5$ de xii, 259 p. — Prix: FF 68.00. — Hermann, Paris, 1974.

Catégories et foncteurs. Limites projectives et inductives : Généralités sur les catégories et foncteurs. Limites projectives et inductives. — *Anneaux* : Catégorie des anneaux. Généralités sur les anneaux commutatifs. Décomposition d'un anneau en produit fini d'anneaux. — *Modules* : Catégorie des modules. Notion de catégorie abélienne. Fidèle exactitude à gauche du foncteur Hom. Systèmes de générateurs. Limites inductives et projectives. Algèbres. — *Algèbre multilinéaire* : Définitions et propriétés du produit tensoriel. Algèbre tensorielle, symétrique, extérieure. — *Modules projectifs, injectifs, plats* : Modules projectifs et injectifs. Généralités sur les anneaux héréditaires. Modules plats et fidèlement plats. — *Eléments d'algèbre homologique* : Introduction. Homologie et cohomologie. Foncteurs dérivés de foncteurs d'une variable. Foncteurs de plusieurs variables, foncteurs Tor et foncteurs Ext. Application des foncteurs Tor aux modules plats.

Topics in topology. — Ed. by A. Csaszar. — Colloquia mathematica societatis Janos Bolyai, vol. 8. — Un vol. relié, 17 × 24, de 643 p. — Prix: DFL 130.00. — North-Holland Publishing Co., Amsterdam/London, 1974.

67 exposés présentés au Colloque de topologie de Keszthely (Lac Balaton), Hongrie, du 19 au 23 juin 1972 par: O. T. Alas, R. A. Alo, A. de Korvin, L. B. Kunes, K. Alster, P. R. Andenaes, L. Babai, A. Mate, W. Imrich, L. Lovasz, F. W. Bauer, M. Bognar, H. G. Bothe, S. Busazi-Boggyukevics, T. A. Chapman, J. J. Charatonik, G. Chogoshvili, A. Csaszar, K. Csaszar, J. van Dalen, F. Deak, D. Doitchinov, R. Z. Domiaty, C. H. Dowker, Dona Papert Strauss, R. Engelking, P. Erdős, A. Hajnal, S. Shelah, M. J. Faber, V. V. Fedorcuk, H. R. Fischer, R. Fric, Z. Frolik, S. Gacsalyi, W. Gähler, J. Gerlits, G. R. Gordh Jr., J. de Groot, N. Hadziivanov, P. Hamburger, J. Hejcman, H. Herrlich, P. Hilton, K. H. Hofmann, M. Mislove, K. Horvatic, M. Husek, F. B. Jones, I. Juhasz, H. Kok, W. Kulpa, K. Kuratowski, R. Liedl, K. Kunen, O. V. Lukucievskii, E. V. Scepin, S. Mardesic, J. Mioduszewski, E. E. Moise, K. Morita, M. Moszynska, G. Murphy, K. Nowinski, P. Nyikos, A. J. Ostaszewski, M. M. Postnikov, T. Przymusinski, J. Rosicky, M. Sekanina, M. E. Rudin, L. Rudolf, Yu. M. Smirnov, J. C. Smith, J. Szenthe, F. Szigeti, F. D. Tall, R. Telgarsky, W. Vogel, J. Vrabec.

Infinite and finite sets: to Paul Erdős on his 60th birthday. Vol. 1. — Ed. by A. Hajnal, R. Rado, Vera T. Sos. — Colloquia mathematica societatis Janos Bolyai, vol. 10. — Un vol. relié, 17 × 24, de 604 p. — Prix: DFL 350.00 pour les 3 vol. — North-Holland Publishing Co., Amsterdam/London, 1975.

33 exposés par: H. L. Abbott, L. Babai, F. Bagemihl, Zs. Baranyai, J. E. Baumgartner, F. Galvin, R. Laver, R. McKenzie, A. Mate, C. Berge, J.-C. Bermond, J. A. Bondy, R. Bonnet, A. Brace, D. E. Daykin, N. G. de Bruijn, S. A. Burr, P. Erdős, Kim Ki-Hang Butler, M. Chein, M. Rivière, S. L. G. Choi, D. V. Choodnovsky, R. O. Davies, W. Deuber, K. J. Devlin, J. B. Paris, W. Dörfler, R. B. Eggleton, G. Elekes, G. Hoffman, R. L. Graham, P. Montgomery, B. L. Rothschild, J. Spencer, E. G. Strauss, L. Posa, S. H. Hechler.

Infinite and finite sets: to Paul Erdős on his 60th birthday. Vol. 2. — Ed. by A. Hajnal, R. Rado, Vera T. Sos. — Colloquia mathematica societatis Janos Bolyai, vol. 10. — Un vol. relié, 17 × 24, de 474 p. — Prix: DFL 350.00 pour les 3 vol. — North-Holland Publishing Co., Amsterdam/London, 1975.

31 exposés par: P. Erdös, L. Lovasz, M. E. Rudin, M. Simonovits, E. Etourneau, V.T. Sos, R. J. Faudree, R. H. Schelp, A. S. Fraenkel, Y. Perl, G. Freud, F. Galvin, J. E. Graver, R. K. Guy, J. L. Selfridge, A. Gyarfás, A. Hajnal, I. Juhasz, E. Harzheim, P. Hell, A. J. W. Hilton, W. Imrich, I. T. Jakobsen, J.-L. Jolivet, S. Josza, E. Szeremedi, R. McKenzie, J. D. Monk, D. Kleitman, J. Komlos, K. Kunen, J. A. Larson, R. Laver, K. Leeb, M. D. Plummer.

Infinite and finite sets: to Paul Erdös on his 60th birthday. Vol. 3. — Ed. by A. Hajnal, R. Rado, Vera T. Sos. — Colloquia mathematica societatis Janos Bolyai, vol. 10. — Un vol. relié, 17×24 , de 472 p. — Prix: DFL 350.00 pour les 3 vol. — North-Holland Publishing Co., Amsterdam/London, 1975.

28 exposés par: W. Mader, A. R. D. Mathias, J. C. Meyer, E. C. Milner, S. Shelah, J. Nesetril, V. Rödl, V. Neumann-Lara, H.-J. Presia, G. B. Purdy, R. Rado, A. Recski, M. Riviere, G. Sabidussi, H. Sachs, J. Sheehan, G. J. Simmons, J. M. S. Simoes-Pereira, M. Simonovits, F. Sterboul, A. P. Street, E. G. Whitehead, Jr., L. Suranyi, B. Toft, W. T. Tutte, M. Las Vergnas, Jennifer Seberry Wallis, H. Walther, J. Yackel.

Theory of stochastic processes, no. 1. — Ed. by I. I. Gikhman. — Translated from the Russian by D. Louvish. — Un vol. relié, $17 \times 24,5$ de v, 157 p. — Prix: £9.40. — John Wiley and Sons/Israel Program for Scientific Translations, New York/Toronto/Jerusalem/London, 1974.

13 exposés de: V.V. Baklan, V. N. Bandura, I. V. Barkhatova, B. V. Bondarev, M. I. Brainin, Ya. S. Brodskii, A. P. Gatun, I. I. Gikhman, I. I. Kadyrova, Yu. N. Lin'kov, N. I. Portenko, L. N. Prokopenko, A. F. Taraskin, V. I. Shevchenko.

Kôsaku YOSIDA. — **Functional analysis.** — 4th edition. — Die Grundlehren der mathematischen Wissenschaften, Band 123. — Un vol. relié, 16×24 , de xi, 496 p, — Prix: DM 69.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1974.

Preliminaries. — Semi-norms. — Applications of the Baire-Hausdorff theorem. — The orthogonal projection and F. Riesz' representation theorem. The Hahn-Banach theorems. — Strong convergence and weak convergence. — Fourier transform and differential equations. — Dual operators. — Resolvent and spectrum. — Analytical theory of semi-groups. — Compact operators. — Normed rings and spectral representation. — Other representation theorems in linear spaces. — Ergodic theory and diffusion theory. — The integration of the equation of evolution.

Ernst Eduard KUMMER: **Collected papers. Vol. 1:** Contributions to number theory. — Edited by André Weil. — Un vol. relié, 17×25 , de viii, 957 p. — Prix: DM 98.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Introduction, par André Weil. — Kummer's language and notations. Nachruf für Ernst Eduard Kummer, von E. Lampe. — Schriften von E. E. Kummer. — Festschrift zur Feier des 100. Geburstages Eduard Kimmers mit Briefen an seine Mutter und an Leopold Kronecker, — Gedächtnisrede auf Ernst Eduard Kummer, von K. Hensel. — Suivis de 77 travaux de E. E. Kummer en latin, allemand et français.

Analyse convexe et ses applications. — Comptes rendus, janvier 1974. — Ed. by Jean-Pierre Aubin. — Lecture notes in economics and mathematical systems, vol. 102. — Un vol. broché, 16×24 , de 243 p. — Prix: DM 25.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1974.

15 exposés présentés aux journées d'analyse convexe qui ont eu lieu à Saint Pierre de Chartreuse (Isère) du 7 au 11 janvier 1974 par: M. Auslender, J. Baranger, Ph. Benilan, A. Bensoussan, P. Clauzure, I. Ekeland, C. Lemaréchal, H. Moulin, J.-J. Moreau, R. Robert, R. T. Rockafellar, R. Temam, M. Valadier, S. Zamir, E. H. Zarantonello.

Séminaire Bourbaki, vol. 1973/74, exposés 436-452. — Lecture notes in mathematics, vol. 431. — Un vol. broché, $16,5 \times 24$, de iv, 347 p. — Prix: DM 30.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

12 exposés de: M. F. Atiyah, Armand Borel, Lawrence Breen, Y. Colin de Verdière, Jean-Louis Koszul, T. A. Springer, Serge Alinhac, Michel Demazure, Pierre Gabriel, Michel Kervaire, Jean-Pierre Serre, Michèle Vergne, Hyman Bass, Joseph Le Potier, Jacques Martinet, Bernard Teissier, André Weil.

Rolf Peter PFLUG. — **Holomorphiegebiete, pseudokonvexe Gebiete und das Levi-Problem.** — Lecture notes in mathematics, vol. 432. — Un vol. broché, $16,5 \times 24$, de vi, 210 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Holomorphiegebiete: Reinhardtsche Gebiete. Holomorphiegebiete. Beispiele. — *Pseudokonvexität*: Plurisubharmonische Funktionen. Pseudokonvexe Gebiete. Beispiele. — *Das Levi-Problem*: Ein Satz aus der Theorie der Hilberträume. Schwache und starke Lösungen partieller Differentialgleichungen. Eine Dichtheitsaussage. Der Satz von Skoda. Lösung des Levi-Problems.

William G. FARIS. — **Self-adjoint operators.** — Lecture notes in mathematics, vol. 433. — Un vol. broché, $16,5 \times 24$, de vi, 115 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

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Philip BRENNER; Vidar THOMÉE; Lars B. WAHLBIN. — **Besov spaces and applications to difference methods for initial value problems.** — Lecture notes in mathematics, vol. 434. — Un vol. broché, $16,5 \times 24$, de 154 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Fourier multipliers on L_p . — Besov spaces. — Initial value problems and difference operators. — The heat equation. — First order hyperbolic equations. — The Schrödinger equation.

Charles F. DUNKL; Donald E. RAMIREZ. — **Representations of commutative semi-topological semigroups.** — Lecture notes in mathematics, vol. 435. — Un vol. broché, $16,5 \times 24$, de vi, 181 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New-York, 1975.

Basic results. — The representation algebra. — Positive-definite and completely positive functions. — Discrete separative semigroups. — Subsemigroups of locally compact abelian groups and weakly almost periodic functions. — Representations in Q -algebras. — Special cases of Q -representations. — Hilbert space representations. — Appendix A: Fourier analysis. — Appendix B: Spectral theorem. — Appendix C: The structure semigroup of the representation algebra.

Louis AUSLANDER; Richard TOLIMIERI; with the assistance of H. E. RAUCH. — **Abelian harmonic analysis, theta functions and function algebras on a nilmanifold.** — Lecture notes in mathematics, vol. 436. — Un vol. broché, $16,5 \times 24$, de 98 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Fourier transforms and the nilmanifold $\Gamma \backslash N$. — Functions on $\Gamma \backslash N$ and theta functions. — Elementary transformation theory. — Cohomology and theta functions. — Theta functions and distinguished subspaces. — The arithmetic of distinguished subspaces. — Fourier analysis on the Reisenberg manifold.

David MASSER. — **Elliptic functions and transcendence.** — Lecture notes in mathematics, vol. 437. — Un vol. broché, $16,5 \times 24$, de XIII, 143 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

A transcendence measure. — Vanishing of linear forms with complex multiplication. — An effective proof of a theorem of Coates. — A lower bound for non-vanishing linear forms. — Lemmas on elliptic functions with complex multiplication. — Linear forms in algebraic points. — A non-analytic modular function. — Zeros of polynomials in several variables. — A transcendence theorem for algebraic points. — Rational points on curve of genus one with complex multiplication.

Walter RUDIN. — **Analyse réelle et complexe.** — Trad. de l'américain par N. Dhombres et F. Hoffman de "Real and complex analysis", Mc-Graw-Hill, 1966. — Un vol. relié, $17 \times 24,5$ de x, 397 p. — Masson, Paris, 1975.

La fonction exponentielle. — Théorie abstraite de l'intégration. — Mesures de Borel positives. — Espaces L^p . — Théorie élémentaire des espaces de Hilbert. — Exemples d'utilisation des espaces de Banach. — Mesures complexes. — Intégration sur les espaces produits. — Différentiation. — Transformation de Fourier. — Propriétés élémentaires des fonctions holomorphes. — Fonctions harmoniques. — Le principe du maximum. — Approximation par des fonctions rationnelles. — Représentation conforme. — Zéros des fonctions holomorphes. — Prolongement analytique. — Espaces H^p . — Théorie élémentaire des algèbres de Banach. — Transformées de Fourier holomorphes. — Approximation uniforme par des polynômes. — Théorème de maximalité de Hausdorff.

Geometric topology. — Proceedings of the Geometric topology conference held at Park City, Utah, February 19-22, 1974. — Edited by L. C. Glaser and T. B. Rushing. — Lecture notes in mathematics, vol. 438. — Un vol. broché, $16,5 \times 24$, de x, 459 p. — Prix: DM 37.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

38 exposés de : Steve Armentrout, Fred Benson, H. W. Berkowitz, P. Roy, R. H. Bing, C. E. Burgess, J. L. Bryant, R. C. Lacher, B. J. Smith, J. W. Cannon, J. C. Cantrell, T. A. Chapman, M. Curtis, R. J. Daverman, W. Eaton, C. Pixley, R. Edwards, M. H. Freedman, L. C. Glaser, H. Gluck, M. A. Gutierrez, M. Handel, J. Hempel, G. Hermion, J. McPherson, L. S. Husch, W. Jaco, R. C. Kirby, L. C. Siebenmann, J. Keesling, L. Lininger, E. J. Mayland, Jr., D. R. McMillan, Jr., K. C. Millett, T. M. Price, C. L. Seebeck, III, F. Quinn, D. Rolfsen, T. B. Rushing, J. L. Shaneson, A.-H. Wright.

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Analytic spaces and algebraic varieties. — D -dimensions and Kodaira dimensions. — Fundamental theorems. — Classification of algebraic varieties and complex varieties. — Algebraic reductions of complex varieties and complexe manifolds of algebraic dimension zero. — Addition formula for Kodaira dimensions of analytic fibre bundles. — Examples of complex manifolds. — Miscellaneous results. — Classification of surfaces.

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Nathan JACOBSON. — **PI-algebras.** — An introduction. — Lecture notes in mathematics, vol. 441. — Un vol. broché, 16,5 × 24, de v, 115 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

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Calvin H. WILCOX. — **Scattering theory for the d'Alembert equation in exterior domains.** — Lecture notes in mathematics, vol. 442. — Un vol. broché, 16,5 × 24, de iii, 184 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Introduction. — Solutions of the d'Alembert equation in \mathbf{R}^n . — Solutions of the d'Alembert equation in arbitrary domains. — Steady-state scattering theory in exterior domains and the limiting absorption principle. — Time-dependent scattering theory in exterior domains. — Steady-state scattering theory and eigenfunction expansions for A . — Wave operators and asymptotic solutions of the d'Alembert equation in exterior domains. — Asymptotic wave functions and energy distributions in exterior domains. — An existence proof for the wave operators based on the abstract theory of scattering of M. S. Birman.

Michel LAZARD. — **Commutative formal groups.** — Lecture notes in mathematics, vol. 443. — Un vol. broché, $16,5 \times 24$, de II, 236 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Formal varieties. — Formal groups and buds. — The general equivalence of categories. — The structure theorem and its consequences. — On formal groups in characteristic p . — Extending and lifting some formal groups.

F. van OYSTAEYEN. — **Prime spectra in non-commutative algebra.** — Lecture notes in mathematics, vol. 444. — Un vol. broché, $16,5 \times 24$, de v, 128 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Generalities on localization. — Symmetric kernel functors. — Sheaves. — Primes in algebras over fields. — Application: the symmetric part of the Brauer group. — Appendix: localization of Azumaya algebras.

Bernard R. McDONALD. — **Finite rings with identity.** — Pure and applied mathematics, vol. 28. — Un vol. relié, $16 \times 23,5$ de IX, 429 p. — Prix: US\$27.50. — Marcel Dekker, New York, 1974.

Introduction and elementary results. — Finite fields. — Finitely generated modules over a ring. — The radical. — Nakayama's lemma and local rings. — Structure theorem for finite commutative rings. — Idempotents. — Finite simple rings. — Examples: the matrix ring and the group ring. — Basic rings and checkered matrix rings. — Decomposition of a ring as ideals. — Modules over a finite ring. — The polynomial ring $R[X]$ part I: regular polynomials. — The polynomial ring $R[X]$ part II: separable local extensions. — The Galois theory of local commutative rings. — Galois rings. — Local commutative rings. — The group of units of a commutative local ring. — The role of the Galois ring in the theory of finite rings. — The skew-polynomial ring $R[X;\sigma]$. — The units of a finite ring.

Johannes C. C. NITSCHE. — **Vorlesungen über Minimalflächen,** — Die Grundlehren der Mathematischen Wissenschaften, Band 199. — Un vol. relié, $17,5 \times 24$, de XIII, 775 p. — Prix: DM 196.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Einleitung: — *Kurven und Flächen:* Kurven. Flächen. Differential-geometrische Flächen. Minimalflächen. Spezielle Minimalflächen I. Die zweite Variation des Flächeninhaltes. — *Konforme Abbildung von Minimalflächen:* Konforme Abbildung offener nichtparametrischer Flächen. Konforme Abbildung offener parametrischer Minimal-

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Andor KERTESZ. — **Einführung in die transfinite Algebra.** — Elemente der Mathematik vom höheren Standpunkt aus, Band 7. — Un vol. broché, 14,5 × 23, de 74 p. — Prix: FS 24.00. — Birkhäuser Verlag, Basel/Stuttgart, 1975.

Einführung. — Vorbereitungen. — Das Auswahlaxiom und seine Äquivalente. — Erste Anwendungen: Der Satz von Krull. Existenz einer Basis eines Vektorraumes. Die Cauchysche Funktionalgleichung. Ueber die Existenz algebraischer Strukturen auf einer nichtleeren Menge. Anordnungsfähige abelsche Gruppen und Körper. Subdirekte Zerlegung von Ringen. — Eine Abstrakte Abhängigkeit. — Anwendungen des Invariantensatzes von unabhängigen Mengen. — Anwendungen für Moduln: Allgemeines über Moduln. Vollständig reduzible Moduln. Injektive Moduln. — Das Jacobsonsche Radikal eines Ringes.

Partial differential equations and related topics. — Ford Foundation sponsored program at Tulane university, January to May 1974. — Ed. by Jerome A. Goldstein. — Lecture notes in mathematics, vol. 446. — Un vol. broché, 16,5 × 24, de iv, 389 p. — Prix: DM 32.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

19 exposés par: D. G. Aronson, H. F. Weinberger, H. Brezis, F. E. Browder, D. G. Costa, D. G. de Figueiredo, H. O. Fattorini, C. Foias, J. M. Greenberg, F. A. Grünbaum, R. Hersh, J. L. Lions, L. A. Medeiros, J. Rauch.

Fractional calculus and its applications. — Proceedings of the international conference held at the University of New Haven, June 1974. — Ed. by Bertram Ross. — Lecture notes in mathematics, vol. 457. — Un vol. broché 16,5 × 24, de vi, 381 p. — Prix: DM 32.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

26 exposés par: B. Ross, I. N. Sneddon, K. S. Miller, M. A. Al-Bassam, R. Askey, P. L. Butzer, U. Westphal, J. A. Donaldson, A. Erdelyi, M. C. Gaer, L. A. Rubel, G. Gasper, T. P. Higgins, P. D. Johnson, Jr., H. Komatsu, J. Kucera, A. G. Laurent, E. R. Love, E. E. Hatch, J. R. Shanebrook, R. A. Struble, W. L. Wainwright, S. J. Wolfe, D. H. Wood, J. L. Lavoie, R. Tremblay, T. J. Osler, M. Mikolas, T. J. Osler.

Spectral theory and differential equations. — Proceedings of the symposium held at Dundee, Scotland, 1-19, July 1974. — Edited by W. N. Everitt. — Lecture notes in mathematics, vol. 448. — Un vol. broché, 16,5 × 24, de XII, 321 p. — Prix: DM 30.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

3 survey papers by: E. A. Coddington, T. Kato, J. Weidmann. — 12 papers by: L. Collatz, M. S. P. Eastham, W. D. Evans, W. N. Everitt, M. Giertz, H. Kalf, U.-W. Schmincke, J. Walter, R. Wüst, S. T. Kuroda, J. B. McLeod, A. Pleijel, F. S. Rofe-Beketov, K. Schmitt, B. D. Sleeman.

Sue TOLEDO. — **Tableau systems for first order number theory and certain higher order theories.** — Lectures notes in mathematics, vol. 447. — Un vol. broché, 16,5 × 24, de, 339 p. — Prix: DM 30.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

First order number theory: The finitary system Ψ . A constructive consistency proof for Ψ . The infinitary system Ω ; Ψ as a substance of Ω . A constructive consistency proof for Ω . The incompleteness of Ψ (missing provable ordinals). — *Second order logic*: Two formulations of second order logic; translation procedures. Second order models and truth sets. Consistency and completeness proofs. Logical frameworks for higher order logic and type theory; the Henkin completeness theorem. — *Other higher order systems due to Schütte*: The system Λ of type-free logic. The system γ of ramified type theory. Systems of analysis in ramified type theory: Γ and Γ^* . Transfinite induction in Γ and Γ^* . The interpretation of analysis. — Cut elimination in first order logic as repetition introduction. — A translation procedure between tableau systems and Schütte systems with positive and negative parts. — Applications of Gentzen's (second) consistency proof to intuitionistic number theory and analysis.

Combinatorial mathematics III. — Proceedings of the 3d Australian conference held at the University of Queensland, 16-18 May 1974. — Ed. by Anne Penfold Street and W. D. Wallis. — Lecture notes in mathematics, vol. 452. — Un vol. broché, 16,5 × 24, de IX, 233 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

4 invited addresses by: V. G. Cerf, D. D. Cowan, R. C. Mullin, R. G. Stanton, H. Shank, W. T. Tutte. — 18 contributed papers by: A. Brace, J. Brett, H. T. Clifford, R. J. Collens, R. G. Stanton, E. Cousins, W. D. Wallis, A. J. Dobson, M. Doherty, H. M. Finucan, D. D. Grant, P. C. Hogarth, D. A. Holton, K. C. Stacey, R. B. Lakein, J. S. Wallis, C. H. C. Little, K. L. McAvaney, M. J. McLean, D. B. Johnston, A. Rahilly, Roberts, A. P. Street, G. Szekeres.

Algebra and logic. — Papers from the 1974 Summer research institute of the Australian mathematical society, Monash university, Australia. — Ed. by J. N. Crossley. — Lecture notes in mathematics, vol. 450. — Un vol. broché, 16,5 × 24, de VIII, 307 p. — Prix: DM 28.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

11 exposés de: M. G. Gresswell, S. Feferman, R. Gilmer, R. I. Goldblatt, S. K. Thomason, P. J. Hilton, R. McFadden, G. Metakides, A. Nerode, A. Mostowski, J. Staples.

Estimation theory. — Ed. by Demetrios G. Lainiotis. — Reprinted from « Information sciences », an international journal. — Un vol. broché, 16 × 24, de 174 p. — Prix: DFL 37.50. — American Elsevier, New York/Amsterdam/London, 1974.

D. G. Lainiotis : Estimation: a brief survey. — D. G. Lainiotis : Partitioned estimation algorithms, I: nonlinear estimation. — J. M. Richardson : The implicit conditioning method in statistical mechanics. — H. W. Sorenson : On the development of practical nonlinear filters. — D. L. Alspach : Gaussian sum approximation in nonlinear filtering and control. — D. G. Lainiotis and J. G. Deshpande : Parameter estimation using splines. — D. G. Lainiotis : Partitioned estimation algorithms, II: linear estimation. — R. L. Kashyap : Minimax estimation with divergence loss function.

V. I. ARNOLD. — **Ordinary differential equations.** — Translated and edited by Richard A. Silverman. — Un vol. broché, 16 × 23,5, de VIII, 280 p. — Prix: £8.25. — M. I. T. Press, Cambridge, Mass./London, 1973.

Basic concepts : Phase spaces and phase flows. Vector fields on the line. Phase flows on the line. Vector fields and phase flows in the plane. Nonautonomous equations. The tangent space. — *Basic theorems* : The vector field near a nonsingular point. Applications to the nonautonomous case. Applications to equations of higher order. Phase curves of autonomous systems. The directional derivative. First integrals. Conservative systems with one degree of freedom. — *Linear systems* : Linear problems. The exponential of an operator. Properties of the exponential. The determinant of the exponential. The case of distinct real eigenvalues. Complexification and decomplexification. Linear equations with a complex phase space. Complexification of a real linear equation. Classification of singular points of linear systems. Topological classification of singular points. Stability of equilibrium positions. The case of purely imaginary eigenvalues. The case of multiple eigenvalues. More on quasi-polynomials. Nonautonomous linear equations. Linear equations with periodic coefficients. Variation of constants. — *Proofs of the basic theorems* : Contraction mappings. The existence, uniqueness, and continuity theorems. The differentiability theorem. — *Differential equations on manifolds* : Differentiable manifolds. The tangent bundle. Vector fields on a manifold. The phase flow determinated by a vector field. The index of a singular point of a vector field.

A. H. LIGHTSTONE and Abraham ROBINSON. — **Nonarchimedean field and asymptotic expansions.** — North-Holland mathematical library, vol. 13. — Un vol. broché, 15,5 × 23, de x, 204 p. — Prix: DFL 60.00. — North-Holland publishing co., Amsterdam/Oxford; American Elsevier publishing co., New York, 1975.

Preface. — Nonarchimedean fields. — Nonstandard analysis. — The field $\mathcal{P}\mathcal{R}$. — Functions in $\mathcal{P}\mathcal{R}$. — Euler-MacLaurin expansions. — Asymptotic expansions — the formal concept. — Popken space. — Bibliography. — Index.

T. YOSHIZAWA. — **Stability theory and the existence of periodic solutions and almost periodic solutions.** — Applied mathematical sciences, 14. — Un vol. broché, 17 × 26, de VII, 233 p. — Prix: DM 23.30. — Springer, New York/Heidelberg/Berlin, 1975.

Preliminaries : Liapunov functions. Almost periodic functions. Asymptotically almost periodic functions. Quasi-periodic functions. Boundary value problem. — *Stability and boundedness* : Stability of a solution. Asymptotic stability of a solution. Boundedness of solutions. Asymptotic stability in the large. Asymptotic behavior of solutions. Converse theorems. Total stability. Inherited properties in almost periodic systems. Uniformly asymptotic stability in almost periodic systems. — *Existence theorems for periodic solutions*

and almost periodic solutions: Existence theorems for periodic solutions. Existence theorems for almost periodic solutions. Separation condition in almost periodic systems. Uniform stability and existence of almost periodic solutions. Existence of almost periodic solutions by Liapunov functions.

Collected papers of Hans Rademacher, Vol. 1. — Edited by Emil Grosswald. — Mathematicians of our time, vol. 3. — Un vol. relié, 18,5 × 26, de xix, 692 p. — Prix: £21.25. — The MIT press, Cambridge, Mass./London, 1974.

Preface. — Biographical sketch. — 28 exposés en allemand publiés entre les années 1916 et 1932: Eineindeutige Abbildungen und Messbarkeit. — Ueber die Eineindeutigkeit im Kleinen und im Grossen stetiger Abbildungen von Gebieten (with C. Carathéodory). — Zu dem Borelschen Satz über die asymptotische Verteilung der Ziffern in Dezimalbrüchen. — Nachträgliche Bemerkung. — Ueber partielle und totale Differenzierbarkeit von Funktionen mehrerer Variabeln und über die Transformation der Doppelintegrale. — Ueber streckentreue und winkeltreue Abbildung. — Bemerkungen zu den Cauchy-Riemannschen Differentialgleichungen und zum Moreraschen Satz. — Ueber partielle und totale Differenzierbarkeit von Funktionen mehrerer Variabeln. II. — Ueber eine Eigenschaft von messbaren Mengen positiven Masses. — Zur Theorie der Minkowskischen Stützebenenfunktion. — Ueber die asymptotische Verteilung gewisser konvergenzerzeugender Faktoren. — Ueber den Konvergenzbereich der Eulerschen Reihentransformation. — Ueber eine funktionale Ungleichung in der Theorie der konvexen Körper. — Einige Sätze über Reihen von allgemeinen Orthogonalfunktionen. — Beiträge zur Viggo Brunschen Methode auf die Theorie der algebraischen Zahlkörper. — Ueber den Vektorenbereich eines konvexen ebenen Bereiches. — Zur additiven Primzahltheorie algebraischer Zahlkörper, I & II. — Ueber eine Erweiterung des Goldbachschen Problems. — Zur additiven Primzahltheorie algebraischer Zahlkörper, III. — Eine Bemerkung zu Herrn Petersson's Arbeit: „Ueber die Darstellung natürlicher Zahlen durch definite und indefinite quadratische Formen von $2r$ Variablen“. — Die Quantelung des symmetrischen Kreisels nach Schrödinger's Undulationsmechanik (paper by Fritz Reiche; appendixes by Rademacher). — Die Quantelung des symmetrischen Kreisels nach Schrödinger's Undulationsmechanik. II. Intensitätsfragen (with F. Reiche). — Ein neuer Beweis für die Funktionalgleichung der Z -Funktion. — Ueber die Erzeugenden von Kongruenzuntergruppen der Modalgruppe. — Zur Theorie der Modulfunktionen. — Eine arithmetische Summenformel.

Hyperfunctions and theoretical physics. — Rencontre de Nice, 21-30 mai 1973. — Edited by Frédéric Pham. — Lecture notes in mathematics, 449. — Un vol. broché, 16,5 × 24, de iv, 218 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

A. Cerezo, J. Chazarain, A. Piriou: Introduction aux hyperfonctions. — T. Kawai: Pseudo-differential operators acting on the sheaf of microfunctions. — M. Kashiwara, T. Kawai: Micro-hyperbolic pseudo-differential operators. — F. Pham: Microanalyticité de la matrice S . — D. Iagolnitzer: Macrocausality, physical-region analyticity and independence property in S -matrix theory. — D. Iagolnitzer: Micro-local essential support of a distribution and decomposition theorems. — an introduction. — D. Olive: Unitary and discontinuity formulae. — H. Epstein, V. Glaser, R. Stora: Geometry of the n -point p -space function of quantum field theory. — R. Stora: Some applications of the Jost-Lehmann-Dyson theorem to the study of the global analytic structure of the n -point function of quantum field theory. — J. Bros, H. Epstein, V. Glaser, R. Stora: Quelques aspects globaux des problèmes d'edge of the wedge.

Logic colloquium: symposium on logic held at Boston, 1972-73. — Ed. by R. Parikh. — Lecture notes in mathematics, 453. — Un vol. broché, 16,5 × 24, de iv, 251 p. — Prix: DM 25.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

J. N. Crossley and A. Nerode: Combinatorial functors. — H. Friedman: Equality between functionals. — G. Kreisel, G. F. Mints and S. G. Simpson: The use of abstract language in elementary meta-mathematics: some pedagogic examples. — A. Meyer: Weak monadic second order theory of successor is not elementary-recursive. — W. V. Quine: The variable. — R. Suszko: Abolition of the fregean axiom. — W. Tait: A realizability interpretation of the theory of species.

Hanspeter KRAFT. — **Kommutative algebraische Gruppen und Ringe.** — Lecture notes in mathematics, 455. — Un vol. broché, 16,5 × 24, de iii, 163 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Einleitung. — Bezeichnungen und Abkürzungen. — Voraussetzungen und Grundlagen. — Cohenschemata, Struktursatz für unipotente Gruppen. — R -Moduln und Einheitengruppen. — Kommutative Ringschemata. — Das Endomorphismen-Schema eines R -Moduls.

Robert M. FOSSUM; Phillip A. GRIFFITH; Idun REITEN. — **Trivial extensions of abelian categories.** — Homological algebra of trivial extensions of abelian categories with applications to ring theory. — Lecture notes in mathematics, 456. — Un vol. broché, 16,5 × 24, de xi, 122 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975

Introduction. — Preliminaries. — Generalities. — Coherence. — Duality and the Gorenstein property. — Homological dimension in $A \propto F$. — Gorenstein modules. — Dominant dimension of finite algebras. Representation dimension of finite algebras.

Peter WALTERS. — **Ergodic theory: introductory lectures.** — Lecture notes in mathematics, 458. — Un vol. broché, 16,5 × 24, de vi, 198 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/ New York, 1975.

Preliminaries. — Measure-preserving transformations. — Isomorphism and spectral invariants. — Measure-preserving transformations with pure point spectrum. — Entropy. — Topological dynamics. — Topological entropy.

Ottmar LOOS. — **Jordan pairs.** — Lecture notes in mathematics, 460. — Un vol. broché, 16,5 × 24, de xvi, 218 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Jordan pairs: Definitions and relations with Jordan algebras and triple systems. Identities and representations. The quasi-inverse. Radicals Peirce decomposition. — *Alternative pairs*: Basic properties and relations with alternative algebras. The Jordan pair associated with an alternative pair. Imbedding into Jordan pairs. Peirce decomposition. — *Alternative and Jordan pairs with chain conditions*: Inner ideals and chain conditions. — Classification of alternative pairs. Classification of Jordan pairs. — *Finite-dimensional Jordan pairs*: Universal enveloping algebras. Solvability and nilpotence. Cartan subpairs. The generic minimum polynomial. Simple Jordan pairs. Polynomial and rational functions.

Computational mechanics: international conference on computational methods in nonlinear mechanics, Austin, Texas, 1974. — Ed. by J. T. Oden. — Lecture notes in mathematics, 461. — Un vol. broché, 16,5 × 24, de vii, 328 p. — Prix: DM 30.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

13 exposés par: W. F. Ames, M. Ginsberg, J. H. Argyris, P. C. Dunne, B. Bichat, G. J. Fix, J. E. Fromm, R. H. Gallagher, W. Herrmann, L. D. Bertholf, S. L. Thompson, J. L. Lions, J. T. Oden, L. C. Wellford, Jr., W. C. Rheinboldt, P. J. Roache, V. Szebehely, D. M. Young, O. C. Zienkiewicz.

H. HALBERSTAM; H.-E. RICHERT. — **Sieve methods.** — London Mathematical Society Monographs, vol. 4. — Un vol. relié, 16 × 23,5, de xiii, 364 p. — Prix: £9.80. — Academic press, London/New York/San Francisco, 1974.

Introduction. — The sieve of Eratosthenes: formulation of the general sieve problem. — The combinatorial sieve. — The simplest Selberg upper bound method. — The Selberg upper bound method (continued): *O*-results. — The Selberg upper bound method: explicit estimates. — An extension of Selberg's upper bound method. — Selberg's sieve method (continued): a first lower bound. — The linear sieve. — A weighted sieve: the linear case. — Weighted sieves: the general case. — Chen's theorem.

Manifolds-Tokyo 1973. — Proceedings of the international conference on manifolds and related topics in topology, Tokyo, 1973. — Ed. by Akio Hattori. — Un vol. relié, 19 × 27, de x, 433 p. — Prix: £16.00. — Published for the Mathematical Society of Japan by the University of Tokyo press, 1975.

2 general lectures by M. F. Atiyah and E. C. Zeeman. — *Topology of manifolds*: 12 exposés par W. Browder, F. Quinn, D. Sullivan, S. Morita, C. T. C. Wall, S. Smale, H. Sato, M. G. Scharlemann, L. C. Siebenmann, R. C. Kirby, S. Fukuhara, K. Shiga, T. Homma, W.-C. Hsiang. — *Singularities*: 6 exposés par E. Brieskorn, G.-M. Greuel, M. Kato, Y. Matsumoto, M. Oka, K. Sakamoto, N. A'Campo. — *Foliations*: 5 exposés par R. Bott, R. Thom, J. N. Mather, I. Tamura, T. Mizutani. — *Dynamical systems*: 3 exposés par N. H. Kuiper, K. Shiraiwa, G. Ikegami. — *Cobordism and transformation groups*: 4 exposés par K. Kawakubo, A. Hattori, P. E. Conner, F. Raymond, M. Nakaoka. — *Algebraic topology*: 8 exposés par J. F. Adams, M. E. Mahowald, H. Toda, M. Mimura, Z. Yosimura, G. Nishida, F. P. Peterson, A. Tsuchiya. — *General theory of complex manifolds*: 6 exposés par D. C. Spencer, H. Hironaka, S. Nakano, K. Ueno, S. Kobayashi, B. G. Moishezon. — *Algebraic theory of algebraic varieties*: 4 exposés par S. Iitaka, T. Shioda, K. Akao, T. Oda, K. Miyake. — *Analytic theory of complex manifolds*: 6 exposés par E. Horikawa, M. Inoue, E. Bombieri, I. Nakamura, Y. Namikawa, A. G. Vitushkin. — Some problems in topology.

BO STENSTRÖM. — **Rings of quotients: an introduction to methods of ring theory.** — Die Grundlehren der mathematischen Wissenschaften, Band 217. — Un vol. relié, 17 × 25, de viii, 309 p. — Prix: DM 92.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Modules. — Rings of fractions. — Modular lattices. — Abelian categories. — Grothendieck categories. — Torsion theory. — Hereditary torsion theories for noetherian rings. — Rings and modules of quotients. — The category of modules of quotients. —

Perfect localizations. — The maximal ring of quotients of a non-singular ring. — Finiteness conditions on $\text{Mod}(A, \mathcal{F})$. — Self-injective rings. — Classical rings of quotients.

James E. HUMPHREYS — **Linear algebraic groups.** — Graduate texts in mathematics, vol. 21. — Un vol. relié, $16 \times 24,5$, de xiv, 247 p. — Prix: DM 43.80. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Algebraic geometry : Affine and projective varieties. Varieties. Dimension. Morphisms. Tangent spaces. — *Affine algebraic groups* : Basic concepts and examples. Actions of algebraic groups on varieties. — *Lie algebras* : Lie algebra of an algebraic group. Differentiation. — *Homogeneous spaces* : Construction of certain representations. Quotients. — *Characteristic O theory* : Correspondence between groups and Lie algebras. Semisimple groups. — Semisimple and unipotent elements: Jordan-Chevalley decomposition. Diagonalizable groups. — *Solvable groups* : Nilpotent and solvable groups. Semisimple elements. Connected solvable groups. One dimensional groups. — *Borel subgroups* : Fixed point and conjugacy theorems. Density and connectedness theorems. Normalizer theorem. — *Centralizers of tori* : Regular and singular tori. Action of a maximal torus on G/B . The unipotent radical. — *Structure of reductive groups* : The root system. Bruhat decomposition. Tits systems. Parabolic subgroups. — *Representations and classification of semisimple groups* : Representations. Isomorphism theorem. Root systems of rank 2. — *Survey of rationality properties* : Fields of definition. Special cases.

S. LEFSCHETZ. — **Applications of algebraic topology.** — Graphs and networks, the Picard-Lefschetz theory, and Feynman integrals. — Applied mathematical sciences, vol. 16. — Un vol. broché, $17 \times 25,5$, de viii, 189 p. — Prix: DM 22.10. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Application of classical topology to graphs and networks : A resume of linear algebra. Duality in vector spaces. Topological preliminaries. Graphs. Geometric structure. Graph algebra. Electrical networks. Complexes. Surfaces. Planar graphs. — *The Picard-Lefschetz theory and Feynman integrals* : Topological and algebraical considerations. The Picard-Lefschetz theory. Extension to higher varieties. Feynman integrals.

Ralph K. AMAYO; Ian STEWART. — **Infinite-dimensional Lie algebras.** — Un vol. relié, 17×25 , de xi, 425 p. — Prix: DFL 119.00. — Noordhoff international publishing, Leyden, 1974.

Basic concepts. Soluble subideals. Coalescent classes of Lie algebras. Locally coalescent classes of Lie algebras. The Mal'cev correspondence. Locally nilpotent radicals. Lie algebras in which every subalgebra is a subideal. Chain conditions for subideals. Chain conditions on descendant abelian subalgebras. Existence theorems for abelian subalgebras. Finiteness conditions for soluble Lie algebras. Frattini theory. Neoclassical structure theory. Varieties. The finite basis problem. Engel conditions. Kostrikin's theorem. Razmyslov's theorem.

Probabilistic methods in differential equations. — Proceedings of the conference held at the University of Victoria, August 19-20, 1974. — Ed. by M. A. Pinsky. — Lecture notes in mathematics, vol. 451. — Un vol. broché, $16,5 \times 24$, vii, 162 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

14 exposés par: K. Ito, A. Friedman, A. Bensoussan, J. Lions, M. Malliavin, R. Hersh, P. Greenwood, F. Wang, M. Donkser, S. Varadhan, M. Pinsky, S. Sawyer, J. P. Caubet, R. Ellis, R. Griego, I. Monroe.

Joram HIRSCHFELD; William H. WHEELER. — **Forcing, arithmetic, division rings.** — Lecture notes in mathematics, vol. 454. — Un vol. broché, 16,5 × 24, de vii, 266 p. — Prix: DM 25.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Forcing: Existentially complete structures and existentially universal structures. Model-completions and model-companions. Infinite forcing in model theory. Approximating chains for G_Σ . Finite forcing in model theory. Axiomatizations. Forcing and recursion theory. — *Arithmetic*: Existentially complete models. Simple models and R. E. ultrapowers. Regular models. Regular models and second order models for arithmetic. Generic models and the analytic hierarchy. Applications to complete extensions of Peano's arithmetic. — *Division rings*: Existentially complete division rings. Nullstellensatz. Classes of existentially complete division algebras.

A survey of statistical design and linear models. — Edited by Jagdish N. Srivastava. — Un vol. relié, 15,5 × 23, de viii, 699 p. — Prix: DFL 140.00. — North-Holland publishing company, Amsterdam/Oxford, 1975.

42 exposés par: R. L. Anderson, R. C. Bose, J. M. Chambers, H. Chernoff, D. V. Chopra, W. G. Cochran, A. P. Dempster, J. Durbin, W. T. Federer, A. Hedayat, B. L. Ratkoe, V.V. Fedorov, L. J. Glesser, I. Olkin, R. F. Gunst, D. B. Owen, H. O. Hartley, J. E. Gentle, D. A. Harville, K. Afsarinejad, K. Hinkelmann, D. G. Horvitz, B. G. Greenberg, J. R. Abernathy, P. J. Huber, O. Kempthorne, J. Kiefer, P. R. Krishnaiah, S. Kumar, M. Sobel, L. Le Cam, A. Linder, B. Lindström, D. A. Meeter, T. H. Naylor, D. S. Burdick, J. Neyman, M. L. Puri, P. K. Sen, C. Radhakrishna Rao, J. N. K. Rao, J. N. Srivastava, P. V. Sukhatme, W. A. Thompson, Jr., G. S. Watson, J. S. Williams, H. P. Wynn, P. Yates, D. Ylvisaker, S. Zacks, B. H. Eichhorn, M. Zelen, G. Zyskind. — *Présentés à Colorado State University, Fort Collins, Colorado, U.S.A. le 19-23 mars 1973 à l'occasion de l'International symposium on statistical design and linear models.*

L. F. SHAMPINE; M. K. GORDON. — **Computer solution of ordinary differential equations: the initial value problem.** — Un vol. relié, 16 × 24, de x, 318 p. — Prix: \$13.95. — W.H. Freeman and Co., San Francisco, 1975.

Fundamentals of the theory. — Interpolation theory. — Adams formulas. — Convergence and stability: small step sizes. — Efficient implementation of the Adams methods. — Error estimation and control. — Order and step size selection. — Stability: large step sizes. — Computer arithmetic. — The codes. — Code performance and evaluation. — Techniques, examples and exercises. — Solutions to the exercises.

Kam-Tim LEUNG. — **Linear algebra and geometry.** — Un vol. broché, 15,5 × 23, de vi, 309 p. — University press, Hong Kong, 1974.

Linear space. — Linear transformations. — Affine geometry. — Projective geometry. — Matrices. — Multilinear forms. — Eigenvalues. — Inner product spaces. — Index.

S. FENYÖ. — **Modern mathematical methods in technology, vol. 2.** — North-Holland series in applied math. and mech., vol. 17. — Un vol. relié, 16×23 , de vii, 326 p. — Prix: DFL 95.00. — North-Holland publishing company, Amsterdam/Oxford, American Elsevier, New York, 1975.

Linear algebra: Matrix theory. Matrix analysis. A few applications of matrix calculus. — *Optimization theory*: Linear optimization. Convex optimization. — *Elements of the theory of graphs*.

P. GERARDIN. — **Construction de séries discrètes p -adiques**, « Sur les séries discrètes non ramifiées des groupes réductifs déployés p -adiques ». — Lecture notes in mathematics, vol. 462. — Un vol. broché, $16,5 \times 24$, de iii, 180 p. — Prix: DM 20. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Groupes d'Heisenberg sur les corps finis: Caractères quadratiques. Groupes d'Heisenberg: premier exemple. Groupes d'Heisenberg: deuxième exemple. Groupes d'Heisenberg, cas général. — *Groupes de Chevalley sur les corps p -adiques*: Définition des groupes de Chevalley. Groupes de Chevalley sur les corps p -adiques. Caractères. Groupes de Weyl affines. — *Tores maximaux non ramifiés*: Tores maximaux. Nullité de cohomologie. Classification des tores maximaux. Tores maximaux non ramifiés anisotropes. Orbites du groupe de Weyl. — *Représentation du groupe des points entiers*: Notations. Caractères du tore. Un groupe résoluble. Représentations du sous-groupe compact maximal spécial. — *Quelques représentations supercuspidales*: Représentations admissibles. Représentations du groupe des points rationnels sur k . Réalisation des représentations.

H.-H. KUO. — **Gaussian measures in Banach spaces**. — Lecture notes in mathematics, vol. 463. — Un vol. broché, $16,5 \times 24$, de vi, 224 p. — Prix: DM 23. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Gaussian measures in Banach spaces: Hilbert-Schmidt and trace class operators. Borel measures in a Hilbert space. Wiener measure and Wiener integral in $C[0,1]$. Abstract Wiener space. $C[0,1]$ as an abstract Wiener space. Weak distribution and Gross-Sazonov theorem. Comments on chapter I. — *Equivalence and orthogonality of Gaussian measures*: Translation of Wiener measure. Kakutani's theorem on infinite product measures. Feldman-Hajek's theorem on equivalence of Gaussian measures in Hilbert space. Equivalence and orthogonality of Gaussian measures in function space. Equivalence and transformation formulas for abstract Wiener measures. Application of the translation formula theorem 1.2. Comments on chapter II. — *Some results about abstract Wiener space*: Banach space with a Gaussian measure. A probabilistic proof of chapter I theorem 4.1. Integrability of $e^{\alpha||x||^2}$ and $e^{\beta||x||}$. Potential theory. Stochastic integral. Divergence theorem. Comments on chapter III. References. Index.

M. R. ESSEN. — **The $\cos \pi \lambda$ theorem**. With a paper by Christer Borell. — Lecture notes in mathematics, vol. 467. — Un vol. broché, $16,5 \times 24$, de vii, 112 p. — Prix: DM 18. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

The Hellsten-Kjellberg-Norstad inequality. — The $\cos \pi \lambda$ theorem. — A generalization of the Ahlfors-Heins theorem. — The Paley conjecture. — A $\cos \pi \lambda$ problem and a differential inequality. — A counterexample. — Proof of theorem 5.2. — Two

consequences of a theorem of A. Baernstein. — On two theorems of A. Baernstein. — References. — Index. — *Christer Borell*: An inequality for a class of harmonic functions in n -space.

E. BINZ. — **Continuous convergence on $C(X)$.** — Lecture notes in mathematics, vol. 469. — Un vol. broché, $16,5 \times 24$, de ix, 140 p. — Prix: DM 18. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Convergence spaces. — Function algebras. — Vector space topologies on $C(X)$ for which the evaluation map is continuous. — c -embedded spaces. — Universal representations of convergence algebras and some general remarks on function spaces. — Functional analytic description of some types of convergence spaces. — *Appendix*: some functional analytic properties of $C_c(X)$. Bibliography. — Index.

D. BURGHELEA; R. LASHOF; M. ROTHENBERG; (with an appendix by E. Pedersen). — **Groups of automorphisms of manifolds.** — Lecture notes in mathematics, vol. 473. — Un vol. broché, $16,5 \times 24$, de vii, 156 p. — Prix: DM 18. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Morlet's Lemma of disjunction. — Lemma of disjunction — 2nd form. — Automorphisms and concordances. — Fibrations over spheres. — Fibrations over manifolds. — The structure of $A(M \times S^1)$. — *Appendix I*: Kan sets of embeddings and automorphisms. — *Appendix II*: The topological category. — Bibliography.

Bernard BOLZANO. — **Gesamtausgabe.** — Hrsg. von Eduard Winter, Jan Berg, Friedrich Kambartel, Jaromir Louzil, Bob van Rootselaar. — Band IIA7: Einleitung zur Größenlehre und erste Begriffe der allgemeinen Größenlehre. — Hrsg. von Jan Berg. — Un vol. relié, $18 \times 25,5$ de 297 p. — Prix: ca DM 150.00. — Friedrich Frommann Verlag (Günther Holzboog), Stuttgart-Bad Cannstatt, 1975.

Vorwort. — Einleitung des Herausgebers. — Inhaltsübersicht zu den beiden herausgegebenen Schriften Bolzanos. — BOLZANO: „Einleitung zur Größenlehre“. — BOLZANO: „Erste Begriffe der allgemeinen Größenlehre“. — Bibliographie. — Personenregister.

W. W. COMFORT; S. NEGREPONTIS. — **Continuous pseudometrics.** — Lecture notes in pure and applied mathematics, vol. 14. — Un vol. broché, 18×25 , de v, 126 p. — Prix: \$12.75. — Marcel Dekker, Inc., New York, 1975.

\bar{P} -reflections. — Realcompact spaces and topologically complete spaces. — Metric spaces. — X as a subset of βX ; locally finite covers. — Tamano's theorem. — The Katětov-Shirota theorem. — On the relation $P(X \times Y) = PX \times PY$. — Absolute (separable, metrizable) Borel spaces. — Topological properties of Baire sets. — Local connectedness in βX . — Some miscellaneous examples.

C. BERG; G. FORST. — **Potential theory on locally compact abelian groups.** — Ergebnisse der Mathematik und ihre Grenzgebiete, Bd 87. — Un vol. relié, 17×25 , de 195 p. — Prix: DM 59.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Harmonic analysis: Notation and preliminaries. Some basic results from harmonic analysis. Positive definite functions. Fourier transformation of positive definite measures. Positive definite functions on \mathbf{R} . Periodicity. — *Negative definite functions and semigroups*: Negative definite functions. Convolution semigroups. Completely monotone functions and Bernstein functions. Examples of negative definite functions and convolution semigroups. Contraction semigroups. Translation invariant contraction semigroups. — *Potential theory for transient convolution semigroups*: Transient convolution semigroups. Transient convolution semigroups on the half-axis and integrals of convolution semigroups. Convergence lemmas and potential theoretic principles. Excessive measures. Fundamental families associated with potential kernels. The Lévy measure for a convolution semigroup.

C. BESSAGA and A. PELCZYNSKI. — **Selected topics in infinite-dimensional topology**. — Monografie matematyczne, tom 58. — Un vol. relié, $17,5 \times 24$, de 353 p. — PWN, Polish scientific publishers, Warszawa, 1975.

Preliminaries. — Topological spaces with convex structures. — Convex sets and deleting homeomorphisms in linear topological spaces. — Skeletons and skeletoids in metric spaces. — Z -sets in the Hilbert cube and in the countable infinite product of lines. — Spaces homeomorphic to the countable infinite product of lines. — Topological classification of non-separable Fréchet spaces. — Topological classification of non-complete separable linear metric spaces. — Infinite-dimensional topological manifolds.

J. CHEEGER and D. G. EBIN. — **Comparison theorems in Riemannian geometry**. — North-Holland mathematical library, vol. 9. — Un vol. relié, $16,5 \times 23$, de VIII, 194 p. — Prix: DFL 50.00 — North-Holland/American Elsevier, Amsterdam/Oxford/New York, 1975.

Basic concepts and results. — Toponogov's theorem. — Homogeneous spaces. — Morse theory. — Closed geodesics and the cut locus. — The sphere theorem and its generalizations. — The differentiable sphere theorem. — Complete manifolds of non-negative curvature. — Compact manifolds of nonpositive curvature.

Wu Yi HSIANG. — **Cohomology theory of topological transformation groups**. — Ergebnisse der Mathematik und ihre Grenzgebiete, Bd 85. — Un vol. relié, $17 \times 24,5$ de VII, 166 p. — Prix: DM 58.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Generalities on compact Lie groups and G -spaces. — Structural and classification theory of compact Lie groups and their representations. — An equivariant cohomology theory related to fibre bundle theory. — The orbit structure of a G -space X and the ideal theoretical invariants of $H_G^*(X)$. — The splitting principle and the geometric weight system of topological transformation groups on acyclic cohomology manifolds or cohomology spheres. — The splitting theorems and the geometric weight system of topological transformation groups on cohomology projective spaces. — Transformation groups on compact homogeneous spaces.

Günter PICKERT. — **Projektive Ebenen**. — Zweite Auflage. — Die Grundlehren der mathematischen Wissenschaften in Einzeldarstellungen mit besonderer Berücksichtigung der Anwendungsgebiete, Bd 80. — Un vol. relié, $17 \times 24,5$, de IX, 371 p. — Prix: DM 98.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Erläuterungen: Rückverweisungen. Allgemeine mathematische Bezeichnungen. — *Grundbegriffe*: Inzidenzstrukturen. Projektive und affine Ebenen. Freie Erweiterungen. Schliessungssätze. Koordinateneinführung in affinen Ebenen. Koordinaten in der dualen Ebene. — *Gewebe*: Darstellung von 3-Geweben mittels Loops. Isotopie. Die Bedingungen von Reidemeister, Bol und Thomsen. Darstellung von 4-Geweben mittels Doppel-Loops. *Der Satz von Desargues*: Zentrale Kollineationen. Der Satz von Desargues. Die Ausartungen des Desarguesschen Satzes. Cartesische Gruppen und Quasikörper. Sonderfälle des Desarguesschen Satzes als Ternärkörpereigenschaften. — *Desarguessche Ebenen*: Kollineationen und homogene Koordinaten. Doppelverhältnisse. Quasiperspektivitäten. Der Satz vom Viereckschnitt. — *Der Satz von Pappos*: Mit dem Satz von Pappos gleichwertige Aussagen. Weitere Herleitungen des Desarguesschen Satzes aus dem Satz von Pappos. Homogenität einer projektiven Ebene. Ausartungen des Satzes von Pappos. — *Alternativkörper*: Definitionen und Rechenregeln. Alternativkörper als Algebra über dem Zentrum. Quadratische Algebren. Alternativkörper der Charakteristik 2. Rechtsalternativkörper. — *Moufang-Ebenen*: Moufang-Ebenen und Alternativkörper. Der Satz vom vollständigen Viereck. Die Kollineationsgruppe. — *Translationsebenen*: Translationsebenen und Kongruenzen. Der Kern einer Translationsebene. Die Kollineationsgruppe. Translationsebenen der Charakteristik $\neq 2$. Translationsebenen über assoziativen Quasikörpern. — *Angeordnete Ebenen*: Anordnungen, Zwischen- und Trennbeziehungen. Angeordnete affine und projektive Ebenen. Einfluss der Anordnung auf die Koordinatenbereiche. Archimedische Anordnung. Ordnungsfunktionen. — *Topologische Ebenen*: Topologie und Ternärkörper. Angeordnete topologische Ebenen. — *Möbius-Netze*: Möbius-Netze und dreifache Ausartung des Desarguesschen Satzes. Schliessungssätze vom Rang 8. — *Endliche Ebenen*: Einordnung unter allgemeinere kombinatorische Begriffe. Punkteanzahl. Vollständige Vierecke mit kollinearen Diagonalpunkten. Desarguessche und zyklische Ebenen. Kollineationen. — *Anhang*: Kennzeichnung der Desarguesschen Ebenen als Untergruppenmengen. Beweis des Desarguesschen Satzes in einer projektiven Ebene mit genau 8 Punkten auf jeder Geraden. Ergänzendes über offene Inzidenzstrukturen. Vereinfachter Beweis des Hauptsatzes über Alternativkörper. Eine andere Koordinateneinführung. Die Lenz-Barlotti-Klassifizierung. Ergänzungen.

D. REVUZ. — **Markov chains**. — North-Holland mathematical library, vol. 11. — Un vol. relié, $15,5 \times 23$, de x, 336 p. — Prix: DFL 85.00. — North-Holland/American Elsevier, Amsterdam/Oxford/New York, 1975.

Preliminaries. — Transition probabilities. Markov Chains. — Potential theory. — Transience and recurrence. — Pointwise ergodic theory. — Transient random walks. Renewal theory. — Ergodic theory of Harris chains. — Martin boundary. — Potential theory for Harris chains. — Recurrent random walks. — Construction of Markov chains and resolvents.

Proceedings of the third scandinavian logic symposium. — Edited by Stig KANGER. — Studies in logic and the foundations of mathematics, vol. 82. — Un vol. relié, $15,5 \times 23$, de v, 214 p. — Prix: DFL 60.00. — North-Holland/American Elsevier, Amsterdam/Oxford/New York, 1975.

P. Aczel: Quantifiers, games and inductive definitions. — K. Fine: Some connections between elementary and modal logic. — B. Hansson and P. Gärdenfors: Filtrations and the finite frame property in Boolean semantics. — J. Hintikka and V. Rantala: Systematizing definability theory. — H. R. Jervell: Conservative Endextensions and the quantifier

“there exists uncountably many”. — *P. Martin-Löf*: About models for intuitionistic type theories and the notion of definitional equality. — *H. Sahlqvist*: Completeness and correspondence in the first and second order semantics for modal logic. — *A. Salomaa*: On some decidability problems concerning developmental languages. — *D. Scott*: Lambda calculus and recursion theory. — *K. Segerberg*: That every extension of *S4.3* is normal. — *S. Stenlund*: Descriptions in intuitionistic logic.

Donald W. BARNES; John M. MACK. — **An algebraic introduction to mathematical logic.** — Graduate texts in mathematics, vol. 22. — Un vol. relié, 16 × 24, de vi, 123 p. — Prix: DM. 26.50. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Universal algebra. — Propositional calculus. — Properties of the propositional calculus. — Predicate calculus. — First-order mathematics. — Zermelo-Fraenkel set theory. — Ultraproducts. — Non-standard models. — Turing machines and Gödel numbers. — Hilbert's tenth problem, word problems.

John L. KELLEY. — **General topology.** — Graduate texts in mathematics, vol. 27. — Un vol. relié, 16 × 24, de xiv, 298 p. — Prix: DM 34.50. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Preliminaries. — Topological spaces. — Moore-Smith convergence. — Product and quotient spaces. — Embedding and metrization. — Compact spaces. — Uniform spaces. — Function spaces. — *Appendix* : Elementary set theory.

Model theory and topoi. — (A collection of lectures by various authors). — Edited by F. W. Lawvere, C. Maurer, and G. C. Wraith. — Lecture notes in mathematics, vol. 445. — Un vol. broché, 16,5 × 24, de iii, 354 p. — Prix: DM 30.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

F. W. Lawvere : Introduction. — *O. Keane* : Abstract Horn theories. — *H. Volger* : Completeness theorem for logical categories. — *H. Volger* : Logical categories, semantical categories and topoi. — *P. T. Johnstone* : Internal categories and classification theorems. — *G. C. Wraith* : Lectures on elementary topoi. — *A. Kock ; P. Lecouturier ; and C. J. Mikkelsen* : Some topos theoretic concepts of finiteness. — *Ch. Maurer* : Universes in topoi. — *G. Osius* : Logical and set theoretical tools in elementary topoi. — *G. Osius* : A note on Kripke-Joyal semantics for the internal language of topoi.

Richard S. HAMILTON. — **Harmonic maps of manifolds with boundary.** — Lecture notes in mathematics, vol. 471. — Un vol. broché, 16,5 × 24, de iv, 168 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Harmonic maps. — Functions spaces. — Semi-elliptic and parabolic equations. — The heat equation for manifolds. — Growth estimates and convergence.

Rufus BOWEN. — **Equilibrium states and the ergodic theory of Anosov diffeomorphisms.** — Lecture notes in mathematics, vol. 470. — Un vol. broché, 16,5 × 24, de iv, 108 p. — Prix: DM 18.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Gibbs measures : Gibbs distributions. Ruelle's Perron-Frobenius theorem. Construction of Gibbs measures. Variational principle. Further properties. — *General thermodynamic formalism* : Entropy. Pressure, Variational principle. Equilibrium states. — *Axiom A diffeomorphisms* : Definitions. Spectral decomposition. Markov partitions. Symbolic dynamics. — *Ergodic theory of axiom A diffeomorphisms* : Equilibrium states for basic sets. The case $\phi = \varphi(u)$. Attractors and Anosov diffeomorphisms:

Dynamical systems — Warwick 1974. — Proceedings of a symposium held at the University of Warwick 1973/74. — Edited by Anthony Manning. — Lecture notes in mathematics, vol. 468. — Un vol. broché, $16,5 \times 24$, de x, 405 p. — Prix: DM 35.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

45 seminar reports : D. Epstein, R. Edwards, P. A. Schweitzer, J. Plante, M. Hirsch, P. Stefan, C. Camacho, G. de la Rocque Palis, C. Gutiérrez, J. L. Arraut, R. C. Robinson, R. Mañé, A. Manning, N. M. dos Santos, W. Parry, P. Walters, R. Bowen, M. Shub, R. F. Williams, D. Sullivan, E. C. Zeeman, J. Palis, S. Newhouse, C. Pugh, N. Kuiper, C. P. Simon, K. Meyer, V. Poenaru, M. Golubitsky, W de Melo, J. Sotomayor, M. Yamaguti, F. Takens, S. Shahshahani, D. Chillingworth, P. Furness, L. Schulman, K. Jänich, D. Sunday. — *21 contributed papers* : J. Guckenheimer, H. Kurland, J. Robbin, R. Mañé, C. Pugh, A. Manning, K. Meyer, S. Newhouse, J. Palis, R. C. Robinson, M. Shub, D. Sullivan, J. Plante, C. Simon, C. Titus, S. Smale, F. Takens, C. T. C. Wall, L. Markus, R. Thom, E. C. Zeeman.

Non-commutative harmonic analysis. — Actes du colloque d'analyse harmonique non commutative, Marseille-Luminy, 1 au 5 juillet 1974. — Edited by J. Carmona, J. Dixmier and M. Vergne. — Lecture notes in mathematics, vol. 466. — Un vol. broché, $16,5 \times 24$, de vi, 231 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

18 exposés de : R. J. Blattner, J. Brezin, J. Carmona, N. Conze-Berline, J. Dixmier, M. Duflo, M. Flensted-Jensen, P. Gérardin, D. Kastler, B. Kostant, N. Lohoue, M.-P. Malliavin, P. Malliavin, M. Rais, F. Rodier, W. Schmid, D. J. Simms, H. Rossi, M. Vergne, N. R. Wallach.

Séminaire de probabilités IX, Université de Strasbourg. — Edited by P. A. Meyer. — Lecture notes in mathematics, vol. 465. — Un vol. broché, $16,5 \times 24$, de iv, 589 p. — Prix: DM 44.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Première partie : Questions de théorie des flots, séminaire 1972/73 (J. de Sam Lazaro et P. A. Meyer) : 7 exposés. — Processus stationnaires et mesures de Palm du flot spécial sous une fonction (A. Benveniste, 1974). — *Seconde partie* : exposés 1973/74: F. Nanopoulos, C. S. Chou, P. A. Meyer, C. Dellacherie, D. Dacunha-Castelle, Ph. Artzner, K. Sigmund, H. Föllmer, X. Fernique, C. Stricker, M. Emery, G. Mokobodzki, K. A. Yen, R. K. Getoor, M. Nagasawa, M. Weil, M. J. Sharpe, D. Heath, B. Maisonneuve, N. Elkaroui, W. von Waldenfels, E. Khalili-Francon.

Charles ROCKLAND. — **Hypoellipticity and eigenvalue asymptotics.** — Lecture notes in mathematics, vol. 464. — Un vol. broché, $16,5 \times 24$, de iii, 171 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Introduction. — *Hypoellipticity with loss of one derivative* : Introduction and statement of theorem. The test-operators. Proof of theorem. The index of the test-operators. Computation of eigenvalues. — *Example* : *Poincaré complexes* ($\bar{\partial}_b$). — *Hypoellipticity and asymptotic eigenvalues in the abstract case*. — *Appendix* : Remark on simple characteristics.

Fourier integral operators and partial differential equations. — Colloque international, Université de Nice, 1974. — Edited by J. Chazarain. — Lecture notes in mathematics, vol. 459. — Un vol. broché, $16,5 \times 24$, de vi, 372 p. — Prix: DM 32.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

12 exposés de: L. Boutet de Monvel, J. J. Duistermaat, V.W. Guillemin, L. Hörmander, J. Leray, B. Malgrange, A. Melin, K. Nirenberg, T. Shirota, J. Sjöstrand, F. Treves, A. Weinstein.

Beiträge zur Analysis 7. — Hrsg, von R. Klötzler, W. Tutschke, K. Wiener. — Un vol. broché, 17×24 , de 177 p. — Prix: DM 36.00. — VEB Deutscher Verlag der Wissenschaften, Berlin, 1975.

15 exposés par: W. Tutschke, H. Meden, D. Göhde, V. Seda, H.-G. Roos, W. Voigt, J. Bergmann, W. Preuss, U. Kosel, K. Wiener, L. V. Wolfersdorf, H. Benker, J. Köhler, J. Hirche, V. Stiebitz, D. Schmidt, A. Angelus.

A. M. OLEVSKII. — *Fourier series with respect to general orthogonal systems*. — Ergebnisse der Mathematik und ihrer Grenzgebiete, Bd 86. — Un vol. relié, $17 \times 24,5$, de ix, 136 p. — Prix: DM 78. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Chapter I: Convergence of Fourier series in the classical sense. Lebesgue functions of bounded systems. — The fundamental inequality. — The logarithmic growth of the Lebesgue functions. Divergence of Fourier series. — Series with decreasing coefficients. — Generalizations, counterexamples, problems. — The stability of the orthogonalization operator. — *Chapter II: Convergence almost everywhere ; conditions on the coefficients.* — The class $\sigma\pi$. — Garsia's theorem. — The coefficients of convergent series in complete systems. — Extension of a system of functions to an ONS. — *Chapter III: Properties of complete systems ; the role of the Haar system.* — The basic construction. — Divergent Fourier series. — Bases in functions spaces and majorants of Fourier series. — Fourier coefficients of continuous functions. — Some more results about the Haar system. — *Chapter IV: Series from L^2 and peculiarities of Fourier series from the spaces L^p .* — The matrices A_k . — Lebesgue functions and convergence almost everywhere. — Convergence of Fourier series of functions from various classes. — Sums of Fourier series. — Conditional bases in Hilbert space.

Ion SUCIU. — **Function algebras.** — Transl. from the Romanian ed. « Algebre de functii ». — Un vol. broché, $14,5 \times 20,5$, de 272 p. — Prix: DFL 48. — Noordhoff international publishing, Leyden, 1975.

Preliminaries : Commutative Banach algebras. — Measures. — Convexity. — Holomorphic functions of several complex variables. — *Boundaries* : Function algebras. — Representing measures. — The Choquet boundary. — The Shilov boundary. — Geometric characterization. — Representing theorems. — *Algebras on the maximal ideal space* : The maximal ideal space. — Locally analytic functions. — The local maximum

modulus principle. — Gleason parts. — *Approximation and interpolation*: Restrictions. — The case of the intersections of peak sets. — Antisymmetry. — Some characterizations of $C(X)$. — *HP-spaces*: Definitions and basic lemmas. — The theorem of F. and M. Riesz and Szegö theorem. — The factorization theorem. — The characterization of the functions in *HP*. — Invariant subspaces. — The algebra $H^\infty(dm)$. — *Special classes of function algebras*: Dirichlet and logmodular algebras. — Algebras generated by inner functions. — Maximal algebras. — Functions algebras on compact sets of the complex plane. — The standard algebra and H^∞ algebra. — *Operator representations of function algebras*: Positive definite maps on $C(X)$. Spectral and semispectral measures. — Representations of function algebras. — Representations of the algebra $C(X)$. — *Elements of spectral theory of representations of function algebras*: The canonical decomposition. — The spectral dilation and attached spectral measures. — Szegö measures and natural representations. — The Wold decomposition. — Decompositions with respect to Gleason parts. — *Elements of prediction theory on S-generated algebras*: Semigroups of contractions. — The Wold decomposition. — The semigroup of unilateral translations. — Representations of *S*-generated algebras. — Prediction theorems. — *Some examples in the spectral theory of non-normal operators*. — The case of a single contraction. — Operators having spectral sets with connected complement. — Finite systems of commuting contractions.

Sybren de GROOT. — **La transformation de Weyl et la fonction de Wigner**: une forme alternative de la mécanique quantique. — Un vol. relié, $16,5 \times 24$, de 82 p. — Les presses de l'Université de Montréal, 1974.

Introduction: Principe. — Notations. — *La transformation de Weyl*: Définition de la transformation de Weyl. — Propriétés de la transformation de Weyl. — Propriétés de l'opérateur-delta. — Transformées de Weyl de produits d'opérateurs. — *La fonction de Wigner*: Définition de la fonction de Wigner. — Propriétés de la fonction de Wigner. — *Le formalisme relativiste*: Les variables de spin. — La transformation de Weyl. — La fonction de Wigner. — *Les équations de mouvement et de spin covariantes d'une particule avec charge et moment magnétique dans un champ électromagnétique*: Le problème. — Théorie quantique relativiste.

Logic colloquium '73. — Studies in logic and the foundations of mathematics, vol. 80. — Edited by H. E. Rose; J. C. Shepherdson. — Un vol. relié, $15,5 \times 23$, de vii, 513 p. — Prix: DFL 130. — North-Holland, American Elsevier, Amsterdam/Oxford/New York, 1975.

11 invited papers: P. Bernays, M. Dummett, A. Robinson, W.W. Boone and G. Higman, A. Kino and J. Myhill, P. Martin-Löf, S. MacLane, F. W. Lawvere, R. Milner, C. C. Elgot, E. Engeler. — *13 contributed papers*: J. P. Cleave, T. Evans, K. I. Mandelberg and M. F. Neff, H. Schwichtenberg, S. S. Wainer, D. Guaspari, A. Hajnal and A. Máté, J. Czermak, P. Henrard, C. F. Kent, J. A. Makowsky, M. A. Amer, J.-P. Seldin, J.-C. Shepherdson.

Nathan JACOBSON. — **Lectures in abstract algebra, II. Linear algebra**. — Graduate texts in mathematics, 31. — Un vol. relié, 16×24 , de xii, 280 p. — Prix: DM 34.50. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Finite dimensional vector spaces: Abstract vector spaces. — Right vector spaces. — \mathfrak{o} -modules. — Linear dependence. — Invariance of dimensionality. — Bases and ma-

trices. — Applications to matrix theory. — Rank of a set of vectors. — Factor spaces. — Algebra of subspaces. — Independent subspaces, direct sums. — *Linear transformations* : Definition and examples. — Compositions of linear transformations. — The matrix of a linear transformation. — Compositions of matrices. — Change of basis. Equivalence and similarity of matrices. — Rank space and null space of a linear transformation. — Systems of linear equations. — Linear transformations in right vector spaces. — Linear functions. — Duality between a finite dimensional space and its conjugate space. — Transpose of a linear transformation. — Matrices of the transpose. — Projections. — *The theory of a single linear transformation* : The minimum polynomial of a linear transformation. — Cyclic subspaces. — Existence of a vector whose order is the minimum polynomial. — Cyclic linear transformations. — The $\Phi[\lambda]$ — module determined by a linear transformation. — Finitely generated \mathfrak{o} -modules, \mathfrak{o} , a principal ideal domain. — Normalization of the generators of \mathfrak{F} and of \mathfrak{N} . — Equivalence of matrices with elements in a principal ideal domain. — Structure of finitely generated \mathfrak{o} -modules. — Invariance theorems. — Decomposition of a vector space relative to a linear transformation. — The characteristic and minimum polynomials. — Direct proof of theorem 13. — Formal properties of the trace and the characteristic polynomial. — The ring of \mathfrak{o} -endomorphisms of a cyclic \mathfrak{o} -module. — Determination of the ring of \mathfrak{o} -endomorphisms of a finitely generated \mathfrak{o} -module, \mathfrak{o} principal. — The linear transformations which commute with a given linear transformation. — The center of the ring \mathfrak{B} . — *Sets of linear transformations* : Invariant subspaces. — Induced linear transformations. — Composition series. — Decomposability. — Complete reducibility. — Relation to the theory of operator groups and the theory of modules. — Reducibility, decomposability, complete reducibility for a single linear transformation. — The primary components of a space relative to a linear transformation. — Sets of commutative linear transformations. — *Bilinear forms* : Bilinear forms. — Matrices of a bilinear form. — Non-degenerate forms. — Transpose of a linear transformation relative to a pair of bilinear forms. — Another relation between linear transformations and bilinear forms. — Scalar products. — Hermitian scalar products. — Matrices of hermitian scalar products. — Symmetric and hermitian scalar products over special division rings. — Alternate scalar products. — Witt's theorem. — Non-alternate skew-symmetric forms. — *Euclidean and unitary spaces* : Cartesian bases. — Linear transformations and scalar products. — Orthogonal complete reducibility. — Symmetric, skew and orthogonal linear transformations. — Canonical matrices for symmetric and skew linear transformations. — Commutative symmetric and skew linear transformations. — Normal and orthogonal linear transformations. — Semi-definite transformations. — Polar factorization of an arbitrary linear transformation. — Unitary geometry. — Analytic functions of linear transformations. — *Products of vector spaces* : Product groups of vector spaces. — Direct products of linear transformations. — Two-sided vector spaces. — The Kronecker product. — Kronecker products of linear transformations and of matrices. — Tensor spaces. — Symmetry classes of tensors. — Extension of the field of a vector space. — A theorem on similarity of sets of matrices. — Alternative definition of an algebra. Kronecker product of algebras. — *The ring of linear transformations* : Simplicity of \mathfrak{L} . — Operator methods. — The left ideals of \mathfrak{L} . — Right ideals. — Isomorphisms of rings of linear transformations. — *Infinite dimensional vector spaces* : Existence of a basis. — Invariance of dimensionality. — Subspaces. — Linear transformations and matrices. — Dimensionality of the conjugate space. — Finite topology for linear transformations. — Total subspaces of \mathfrak{R}^* . — Dual spaces. Kronecker products. — Two-sided ideals in the ring of linear transformations. — Dense rings of linear transformations. — Isomorphism theorems. — Anti-automorphisms and scalar products. — Schur's lemma. A general density theorem. — Irreducible algebras of linear transformations.

Probability-winter school. — Proceedings of the fourth winter school on probability held at Karpacz, Poland, 1975. — Edited by Z. Ciesielski, K. Urbanik, and W.A. Woyczyński. — Lecture notes in mathematics, 472. — Un vol. broché, 16,5 × 24, de vi, 283 p. — Prix: DM 28.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Z. Ciesielski: Stochastic systems of particles. — *Z. Ciesielski*: On Lévy's brownian motion with several-dimensional time. — *R. Jajte*: Convergence of observables. — *Z. Jurek*: A limit theorem for truncated random variables. — *Z. S. Kowalski*: Invariant measures for piecewise monotonic transformations. — *C. Ladoqorski*: A limit theorem for triangular arrays of representations of canonical anti-commutation relations. — *M. J. Maczynski*: Non-commutative probability theory on Von Neumann algebras. — *A. Pelczynski*: On unconditional bases and Rademacher averages. — *C. Ryll-Nardzewski*: Topics in ergodic theory. — *W. Szatzschneider*: A more deterministic version of Harris-Spitzer's "Random constant velocity" model for infinite systems of particles. — *K. Urbanik*: Extreme point method in probability theory. — *K. Urbanik*: Stable symmetric probability laws in quantum mechanics. — *A. Weron*: Prediction theory in Banach spaces. — *W.A. Woyczyński*: Geometry and martingales in Banach spaces. — *J. Zabczyk*: A note on semipolar sets for processes with independent increments.

Séminaire Pierre Lelong. — (Analyse) Année 1973/74. — Edité par Pierre Lelong. — Lecture notes in mathematics, 474. — Un vol. broché, 16,5 × 24, de vi, 182 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

P. Lelong: Topologies semi-vectorielles et topologies pseudo-convexes sur un espace vectoriel complexe. — *P. Krée*: Solutions faibles d'équations aux dérivés fonctionnelles II. — *Ph. Turpin*: Espaces et opérateurs exponentiellement galbés. — *Ph. Noverraz*: Pseudo-convexité et base de Schauder dans les e.l.c. — *B. Lascar*: Opérateurs pseudo-différentiels d'une infinité de variables. — *J. Kajiwara*: Opérateurs d'' dans les espaces de Hilbert avec croissance polynomiale. — *Ph.-J. Boland*: Holomorphic functions on duals of Fréchet nuclear spaces. — *S. Dineen*: Equivalent definitions of holomorphic functions in infinite dimensions. — *O. Bonnin*: Représentation holomorphe des distributions tempérées. Transformation de Fourier-Borel. Opérateurs de dérivations partielles de type Hilbert-Schmidt en dimension infinie (d'après Thomas A.W. Dwyer, III). — *J.-M. Kantor*: Le complexe de Dolbeault-Grothendieck sur les espaces analytiques. — *J.-L. Stehlé*: Fonctions plurisousharmoniques et convexité holomorphe de certains fibrés analytiques. — *P. Mazet*: Rectificatif concernant l'exposé: « Un théorème d'image directe propre », publié dans le séminaire P. Lelong, 1972/73, n° 410.

Répartition modulo I. — Actes du colloque de Marseille-Luminy, 4 au 7 juin 1974. — Edité par G. Rauzy. — Lecture notes in mathematics, 475. — Un vol. broché, 16,5 × 24, de vi, 258 p. — Prix: DM 25.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

J. Besineau: Ensembles d'entiers à caractères presque périodiques et équirépartition. — *Ch. Binder*: Une remarque sur la caractérisation des fonctions $R - \mu$ - intégrables. — *M. Bruneau*: Irrégularité locale des fonctions et approximation sur le tore. — *J. Couot*: Théorie ergodique de l'équirépartition. — *P. Erdos*: Problems and results on diophantine approximations (II). — *P. Gerl.*: Quelques généralisations de l'équirépartition. — *H. G. Meijer & H. Niederreiter*: Equirépartition et théorie des nombres premiers. — *J.-L. Nicolas*: Problèmes d'optimisation en nombres entiers et approximations diophantiennes. — *H. Niederreiter*: Indépendance de suites. — *H. Niederreiter*: Résultats nouveaux dans

la théorie quantitative de l'équirépartition. — *G. Rauzy*: Equirépartition et entropie. — *G. Rhin*: Répartition modulo 1 de $f(p_n)$ quand f est une série entière. — *P. Schmitt*: Linear uniform distribution. *J. Vaaler*: A tauberian theorem related to Weyl's criterion.

Modular functions of one variable IV. — Proceedings of the international summer school, University of Antwerp, RUCA, July 17 — August 3, 1972. — Edited by B. J. Birch and W. Kuyk. — Lecture notes in mathematics, 476. — Un vol. broché, $16,5 \times 24$, de v, 151 p. — Prix: DM 20.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

H. P. F. Swinnerton-Dyer, B. J. Birch: Elliptic curves and modular functions. — *J. Tate*: Algorithm for determining the type of a singular fiber in an elliptic pencil. — *P. Deligne*: Courbes elliptiques: formulaire (d'après J. Tate). — Sources and reliability of the tables. Remarks on isogenies. — Table 1. — Table 2. — Table 3. — Table 4. — Table 5. — Table 6.

Stephen D. FISCHER, Joseph W. JEROME. — **Minimum norm extremals in function spaces.** — Lecture notes in mathematics, 479. — Un vol. broché, $16,5 \times 24$, de viii, 209 p. — Prix: DM 23.00. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Existence theorems: Nonlinear minimization problems. — Minimization with linear operators. — *Characterization theorems*: Nonlinear operators in L^p , $1 < p \leq \infty$ — L^∞ minimization problems for elliptic operators. — L^1 minimization in one and several variables. — *Uniqueness theorems*: Sets of uniqueness in L^∞ minimization problems. — *Bang-bang characterization theorems*: Bang-bang optimal controls. — *Lagrange multiplier solutions with inequalities*: A general theorem of Kuhn-Tucker type. — Stable and unstable elastica equilibrium and the problem of minimum curvature. — *Convergence theorems*: Approximation by extremals of nonlinear differential expressions in one variable and quadratic forms in several variables. — *Perfect spline solutions in the theory of best approximation in L^∞* : The trigonometric and algebraic Favard problem. — Minimization and interpolation at integer points of the real axis. — The Landau problem and Kolmogorov's theorem. — Perfect interpolating splines on compact intervals. — *Further topics*: A Polya algorithm for the Favard solution, N -width characterizations and Whitney type theorems. — Application of the Riesz-Fredholm-Schauder theory to spline functions. — Epilogue.

L. COLLATZ, W WETTERLING. — **Optimization problems.** — Translated by P. Wadsack. — Applied mathematical sciences, 17. — Un vol. broché, $15,5 \times 23,5$, de x, 356 p. — Prix: DM 33.80. — Springer-Verlag, New York/Heidelberg/Berlin, 1975.

Linear optimization: Linear optimization and polyhedra. — Vertex exchange and the simplex method. — Algorithmic implementation of the implementation of the simplex method. — Dual linear optimization problems. — *Convex optimization*: A characterization of minimal solutions for convex optimization. — Convex optimization for differentiable functions. — Convex optimization with affine linear constraints. — The numerical treatment of convex optimization problems. — *Quadratic optimization*: The Kuhn-Tucker theorem and applications. — Duality for quadratic optimization. — The numerical treatment of quadratic optimization problems. — *Tchebychev approximation and optimization*: Discrete linear Tchebychev approximation. — Further types of approximation problems. — *Elements of game theory*: Matrix games (Two person zero sum games). — n -person games. — Appendix. — Problems.

I. I. GIHMAN, A.V. SKOROHOD. — **The theory of stochastic processes II**, — Translated from the Russian by S. Kotz. — Die Grundlehren der mathematischen Wissenschaften in Einzeldarstellungen mit besonderer Berücksichtigung der Anwendungsgebiete, Bd 218. — Un vol. relié, 17 × 24,5, de vii, 441 p. — Prix: DM 112. — Springer-Verlag, Berlin/Heidelberg/New York, 1975.

Basic definitions and properties of Markov processes: Wide-sense Markov processes. — Markov random functions. — Markov processes. — Strong Markov process. — Multiplicative functionals. — Properties of sample functions of Markov processes. — *Homogeneous Markov processes*: Basic definitions. — The resolvent and the generating operator of a weakly measurable Markov process. — Stochastically continuous processes. — Feller processes in locally compact spaces. — Strong Markov processes in locally compact spaces. — Multiplicative additive functionals, excessive functions. — *Jump processes*: General definitions and properties of jump processes. — Homogeneous Markov processes with a countable set of states. — Semi-Markov processes. — Markov processes with a discrete component. — *Processes with independent increments*: Definitions. General properties. — Homogeneous processes with independent movements. One-dimensional case. — Properties of sample functions of homogeneous processes with independent increments in \mathcal{R}^1 . — Finite-dimensional homogeneous processes with independent increments. — *Branching processes*: Branching processes with finite number particles. — Branching processes with a continuum of states. — General Markov processes with branching. — Historical and bibliographical remarks.

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