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H. HERMES. — **Aufzählbarkeit. Entscheidbarkeit. Berechenbarkeit. Einführung in die Theorie der rekursiven Funktionen.** — Zweite Auflage. — Heidelberger Taschenbücher, 87. — Un volume broché,  $13,5 \times 20,5$ , de VIII, 246 pages, avec 3 figures. — Prix: DM 14.80. — Springer-Verlag, Berlin/Heidelberg/New-York, 1971.

Einführende Betrachtungen über Algorithmen. — Turingmaschinen. —  $\mu$ -rekursive Funktionen. — Die Äquivalenz von Turing-Berechenbarkeit und  $\mu$ -Rekursivität. — Rekursive Funktionen. — Unentscheidbare Prädikate. — Verschiedenes.

**General topology and its applications.** — A journal devoted to set theoretic, axiomatic and geometric topology. — Vol. I, number 1. — Advisory board: R. D. Anderson, J. de Groot, S. Mardesic, K. Morita, Yu. Smirnov, A. H. Stone. — Un volume broché,  $16,5 \times 24$ , de xv, 103 pages. — Prix: US\$ 20.00 par volume annuel. — North-Holland, Amsterdam, 1971.

Report of the Pittsburgh International Conference on general topology. — *H. Herrlich* : Categorical topology. — *O. Wyler* : Top categories and categorical topology. — *S. P. Franklin* : On epi-reflective hulls. — *F. Siwiec, V. J. Mancuso* : Relations among certain mappings and conditions for their equivalence. — *D. J. Lutzer* : Semimetrizable and stratifiable spaces. — *K. Morita* : A survey of the theory of M-spaces. — *A. Okuyama* : A survey of the theory of  $\sigma$ -spaces. — *J. Nagata* : A survey of dimension theory II. — *C. R. Borges* : A survey of  $M_i$ -spaces: open questions and partial results. — *H. H. Wicke* : Open continuous images of certain kinds of M-spaces and completeness of mappings and spaces. — *B. Fitzpatrick Jr.* : Some topologically complete spaces.

**Discrete Mathematics.** — Vol. I, number 1. — Advisory Editors: C. Berge (Paris), M. Harrison (Berkeley, Calif.), V. Klee (Seattle, Wash.), J. H. van Lint (Eindhoven), G.-C. Rota (Cambridge, Mass.). — Un volume broché,  $18,5 \times 24$ , de 114 pages. — Prix: US\$ 17.00 par volume annuel de 4 numéros. — North-Holland, Amsterdam, 1971.

*P. Erdős* : On some extremal problems on r-graphs. — *F. Harary, P. A. Ostrand* : The cutting center theorem for trees. — *O. J. Heilmann, D. J. Kleitman, E. H. Lieb, S. Sherman* : Some positive definite functions on sets and their application to the Ising model. — *G. Bradley* : Transformation of integer programs to knapsack problems. — *D. J. Kleitman, M. Edelberg, D. Lubell* : Maximal sized antichains in partial orders. — *C. J. Everett, P. R. Stein* : The asymptotic number of integer stochastic matrices. — *L. Nebesky* : Left-right double trees. — *J. W. Essam* : Graph theory and statistical physics. — *E. G. Whitehead* : Algebraic structure of chromatic graphs associated with the Ramsey number  $N(3,3,3;2)$ .

E. R. LORCH. — **Sixtieth anniversary volume.** — Edited by Annali di Matematica pura ed applicata and Hing Tong. — Un volume broché,  $23 \times 29,5$ , de 77 pages. — Nicola Zanichelli, Bologna, 1970.

*F. E. J. Linton*: Applied functional semantics I. — *H. Gordon*: Compactifications defined by means of generalized ultrafilters. — *P. E. Meyer*: Function spaces and the Aleksandrov-Urysohn conjecture. — *D. Kocan*: Strongly continuous spectral families. — *H. Tong*: Non-existence of certain topological expansions. — *H. Tong*: Solutions of problems of P. S. Alexandroff on extensions of topological spaces. — *A. J. Hoffman*: On the variation of analytic functions in commutative Banach algebras with involution.

C. R. F. MAUNDER. — **Algebraic topology.** — The New University Mathematics Series. — Editor: Pr. E. T. Davies. — Un volume relié, de  $16 \times 23,5$ , de ix, 375 pages, avec figures. — Prix: £ 7. — Van Nostrand Reinhold Co., New-York/ Cincinnati/Toronto/ Melbourne/London, 1970.

*Algebraic and topological preliminaries*: Algebra; analytic topology. — *Homotopy and simplicial complexes*: simplicial complexes; homotopy and homeomorphism of polyhedra; subdivision and the simplicial approximation theorem. — *The fundamental group*: Methods of calculation; classification of triangulable 2-manifolds. — *Homology theory*: homology groups; methods of calculation (simplicial homology and exact sequences); homology groups with arbitrary coefficients; and the Lefschetz fixed-point theorem. — *Cohomology and duality theorems*: The Alexander-Poincaré duality theorem; manifolds with boundary and the Lefschetz duality theorem. — *General homotopy theory*: some geometric constructions; homotopy classes of maps; exact sequences; fibre and cofibre maps. — *Homotopy Groups and CW-Complexes*: Homotopy groups; CW-complexes; homotopy groups of CW-complexes; the theorem of J. H. C. Whitehead and the cellular approximation theorem. — *Homology and cohomology of CW-complexes*: the excision theorem and cellular homology; the Hurewicz theorem; cohomology and Eilenberg-MacLane spaces; products.

C. L. SIEGEL. — **Topics in complex function theory. Vol. II: Automorphic functions and abelian integrals.** — Translated from the original German by A. Shenitzer and M. Tretkoff. — Interscience Tracts in pure and applied mathematics, 25. — Un volume relié,  $16 \times 23,5$ , de ix, 193 pages, avec figures. — Prix: £ 6.25. — John Wiley & Sons, New-York/ London/Sydney/Toronto, 1971.

*Automorphic functions*: Fractional linear transformations; noneuclidean geometry; discontinuous groups; polygon groups; Poincaré series; the field of automorphic functions; automorphic and algebraic functions; algebraic curves of genus 0 and 1; canonical polygons. — *Abelian integrals*: reduction; existence; the period matrix; the modular group; canonical transformation; the theorem of Riemann and Roch; the theorem of Abel; the Jacobi inversion problem; theta functions; the zeros of the theta function; theta quotients; Jacobi-Abel functions.

E. M. ALFSEN. — **Compact convex sets and boundary integrals.** — Ergebnisse der Mathematik und ihrer Grenzgebiete, 57. — Un volume relié,  $16 \times 23,5$ , de ix, 210 pages, avec 3 figures. — Prix: DM 46.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*Representations of points by boundary measures*: distinguished classes of functions on a compact convex set; weak integrals, moments and barycenters; comparison of measures

on a compact convex set; Choquet's theorem; abstract boundaries defined by cones of functions; unilateral representation theorems with application to simplicial boundary measures. — *Structure of compact convex sets*: order-unit and base-norm spaces; elementary embedding theorems; Choquet simplexes; Bauer simplexes and the Dirichlet problem of the extreme boundary; order ideals, faces and parts; split-faces and facial topology; the concept of center for  $A(K)$ ; existence and uniqueness of maximal central measures representing points of an arbitrary compact convex set.

S. L. de MEDRANO. — **Involutions on Manifolds.** — *Ergebnisse der Mathematik und ihrer Grenzgebiete*, 59. — Un volume relié,  $16 \times 23,5$ , de ix, 103 pages, avec 15 figures. — Prix: DM 36.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*The Browder-Liversay invariants*: involutions of spheres; involutions of simply connected manifolds. — *Realization of the Browder-Liversay invariants*: the realization theorem; constructions with involutions; proof of theorem II.1-D; proof of theorem II.1-A; homology 3-spheres; manifolds with the same regular homotopy type as line bundles over projective spaces; invariant codimension 2 spheres. — *Relations with non-simply-connected surgery obstructions*: normal invariants; non-simply-connected surgery obstructions; relations with the Browder-Liversay invariants. — *Combinatorial classification of involutions*: some maps and exact sequences; computation of  $[P^n, G/PL]$ ; the classification theorem; another relation with non-simply-connected surgery obstructions; on the topological classification of involutions. — *Smooth Involutions*: general remarks on smooth involutions of spheres; normal invariants and Browder-Liversay invariants; differentiable structure of spheres and other double coverings; proof of theorem II.1-B, Smooth case; involutions and the generalized Kervaire invariant; smooth involutions of spheres of low dimension; action of  $\theta^m(\delta\pi)$  (after Browder); how to prove  $\sigma = \tau$ . — *Codimension 2 invariant spheres*: invariant vs. characteristic spheres; applications; knotted and unknotted codimension 2 invariant spheres; cobordism classes of invariant knots. — *Some unsolved problems*.

**Espaces Analytiques, Bucarest, 25/30 septembre 1969.** — Séminaires de l'Institut de mathématique de l'Académie de la République Socialiste de Roumanie. — Ouvrage paru sous la direction de M. Jurchescu. — Un volume broché,  $15 \times 20,5$ , de 171 pages. — Prix: Lei 7. — Académie de la République Socialiste de Roumanie, Bucarest, 1971.

Contient 14 exposés de K. Knorr, M. Jurchescu, P. Dolbeault, G. Fischer, N. Kuhlmann, Th. Bloom, G. Gussi, H. Cartan, P. Mazet, D. Burghilea, A. Duma, A. Tognoli, C. Banica et O. Stanasila.

R. LARSEN. — **An introduction to the theory of multipliers.** — *Die Grundlehren der mathematischen Wissenschaften*, 175. — Un volume relié,  $16,5 \times 24$ , de xx, 282 pages. — Prix: DM 84.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

Prologue: the multipliers for  $L_1(G)$ . — The general theory of multipliers. — The multipliers for commutative  $H^*$ -Algebras. — Multipliers for topological linear spaces of functions and measures. — The multipliers for  $L_p(G)$ . — The multipliers for the pair  $(L_p(G), L_q(G))$ ,  $1 \leq p, q \leq \infty$ . — The multipliers for functions with Fourier transforms in  $L_p(G)$ . — The multipliers for the pair  $(H_p(G), H_q(G))$ ,  $1 \leq p, q \leq \infty$ . — Appendices: Topology; topological groups; measure and integration; functional analysis; Banach algebras; Harmonic Analysis.



G. M. FICHTENHOLZ. — **Functional series.** — English edition by R. A. Silverman. — The Pocket Mathematical Library; Courses: 5. — Un volume relié,  $14,5 \times 22$ , de VII, 168 pages, avec 4 figures. — Prix: £ 5.25. — Gordon and Breach, New York/London/Paris, 1970.

*Uniforme Convergence*: Introductory remarks; uniform and nonuniform convergence; tests for uniform convergence. — *Functional properties of the sum of a series*: continuity of the sum of a series; integration and differentiation of a series; the case of power series. — *Applications*: More on integration of series; more on differentiation of series; the implicit function theorem; analytic definition of the trigonometric functions; a continuous nondifferentiable function. — *More on power series*: operations on power series; substitution of one power series into another; division of power series; solution of equations by using power series; Lagrange's series. — *Enveloping and asymptotic series*: definition and examples; basic properties of asymptotic expansions; the Euler-Maclaurin formula; another form of the Euler-Maclaurin formula.

P. L. BUTZER — R. J. NESSEL — **Fourier analysis and approximation. Vol. I: One-dimensional theory.** — Mathematische Reihe, 40. — Un volume relié,  $17,5 \times 24,5$ , de IX, 553 pages. — Prix: 108 F. — Birkhäuser Verlag, Basel et Stuttgart, 1971.

*Preliminaries.* — *Approximation by singular integrals*: singular integrals of periodic functions; theorems of Jackson and Bernstein for polynomials of best approximation and for singular integrals; singular integrals on the line group. — *Fourier transforms*: Finite Fourier transforms; Fourier transforms associated with the line group; representation theorems; Fourier transform methods and second-order partial differential equations. — *Hilbert Transforms*: Hilbert transforms on the real line; Hilbert transforms of periodic functions. — *Characterization of certain function classes*: characterization in the integral case; characterization in the fractional case. — *Saturation theory*: saturation for singular integrals on  $X_{2\pi}$  and  $L^p$ ,  $1 \leq p \leq 2$ ; saturation on  $X(\mathbf{R})$ .

J. C. OXTOBY. — **Mass und Kategorie.** — Aus dem Englischen übersetzt von K. Schürger. — Un volume broché,  $17,5 \times 25$ , de VII, 111 pages. — Prix: DM 16.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

Mass und Kategorie auf der Zahlengeraden; Liouvillesche Zahlen; das Lebesguesche Mass im  $r$ -dimensionalen Raum; die Bairesche Eigenschaft; Nicht-messbare Mengen; das Spiel von Banach-Mazur; Funktionen erster Klasse; die Sätze von Lusin und Egoroff; Metrische und topologische Räume; Beispiele für metrische Räume; nirgends differenzierbare Funktionen; der Satz von Alexandroff; transformation von linearen Mengen in Nullmengen; der Satz von Kuratowski-Ulam; der Kategorie-Satz von Banach; der Wiederkehrsatz von Poincaré; transitive Transformationen; der Dualitätssatz von Sierpinski-Erdős; Beispiele für Dualität; das erweiterte Dualitätsprinzip; Kategorie-Massräume.

J. HALE. — **Functional differential equations.** — Applied Mathematical Sciences, 3. — Editors: Fritz John (New York University), Joseph P. LaSalle (Brown University, Providence) and Lawrence Sirovich (Brown University). — Un volume broché,  $17 \times 25$ , de VIII, 238 pages, avec 15 figures. — Prix: DM 24.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

A general initial value problem; existence; continuation of solutions; continuous dependence and uniqueness; backward continuation; Carathéodory conditions; remarks

on the map defined by solutions; autonomous systems; definitions of stability; sufficient conditions for stability of general systems; sufficient conditions for instability; stability in autonomous systems; an example of Levin and Nohel; an equation of Volterra; nonhomogeneous linear systems; the « adjoint » equation and representation of solutions; stability of perturbed systems; linear autonomous equations, the semigroup and infinitesimal generator; the eigenvalues of a linear autonomous equation, decomposition of  $C$ ; decomposing  $C$  with the adjoint equation; estimates on the complementary subspace; an example; the decomposition in the variation of constants formula; forced linear systems; the saddle point property; a fixed point theorem for cones; a periodicity theorem for functional equations; the equation  $\dot{x}(t) = -\alpha x(t-1) [1+x(t)]$ ; the equation  $\dot{x}(t) = -\alpha x(t-1) [1-x^2(t)]$ ; the equation  $\ddot{x}(t) + f(x(t))\dot{x}(t) + g(x(t-r)) = 0$ ; the « adjoint » equation for general linear systems; the true adjoint of a linear system; boundary value problems; linear periodic systems, general theory; decomposition of linear periodic systems; nondegenerate periodic orbits; notes and remarks.

L. SIROVICH. — **Techniques of Asymptotic Analysis.** — Applied mathematical sciences, vol. 2. — Editors: Fritz John (New York University), Joseph P. LaSalle (Brown University, Providence) and Lawrence Sirovich (Brown University). — Un volume broché, 17 × 25, de IX, 306 pages, avec 23 figures. — Prix: DM 24.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*Asymptotic sequences and asymptotic development of a function*: notation and definition; operations with asymptotic expansions; some remarks on the use of asymptotic expansions; summation of asymptotic expansions. — *The asymptotic development of a function defined by an integral*: elementary analytic methods; Laplace and Fourier transforms at infinity; Laplace's formula and its generalization; Kelvin's formula and generalizations; integrals of the type  $\int_{\alpha(\underline{x})}^{\beta(\underline{x})} G(\underline{x}, t) dt$  method of steepest descents and the saddle point formula; applications of the saddle point formula; multidimensional integrals (I-II); asymptotic evaluation of integrals; miscellaneous. — *Linear ordinary differential equations*: some topics in matrix analysis; matrix theory; linear ordinary differential equations with constant coefficients; classification and general properties of ordinary differential equations in the neighbourhood of singular points; linear ordinary differential equations with regular singular points; irregular singular points; ordinary differential equations containing a large parameter.

C. L. SIEGEL. — **Topics in complex function theory. Vol. I: Elliptic functions and uniformization theory.** — Translated from the original german by A. Shenitzer and D. Solitar. — Interscience tracts in pure and applied mathematics, 25. — Un volume relié, 16 × 23,5, de IX, 186 pages, avec figures. — Prix: £ 4.75. — John Wiley & Sons, New York/London/Sidney/Toronto, 1969.

*Elliptic functions*: doubling the arc of a lemniscate; the Euler addition theorem; analytic continuation; Riemann regions; the Riemann surface of the function  $a_0 z^4 + a_1 z^3 + a_2 z^2 + a_3 z + a_4$ ; the elliptic integral of the first kind; the inverse function; the covering surface; the periods; the period parallelogram; the  $\gamma$ -function; partial fractions expansions of the  $\gamma$ -functions; the inversion problem; the field of elliptic functions; the addition theorem; degenerate elliptic functions. *Uniformization*: algebraic functions; compact Riemann regions; the fundamental group; invariance of the genus; the Poisson

integral; the Dirichlet integral; preliminaries for the mapping theorem; construction of a harmonic function with minimal property; the mapping theorem; uniformization of algebraic functions.

**Séminaire Bourbaki, vol. 1969/70.** — Exposés 364-381. — Lecture notes in mathematics, 180. — Un volume broché, de iv, 310 pages,  $17 \times 25,5$ . — Prix: DM 22.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*M. Berger* : Le théorème de Gromoll-Meyer sur les géodésiques fermées. — *M. Demazure* : Motifs des variétés algébriques. — *A. Douady* : Prolongement de faisceaux analytiques cohérents (Travaux de Trautmann, Frisch-Guenot et Siu). — *P. Eymard* : Algèbres  $A_p$  et convoluteurs de  $L^p$ . — *J. P. Serre* : Travaux de Baker. — *M. Vergne* : Sur les intégrales d'entrelacement de R. A. Kunze et E. M. Stein (d'après G. Schiffmann). — *P. Cartier* : Espaces de Poisson des groupes localement compacts (d'après R. Azencott). — *J. Dixmier* : Les algèbres hilbertiennes modulaires de Tomita (d'après Takesaki). — *J. Martinet* : Un contre-exemple à une conjecture d'E. Noether (d'après R. Swan). — *V. Poenaru* : Travaux de J. Cerf (isotopie et pseudo-isotopie). — *S. Smale* : Stability and genericity in dynamical systems. — *J. Tits* : Groupes finis simples sporadiques. — *P. Deligne* : Travaux de Griffiths. — *G. Mokobodzki* : Structure des cônes de potentiels. — *Ni. Moulis* : Variétés de dimension infinie. — *J. P. Schreiber* : nombres de Pisot et travaux d'Yves Meyer. — *J. P. Serre* :  $p$ -torsion des courbes elliptiques (d'après Y. Manin). — *R. Temam* : Approximation d'équations aux dérivées partielles par des méthodes de décomposition.

**H. S. SHAPIRO.** — **Topics in approximation theory.** — Lecture notes in mathematics, 187. — Un volume broché,  $17 \times 25,5$ , de vi, 275 pages. — Prix: DM 22.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

Best uniform approximation. — The interpolation formula and gaussian quadrature. — Best approximation and extremal problems in other norms. — Applications of the Hahn-Banach theorem and dual extremal problems. — Approximation theory and extremal problems in Hilbert spaces. — Completeness of a set of elements in Hilbert spaces. — Minimal extrapolation of Fourier transforms. — General aspects of « Degree of approximation ». — Approximation theory in Homogeneous Banach spaces.

**Martingales. A report on a meeting at Oberwolfach. May 17-23, 1970.** — Lecture notes in mathematics, 190. — Un volume broché,  $17 \times 25,5$ , de v, 75 pages. — Prix: DM 12.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*Burkholder* : Martingale inequalities. — *H. Dinges* : inequalities leading to a proof of the classical Martingale-convergence theorem. — *J. L. Doob* : state space for Markov processes. — *W. Hansen* : Hunt's theorem and axiomatic potential theory. — *F. B. Knight* : a reduction of continuous square-integrable Martingales to brownian motion. — *P. A. Meyer* : Square integrable Martingales, a survey. — *P. A. Meyer* : Non-square integrable Martingales etc. — *H. Rost* : Einige Ergebnisse über die Stoppverteilungen eines Markoff-Prozesses. — *L. J. Snell* : on the proofs of two theorems in probabilistic potential theory. — *D. W. Stroock and S. R. S. Varadhan* : Diffusion processes and Martingales (I and II).

**Séminaire de Probabilités V. Université de Strasbourg.** — Lecture notes in mathematics, 191. — Un volume broché,  $17 \times 25,5$ , de iv, 372 pages, avec 5 figures. — Prix: DM 26.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*Ph. Artzner* : Fonctions caractéristiques et mesures planes invariantes par rotation. — *P. Assouad* : Démonstration de la « Conjecture de Chung » par Carleson. — *J. Bretagnolle* : Résultats de Kesten sur les processus à accroissements indépendants. — *R. Cairoli* : Décomposition de processus à indices doubles. — *P. Cartier* : Introduction à l'étude des mouvements browniens à plusieurs paramètres. — *K. L. Chung* : A simple proof of Doob's convergence theorem. — *C. Dellacherie* : Une démonstration du théorème de séparation des ensembles analytiques. — *C. Dellacherie* : Quelques commentaires sur les prolongements de capacités. — *C. Dellacherie* : Correction à « Ensembles aléatoires II ». — *C. Dellacherie* : Les théorèmes de Mazurkiewicz-Sierpinski et de Lusin. — *C. Dellacherie* : Ensembles pavés et rabotages. — *C. Dellacherie et C. Doléans-Dade* : Un contre-exemple au problème des laplaciens approchés. — *C. Doléans-Dade* : Une martingale uniformément intégrable, mais non localement de carré intégrable. — *C. Doléans-Dade* : Intégrales stochastiques par rapport à une famille de probabilités. — *B. Maisonneuve* : Ensembles régénératifs, temps locaux et subordinateurs. — *P. A. Meyer* : Sur un article de Dubins. — *P. A. Meyer* : Processus de Poisson ponctuels, d'après K. Ito. — *P. A. Meyer* : Démonstration simplifiée d'un théorème de Knight. — *P. A. Meyer* : Représentation intégrale des fonctions excessives, résultats de Mokobodzki. — *P. A. Meyer* : Un théorème sur la répartition des temps locaux. — *P. A. Meyer* : Deux petits résultats de théorie du potentiel. — *P. A. Meyer* : Le retournement du temps d'après Chung et Walsh. — *P. A. Meyer* : Travaux de H. Rost en théorie de balayage. — *P. A. Meyer* : Solutions de l'équation de Poisson dans le cas récurrent. — *P. A. Meyer* : Balayage pour les processus de Markov continus à droite, d'après Shih Chung Tuo. — *D. Revuz* : Remarque sur les potentiels de mesure. — *J. de Sam Lazaro et P. A. Meyer* : Une remarque sur le flot du mouvement brownien. — *J. B. Walsh* : Two footnotes to a theorem of Ray. — *J. B. Walsh* : Some topologies connected with Lebesgue measure. — *T. Watanabe* : On balayées of excessive measures and functions with respect to resolvents. — *M. Weil* : Décomposition d'un temps terminal. — *M. Weil* : Quasi-processus et énergie. — *M. Weil* : Conditionnement par rapport au passé strict.

**Proceedings of Liverpool Singularities. — Symposium I.** — Lecture notes in mathematics, 192. — Un volume broché, 17 × 25,5, de v, 319 pages. — Prix: DM 24.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*H. I. Levine* : Singularities of differentiable mappings. — *C. T. C. Wall* : Introduction to the preparation theorem. — *L. Nirenberg* : A proof of the Malgrange preparation theorem. — *S. Lojasiewicz* : Whitney fields and the Malgrange-Mather preparation theorem. — *J. N. Mather* : On Nirenberg's proof of Malgrange's preparation theorem. — *G. Glaeser* : Sur le théorème de préparation différentiable. — *C. T. C. Wall* : Stratified sets: a survey. — *T.-C. Kuo* : The ratio test for analytic Whitney stratifications. — *C. B. Rayner* : Thom's cell decomposition as a stratified set. — *R. Thom* : Stratified sets and morphisms; local models. — *D. Sullivan* : Combinatorial invariants of analytic spaces. — *T.-C. Kuo* : The jet spaces  $J^r(n,p)$ . — *C. T. C. Wall* : Lectures on  $C^\infty$ -stability and classification. — *J. N. Mather* : Stability of  $C^\infty$  Mappings: VI. The Nice dimensions. — *J. Bochnak and S. Lojasiewicz* : A converse of the Kuiper-Kuo theorem. — *J. Bochnak and S. Lojasiewicz* : Remarks on finitely determined analytic germs. — *S. A. Khabbaz and E. Pitcher* : Nondegenerate critical points of deficiency one. — *J. G. Timourian* : Maps with 0-dimensional critical set. — *I. R. Porteous* : Simple singularities of maps. — *I. R. Porteous* : Todd's canonical classes. — *F. Ronga* : Le calcul de la classe de cohomologie entière duale à  $\Sigma_{-K}$  — *R. MacPherson* : Singularities of vector bundle maps.

**Symposium on the theory of numerical analysis. Held in Dundee/Scotland, September 15-23, 1970.** — Lecture notes in mathematics, 193. — Un volume broché,  $17 \times 25,5$ , de vi, 152 pages. — Prix: DM 16.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*G. Golub*: Direct methods for solving elliptic difference equations. — *G. Golub*: Matrix methods in mathematical programming. — *V. Toméee*: Topics in stability theory for partial difference operators. — *E. L. Wachspress*: Iteration parameters in the numerical solution of elliptic problems. — *O. Widlund*: Introduction to finite difference approximations to initial value problems for partial differential equations.

M. BERGER; P. GAUDUCHON; E. MAZET. — **Le spectre d'une variété Riemannienne.** — Lecture notes in mathematics, 194. — Un volume broché,  $17 \times 25,5$ , de vii, 251 pages. — Prix: DM 22.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

*Variétés Riemanniennes. — Invariants Riemanniens*: Mesure canonique; connexion canonique; géodésiques; courbure; courbure et géodésiques; variétés kählériennes; le laplacien. — *Le spectre d'une variété riemannienne*: Définition et premières propriétés; spectre des tores plats et des bouteilles de Klein plates; spectre des sphères et des projectifs; résultats  $\forall$  concernant  $\lambda_1$ ; développement asymptotique de Minakshisundaram-Pleijel; déformations isospectrales; autres résultats.

**Reports of the Midwest Category Seminar V.** — Lecture notes in mathematics, 195. — Un volume broché,  $17 \times 25,5$ , de iii, 255 pages. — Prix: DM 22.—. — Springer-Verlag, Berlin/Heidelberg/New York, 1971.

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