Α

W Abikoff [1981], "The uniformization theorem," *Amer Math Monthly* 88, 574–592.

M B Abrahamse [1974], "Toeplitz operators in multiply connected regions," *Amer J Math* **96**, 261–297.

M B Abrahamse [1975], "Analytic Toeplitz operators with automorphic symbol," *Proc Amer Math Soc* **52**, 297–302.

M B Abrahamse [1976], "Subnormal Toeplitz operators and functions of bounded type," *Duke Math J* **43**, 597–604.

M B Abrahamse [1978], "Commuting subnormal operators," Illinois J Math 22, 171–176.

M B Abrahamse [preprint], "Some examples on lifting the commutant of a subnormal operator."

M B Abrahamse and J A Ball [1976], "Analytic Toeplitz operators with automorphic symbol, II," *Proc Amer Math Soc* **59**, 323–328.

M B Abrahamse and J J Bastian [1978], "Bundle shifts and Ahlfors functions," *Proc Amer Math Soc* **72**, 95–96.

M B Abrahamse and R G Douglas [1976], "A class of subnormal operators related to multiply connected domains," *Adv Math* **19**, 106–148.

M B Abrahamse and T L Kriete [1973], "The spectral multiplicity of a multiplication operator," *Indiana Math J* **22**, 845–857.

G Adams, "A non-linear characterization of stable invariant subspaces," Integral Equations and Operator Theory 6 (1983) 473–487.

G. Adams, "The Bergman bilateral shift," Ph. D. Thesis, Indiana Univ. (1984).

R A Adams [1975], Sobolev Spaces, Academic Press, New York.

J Agler [1979], "An invariant subspace theorem," Bull Amer Math Soc 1, 425–427.

J Agler [1980], "An invariant subspace theorem," J Funct Analysis **38** 315–323.

J Agler [1985a], "Hypercontractions and subnormality," J Operator Theory **13** 203–217.

J Agler [1985b], "Rational dilation on an annulus," Ann Math 121 537–563.

J Agler [1988], "An abstract approach to model theory," *Surveys of Some Recent Results in Operator Theory*, vol 2, J B Conway and B B Morrel, Editors, Research Notes in Mathematics, Longman, London.

P R Ahern and D N Clark [1970], "On functions orthogonal to invariant subspaces," *Acta Math* **124** 191–204.

P R Ahern and D Sarason [1967a], "The  $H_p$  spaces of a class of function algebras," Acta Math ~ 117 123–163.

P R Ahern and D Sarason [1967b], "On some hypo-Dirichlet algebras of analytic functions," *Amer J Math* **89** 932–941.

L V Ahlfors [1973], Conformal Invariants, McGraw-Hill, New York.

Typeset by  $\mathcal{A}_{\mathcal{M}}S$ -T<sub>E</sub>X

L V Ahlfors and A Beurling [1950], "Conformal invariants and function theoretic null sets," *Acta Math* **83** 101–129.

C A Akemann [1967], "The dual space of an operator algebra," *Trans Amer Math Soc* **126** 286–302.

C A Akemann and G K Pedersen [1977], "Ideal perturbations of elements of C<sup>\*</sup>-algebras," *Math Scand* **41** 117–139.

J Akeroyd [1987], "Polynomial approximation in the mean with respect to harmonic measure on crescents," *Trans Amer Math Soc* **303** 193–199.

J Akeroyd [1989], "Point evaluations and polynomial approximation in the mean with respect to harmonic measure," *Proc Amer Math Soc* **105** 575–581.

J Akeroyd [preprint], "Polynomial approximation in the mean with respect to harmonic measure on crescents, II."

J Akeroyd [1991], "Density of the polynomials in the Hardy space of certain slit domains." *Proc. Amer. Math. Scc* 

J Akeroyd, D Khavinson, and H S Shapiro [1991], "Remarks concerning cyclic vectors in Hardy and Bergman spaces," *Michigan Math J* **38** 191–205.

A Aleman [1996], "Subnormal operators with compact selfcommutator," *Manuscripta Math* **91** 353–367.

A Aleman, S Richter, and W T Ross [1996], "Bergman spaces on disconnected domains," *Canad J Math* **48** 225–243.

A Aleman and S Richter [preprint], "Some sufficient conditions for the division property of invariant subspaces in weighted Bergman spaces."

A Aleman, S Richter, and C Sundberg [1996], "Beurling's theorem for the Bergman space," *Acta Math* **177** 275–310

H Alexander [1973], "Projections of polynomial hulls," J Funct Analysis 3 13-19.

T Ando [1963a], "Matrices of normal extensions of subnormal operators," *Acta Sci Math (Szeged)* **24** 91–96.

T Ando [1963b], "On hyponormal operators," Proc Amer Math Soc 14 290-291.

T Ando [1963c], "Note on invariant subspaces of a compact normal operator," *Arkiv Math* **14** 337–340.

C. Apostol, "On the roots of spectral operators," *Proc Amer Math Soc* **19** (1968) 811–814.

C Apostol, H Bercovici, C Foias, and C Pearcy [1985], "Invariant subspaces, dilation theory, and the structure of the predual of a dual algebra, I," *J Funct Analysis* **63** 369–404.

C. Apostol, L. Fialkow, D. Herrero, and D. Voiculescu, *Approximation of Hilbert Space Operators*, Pitman Publ, London (1984).

C Apostol, C Foias, and N Salinas, "On stable invariant subspaces," *Integral Equations and Operator Theory* 8 (1985) 721–750.

C Apostol, C Foias, and D Voiculescu [1973], "Some results on non-quasitriangular operators, IV" *Revue Roum Math Pures et Appl* **18** 487–514.

C. Apostol, D. A. Herrero, and D. Voiculescu, "The closure of the similarity orbit of a Hilbert space operator," *Bull Amer Math Soc* **6** (1982) 421–426.

C. Apostol and B. B. Morrel, "On uniform approximation of operators by simple models," *Indiana Univ Math J* 26 (1977) 427–442.

N Aronszajn and K T Smith, "Invariant subspaces of completely continuous operator," Ann Math **60** (1953) 345–350.

W B Arveson [1967], "A density theorem for operator algebras," *Duke Math J* 34 635–647.

W B Arveson [1969], "Subalgebras od C\*-algebras," Acta Math 123 141–224.

W B Arveson [1972], "Subalgebras od C\*-algebras, II," Acta Math 128 271-308.

W B Arveson [1975], "Interpolation problems in nest algebras," J Functional Analysis **20** 208–233.

W B Arveson [1976], An Invitation to  $C^*$ -algebras, Springer-Verlag, New York.

W B Arveson [1977], "Notes on extensions of C\*-algebras," Duke Math J 44 329–355.

W B Arveson [1984], "Ten Lectures on operator algebras," *CBMS lecture Notes* **55** Amer math Soc, Providence.

A Athavale [1987], "Holomorphic kernels and commuting operators," *Trans Amer Math Soc* **304** 101–110.

A Athavale [1988], "On joint hyponormality of operators," *Proc Amer Math Soc* **103** 417–423.

A Athavale [preprint a], "Subnormal tuples quasisimilar to the Szegö tuple."

A Athavale [preprint b], "On the duals of subnormal tuples."

A Athavale [preprint c], "Model theory on the unit ball in  $\mathbb{C}^m$ ."

A Athavale and S Pedersen [preprint], "Moment problems and subnormality."

S Axler [1982], "Multiplication operators on Bergman spaces," J. Reine. Angew. Math. **336** 26–44.

S Axler [1986], "Harmonic functions from a complex analysis viewpoint," *Amer* Math Monthly **93** 246–258.

S Axler, J B Conway, and G McDonald [1982], "Toeplitz operators on Bergman spaces," *Canadian Math J* **34** 466–483.

S Axler and J Shapiro [1985], "Putnam's Theorem, Alexander's spectral area estimate, and VMO," *Math Ann* **271** 161–183.

E A Azoff, C K Fong, and F Gilfeather [1976], "A reduction theory for non-self-adjoint algebras," *Trans Amer Math Soc* **224** 351–366.

### в

A Baernstein, et al [1986], *The Bieberbach Conjecture*, Amer Math Soc, Providence. T Bagby [1972], "Quasi topologies and rational approximation," *J Funct Analysis* **10** 259–268.

J A Ball, R F Olin, and J E Thomson [1978], "Weakly closed algebras of subnormal operators," *Illinois J Math* **22** 315–326.

R Bañuelos and T Wolff [1985], "Note on  $H^2$  of planar domains," *Proc Amer Math Soc* **95** 217–218.

N K Bari [1951]. Biorthogonal systems and bases in Hilbert space . *Moskov Gos Univ Ucenye Zapinski* **148** , *Matematika* **4** 69–107 . (Russian) (MR **14** p 249) .

H Bart, I Gohberg, and M A Kaashoek, "Stable factorizations of monic matrix polynomials and stable invariant subspaces," *Integral Equations and Operator Theory* **1** (1978) 496–517.

J J Bastian [1976], "A decomposition of weighted translation operators," *Trans* Amer Math Soc **224** 217–230.

J J Bastian and K J Harrison [1974], "Subnormal weighted shifts and asymptotic properties of normal operators," *Proc Amer Math Soc* **42** 475–479.

H. Behncke [1968], "Structure of certain nonnormal operators," J Math Mech 18 103–107.

H. Behncke [1970], "Generators of W\*-algebras," Tohoku Math J 22 541–546.

S K Berberian, [1959], "Note on a theorem of Fuglede and Putnam," *Proc Amer Math Soc* **10** 175–182.

S K Berberian, [1961], Introduction to Hilbert space, Oxford Univ Press, New York.

S K Berberian, [1962], "A note on hyponormal operators," *Pacific J Math* **12** 1171–1175.

S K Berberian, [1966], Notes on Spectral Theory, Van Nostrand, Princeton.

S K Berberian, [1969], "An extension of Weyl's Theorem to a class of not necessarily normal operators," *Michigan Math J* 16 273–279.

S K Berberian, [1978], "Extensions of a theorem of Fuglede and Putnam," *Proc* Amer Math Soc **71** 113–114.

H Bercovici [1984], "On dominating sequences in the unit disc," *Math Zeit* **188** 33–43.

H Bercovici [1988], "Factorization theorems and the structure of operators on Hilbert space," Ann Math **128** 399–413.

H Bercovici [1988], Operator Theory and Arithmetic in  $H^{\infty}$ , Amer Math Soc, Providence.

H Bercovici [1998], "Hyper-reflexivity and the factorization of linear functionals," J Funct Anal. **158** 242–252.

H Bercovici and J B Conway [1988], "A note on the algebra generated by a subnormal operator," *Operator Theory: Advs Appl* **32** 53–56.

H Bercovici, C Foias, and C Pearcy [1985], *Dual algebras with applications to invariant subspaces and dilation theory*," CBMS notes **56**, Amer Math Soc, Providence. C Berg, J P R Christensen, and P Ressel [1984], *Harmonic Analysis on Semigroups*, New York: Springer-Verlag.

I. D. Berg, "An extension of the Weyl-von Neumann Theorem to normal operators," *Trans Amer Math Soc* **160** (1971) 365–371.

C A Berger [1978], "Sufficiently high powers of hyponormal operators have rationally invariant subspaces," *Integral Equations Operator Theory* **1** 444–447.

C A Berger and B I Shaw [1973a], "Selfcommutators of multicyclic hyponormal operators are trace class," *Bull Amer Math Soc* **79** 1193–1199.

C A Berger and B I Shaw [1973b], "Intertwining, analytic structure, and the trace norm estimate," *Proc Conf Operator Theory*, Springer-Verlag Lecture Notes vol 345, pp 1–6.

C A Berger and B I Shaw [preprint], "Hyponormality: its analytic consequences." S Bergman [1947], Sur les fonctions orthogonales de plusiers variables complexes avec les applications à la theorie des fonctions analytiques, Gauthier-Villars, Paris. S Bergman [1950], The kernel function and conformal mapping, Math Surveys V, Amer Math Soc, Providence.

A R Bernstein, "Invariant subspaces of polynomially compact operators," *Pacific J Math* **21** (1967) 445–464.

L Bers [1965], "An approximation theorem," J Analyse Math 14 1–4.

A Beurling [1949], "On two problems concerning linear transformations in Hilbert space," Acta Math **81** 239–255.

P Billingsley [1965], Ergodic Theory and Information, Wiley, New York.

E Bishop [1957], "Spectral theory for operators on a Banach space," *Trans Amer Math Soc* 86 414–445.

E Bishop, "A generalization of the Stone-Weierstrass Theorem," *Pacfic J Math* **11** (1961) 777–783.

N Bourbaki [1959], Éléments de Mathématique, Livre VI, Intégration, Chap. 6 Intégration Vectorielle, Hermann et Cie, Paris (1959).

P S Bourdon [preprint], "Rudin's orthogonality problem and the Nevanlinna counting function," *proc Amer Math Soc*, to appear.

J Bram, "Subnormal operators," Duke Math J 22 (1955) 75–94.

L deBranges[1985], "A proof of the Bieberbach conjecture," *Acta math 154* 137–152. L deBranges and J Rovnyak, "The existence of invariant subspaces," *Bull Amer Math Soc* **70** (1964) 718–721.

L deBranges and J Rovnyak, "Correction to 'The existence of invariant subspaces' ," Bull Amer Math Soc **71** (1965) 396 .

L deBranges and J Rovnyak, Notices American Mathematical Society **12** (1965) 534.

L deBranges and J Rovnyak, Notices American Mathematical Society **12** (1965) 823.

L deBranges and J Rovnyak [1966a], "Canonical models in quantum scattering theory," in *Perturbation theory and its applications in quantum mechanics*, Wiley, New York, 295–392.

L deBranges and J Rovnyak [1966b], *Square summable power series*, Holt, Reinhart and Winston, New York.

J E Brennan [1971a], "Invariant subspaces and rational approximation," J Funct Analysis 7 285–310.

J E Brennan [1971b], "Point evaluations and invariant subspaces," Indiana Univ Math J 20 879–881.

J E Brennan [1973], "Invariant subspaces and weighted polynomial approximation," Ark Math ~11 167–189.

J E Brennan [1977], "Approximation in the mean by polynomials on non-Carathédory domains," *Ark Math* **15** 117–168.

J E Brennan [1979a], "Point evaluations, invariant subspaces and approximation in the mean by polynomials," *J Funct Analysis* **34** 407–420.

J E Brennan [1979b], "Invariant subspaces and subnormal operators," *Proc Symposium Pure Math*, Amer Math Soc **35** part 1, 303–309.

L Brickman and P A Fillmore [1967], "The invariant subspace lattice of a linear transformation," *Canadian J Math* **19** 810–822.

M S Brodskii [1957], "On a problem of I M Gelfand," Uspekhi Mat Nauk **12** 129-132.

A Browder [1969], Introduction to Function Algebras, W A Benjamin (New York). A Brown [1953], "On a class of operators," Proc Amer Math Soc 4 723–728.

A Brown and C Pearcy [1977], "Jordan loops and decomposition of operators," *Can J Math* **29** 1112–1119.

L Brown, A L Shields, and K Zellar [1960], "On absolutely convergent sums," *Trans Amer Math Soc* **96** 162–183.

L Brown [1991], "Multipliers and cyclic vectors in the Bloch space,"  $Michigan\ Math$  J  ${\bf 38}\ 141{-}146$ 

L G Brown, R G Douglas, and P A Fillmore [1973], "Unitary equivalence modulo the compact operators and extensions of C<sup>\*</sup>-algebras," Lecture Notes vol **345**, 58–128, Springer-Verlag, Berin.

L G Brown, R G Douglas, and P A Fillmore [1977], "Extensions of C<sup>\*</sup>-algebras and K-homology," Ann Math **105** 265–324.

S W Brown [1978], "Some invariant subspaces for subnormal operators," *Integral Equations Operator Theory* **1** 310–333.

S W Brown [1987], "Hyponormal operators with thick spectra have invariant subspaces," Ann Math **125** 93–103.

S W Brown [1988], "Full analytic subspaces for contractions with rich spectrum," *Pacific J Math* **132** 1–10.

S W Brown and B Chevreau [1988], "Toute contraction à calcul fonctionnel isométrique est réflexive," C R Acad Sci Paris **307** (1988) 185–188.

S W Brown, B Chevreau, and C Pearcy, "Sur le problème du sous-espace invariant pour les contractions," (preprint).

J W Bunce [1970], "Characters on singly generated C\*-algebras," *Proc Amer Math Soc* **25** 297–303.

J W Bunce [1978], "A universal diagram property of minimal normal extensions," *Proc Amer Math Soc* **69** 103–108.

J W Bunce and J A Deddens [1977], "On the normal spectrum of a subnormal operator," *Proc Amer Math Soc* **63** 107–110.

### $\mathbf{C}$

S L Campbell [1975], "Subnormal operators with non-trivial quasinormal extensions," *Acta Sci Math (Szeged)* **37** 191–193.

S Campbell and J Daughtry, "The stable solutions of quadratic matrix equations," *Proc Amer Math Soc* **74** (1979) 19–23.

S R Caradus , W E Pfaffenberger , and B Yood [1974]. Calkin Algebras and Algebras of Operators on Banach Spaces. New York: Marcel Dekker .

R W Carey and J D Pincus [1975], "Commutators, symbols, and determining functions," *J Funct Analysis* **19** 50–80.

R W Carey and J D Pincus [1977], "Mosaics, principal functions, and mean motion in von Neumann algebras," *Acta Math* **138** 153–218.

R W Carey and J D Pincus [1979], "Principal functions, index theory, geometric theory and function algebras," *Integral Equations Operator Theory* **2** 441–483.

R W Carey and J D Pincus [1981], "An integrality theorem for subnormal operators," *Integral Equations Operator Theory* **4** 10–44.

L Carleson [1962], "Interpolation by bounded analytic functions and the corona problem," Ann Math (2)**76** 547–559.

L Carleson [1966], "On the convergence and growth of partial sums of Fourier series," *Acta Math* **116** 135–157.

L Carleson [1967], Selected Problems on Exceptional sets, Van Nostrand (Princeton).

J Chaumat [1974], "Adherence faible étoile d'algèbras de fractions rationelles," Ann Inst Fourier **24** 93–120.

J Chaumat [1975], "Adherence faible étoile d'algèbras de fractions rationelles," *Publications Mathématiques d'Orsay* 147.

B Chevreau, "Sur les contractions à calcul fonctionnel isométrique, II," (preprint).

E Christensen [1977a], "Perturbations of operator algebras," Invent Math 43 1–13.

E Christensen [1977b], "Perturbations of operator algebras, II," Indiana U Math J **26** 891–904.

E Chrictensen [1978], "Extensions of derivations," J Functional Analysis 27 234–247.

G Choquet [1955], "Theory of capacities," Ann Inst Fourier 5 131–295.

J Cima and I Graham, "On the extension of holomorphic functions with growth conditions across analytic subvarieties," *Mich Math J* 28 (1981) 241–256.

J A Cima, B Korenblum, and M Stessin, [preprint] "On Rudin's orthogonality and independence problem."

J Cima and Matheson [1985], "Approximation in the mean by polynomials," *Rocky Mountain J Math* **15** 729–738.

K F Clancey [1979], *Seminormal Operators*, Lecture Notes vol 742, Springer-Verlag, New York.

K F Clancey [1991], "Representing measures on multiply connected planar domains," *Illinois J. Math* **35** 286–311

K F Clancey, J B Conway, and M Raphael [1983], "On a conjecture of Carey and Pincus," *Integral Equations Operator Theory* **6** 158–159.

K F Clancey and B B Morrel [1974], "The essential spectrum of some Toeplitz operators," *Proc Amer Math Soc* 44 129–134.

K F Clancey and C R Putnam [1972], "The local spectral behavior of completely subnormal operators," *Trans Amer Math Soc* **163** 239–244.

W S Clary [1973], "Quasi-similarity and subnormal operators," Ph D thesis, University of Michigan.

W S Clary [1975], "Equality of spectra of quasi-similar hyponormal operators," *Proc Amer Math Soc* **53** 88–90.

L A Coburn [1966], "Weyl's theorem for nonnormal operators," *Michigan Math J* **13** 285–288.

B J Cole and T W Gamelin [1982], "Tight uniform algebras and algebras of analytic functions," J Funct Analysis  ${\bf 46}$  158–220.

B J Cole and T W Gamelin [1985], "Weak-star continuous homomorphisms and a decomposition of orthogonal measures," Ann de l'Institute Fourier **35** 149–189.

E F Collingwood and A J Lohwater [1966], *The Theory of Cluster Sets*, Cambridge University Press, Cambridge.

J B Conway [1990], A Course in Functional Analysis, Springer-Verlag, New York. J B Conway, The Theory of Subnormal Operators, Amer Math Soc, Providence (1991).

J B Conway [1978], *Functions of One Complex Variable*, Springer-Verlag, New York.

J B Conway [1995], Functions of One Complex Variable, II, Springer-Verlag, New York.

J B Conway, "On the Calkin algebra and the covering homotopy property," *Trans* Amer Math Soc **211** (1975) 135–142.

J B Conway, "On the Calkin algebra and the covering homotopy property, II," *Canadian Math J* **29** (1977) 210–215.

J B Conway [1973], "A complete Boolean algebra of subspaces which is not reflexive," *Bull Amer Math Soc* **79** 720–722.

J B Conway [1977], "The direct sum of normal operators," *Indiana Univ Math J* **26** 277–289.

J B Conway [1980], "Quasisimilarity for subnormal operators," *Illinois J Math* **24** 689–702.

J B Conway [1981b], "The dual of a subnormal operator," J Operator Theory 5 195–211.

J B Conway [1982], "Quasisimilarity for subnormal operators, II," *Canadian Math Bull* **25** 37–40.

J B Conway, "Finite-dimensional points of continuity for Gen and Com," *Lin Alg and Appl* **35** (1981) 121–127.

J B Conway[1985a], "Arranging the disposition of the spectrum," *Proc Royal Irish Acad* **85A**, 139–142.

J B Conway [1985b], "A survey of some results on subnormal operators," pp 19–37, *Operators and Function Theory*, edited by S C Power, D Reidel, Dordrecht, Holland.

J B Conway[1987], "Spectral properties of certain operators on Hardy spaces of planar regions," *Integral Equations Operator Theory* **10** 659–706.

J B Conway[1989], "The minimal normal extension of a function of a subnormal operator," Analysis at Urbana II, Proc Special Year in Modern Analysis at University of Illinois, 1986–87 Cambridge Univ Press, Cambridge.

J B Conway [1990], "Towards a functional calculus for subnormal tuples: the minimal normal extension and approximation in several complex variables," *Proc Symposium Pure Math* **51** Part I, Amer Math Soc, Providence.

J B Conway [1991], *The Theory of Subnormal Operators*, Amer Math Soc Surveys and Monographs **36**, Providence.

J B Conway [1991], "Towards a functional calculus for subnormal tuples: the minimal normal extension," *Trans Amer Math Soc* **326** 543–567.

J B Conway [1994], "On the fundamental problem for spectral sets," *Linear and Complex Analysis Problem Book 3*, vol 1, Springer-Verlag Lecture Notes **1573**, 373–377.

J B Conway [1995], Functions of One Complex Variable, II," Springer-Verlag, New York.

J B Conway [1999], A Course in Operator Theory, Amer Math Soc, Providence.

J B Conway and J J Dudziak [1990], "Von Neumann operators are reflexive," J reine angew Math 408 34–56.

J B Conway, J J Dudziak, and E Straube [1987], "Isometrically removable sets for functions in the Hardy space are polar," *Michigan Math J* **34** 267–273.

J B Conway, J Duncan, and A L T Paterson, "Monogenic inverse semigroups," *Proc Royal Soc Edinburgh* **98A** (1984) 13–24.

J B Conway and N Elias [1993], "Analytic bounded point evaluations for spaces of rational functions," J Functional Analysis **117** 1–24.

J B Conway and N S Feldman [1997], "The essential selfcommutator of a subnormal operator," *Proc Amer Math Soc* **125** 243–244.

J B Conway and T A Gillespie, "Is a self-adjoint operator determined by its lattice of invariant subspaces?" J Funct Analysis **64** (1985) 178–189.

J B Conway and T A Gillespie, "Is an isometry determined by its invariant subspace lattice ?" J Operator Theory **22** (1989) 31–49.

J B Conway and D W Hadwin [1983], "Strong limits of normal operators," *Glasgow Mathematical J* **24** 93–96.

J B Conway and P R Halmos, "Finite dimensional points of continuity of Lat," *Lin Alg and its Appl* **31** (1980) 93–102.

J B Conway and P McGuire [1984], "Operators with  $C^*$ -algebra generated by a shift," Trans Amer Math Soc **284** 153–161.

J B Conway and B B Morrel, "Operators that are points of spectral continuity," Integral Equations and Operator Theory 2 (1979) 174–198. J B Conway and B B Morrel, "Operators that are points of spectral continuity, II," *Integral Equations and Operator Theory* **4** (1981) 459–503.

J B Conway and B B Morrel, "Operators that are points of spectral continuity, III," *Integral Equations and Operator Theory* **6** (1983) 319–344.

J B Conway and B B Morrel, "Behavior of the spectrum under small perturbations," *Proc. Royal Irish Acad* **81A** (1981) 55–63.

J B Conway and B B Morrel, "Roots and logarithms of bounded operators on a Hilbert space," J Funct Analysis **70** (1987) 171–193.

J B Conway, B B Morrel, and J G Stampfli, "The operator equation TS = 1 and representations of the bicyclic semigroup," *Proc Royal Edinburgh Soc* **79A**(1977) 131–136.

J B Conway and R F Olin [1976], "A functional calculus for subnormal operators," *Bull Amer Math Soc* 82 259–261.

J B Conway and R F Olin [1977], "A functional calculus for subnormal operators, II," *Memoirs Amer Math Soc* 184.

J B Conway and C R Putnam [1985], "An irreducible subnormal operator with infinite multiplicities," *J Operator Theory* **13** 291–297.

J B Conway and J Szucs, "The weak sequential closure of certain sets of extreme points in a von Neumann algebra," *Indiana Univ Math J* **22** (1973) 763–768.

J B Conway and W Szymanski, "Singly generated antisymmetric algebras," *Pacific J Math* **89** (1980) 269–277.J B Conway and W Szymanski [1988], "Linear combinations of hyponormal operators," *Rocky Mount Math J* **18** 695–705.

J B Conway and P Y Wu [1977], "The splitting of  $\mathcal{A}(T_1 \oplus T_2)$  and related questions," Indiana Univ Math J 26 41–56.

J B Conway and P Y Wu [1982], "The structure of quasinormal operators and the double commutant property," *Trans Amer Math Soc* **270** 641–657.

C C Cowen [1978], "The commutant of an analytic Toeplitz operator," *Trans Amer Math Soc* **239** 1–31.

C C Cowen [1980a], "The commutant of an analytic Toeplitz operator, II," *Indiana Univ Math J* **29** 1–12.

C C Cowen [1980b], "An analytic Toeplitz operator that commutes with a compact operator and a related class of Toeplitz operators," J Funct Analysis **36** 169–184.

C C Cowen [1984], "Subnormality of the Cesàro operator and a semigroup of composition operators," Indiana Univ Math J ${\bf 33}$ 305–318.

M J Cowen and R G Douglas [1978], "Complex geometry and operator theory," *Acta Math* **141** 187–261.

T Crimmins and P Rosenthal [1967], "On the decomposition of invariant subspaces," *Bull Amer Math Soc* **73** 97–99.

G W Cross and P Lancaster, "Square roots of complex matrices," *Lin Mult Alg* **1** (1974) 289–293.

R E Curto [1981], "Spectral inclusion for doubly commuting subnormal n-tuples," *Proc Amer Math Soc* 83 730–734.

R E Curto [preprint], "Joint hyponormality: a bridge between hyponormality and subnormality," *Proc Symp Pure Math*, Amer Math Soc (to appear).

R E Curto and P S Muhly [1985], "C\*-algebras of multiplication operators on Bergman spaces," J Func Analysis 64 315–329.

R E Curto, P S Muhly, and J Xia [1988], "Hyponormal pairs of commuting operators," *Operator Theory: Adv Appl* **35** 1–22.

R E Curto and N Salinas [1985], "Spectral properties of cyclic subnormal m-tuples," *Amer J Math* **107** 113–138.

D

K R Davidson [1987], "The distance to the analytic Toeplitz operators," *Ill J Math* **31** 265–273.

K R Davidson [1996], C<sup>\*</sup>-Algebras by Example, Amer math Soc, Fields Inst Monographs **6**, Providence.

K R Davidson and S C Power [1985], "Failure of the distance formula," *J London Math Soc* **32** 152–165.

A M Davie [1972a], "Bounded limits of analytic functions," *Proc Amer Math Soc* **32** (1972) 127–133.

A M Davie [1972b], "Analytic capacity and approximation problems," *Trans Amer Math Soc* **171** 409–444.

A M Davie, "Invariant subspaces for Bishop's operator," *Bull London Math Soc* 6 (1974) 343–348.

D. Deckard and C. Pearcy, "Another class of invertible operators without square roots," *Proc Amer Math Soc* **14** (1963) 445–449.

D. Deckard and C. Pearcy, "On rootless operators and operators without logarithms," *Acta Sci Math (Szeged)* **28** (1967) 1–7.

J A Deddens [1971], "Intertwining analytic Toeplitz operators," *Mich Math J* 18 243–246.

J A Deddens [1972], "Analytic and Toeplitz composition operators," *Canadian J Math* **24** 859–865.

J A Deddens and P A Fillmore [1975], "Reflexive linear transformations," *Lin Alg Appl* **10** 89–93.

J A Deddens and J G Stampfli [1973], "On a question of Douglas and Fillmore," *Bull Amer Math Soc* **79** 327–330.

J A Deddens and T K Wong [1973], "The commutant of analytic Toeplitz operators," *Trans Amer Math Soc* **186** 261–273.

N P Dekker [1969], Joint numerical range and joint spectrum of Hilbert space operators, Thesis, Free University of Amsterdam.

J Dixmier [1949], "Les operateurs permutables à l'opérateur integral," *Prtugal Math* 8 73–84.

J Dixmier [1956], Les Algébres d'Operateurs dans l'Espace Hilbertien, Gautiers-Villars, Paris.

J Dixmier [1964], Les C<sup>\*</sup>-Algèbras et leurs Représentations, Gautiers-Villars, Paris. W F Donoghue [1957], "The lattice of invariant subspaces of a quasi-nilpotent completely continuous transformation," Pacific J Math 7 1031–1035.

J L Doob, *Classical Potential Theory and its Probabilistic Counterpart*, Springer-Verlag, New York (1984).

R G Douglas [1966], "On majorization, factorization, and range inclusion of operators on Hilbert space," *Proc Amer Math Soc* **17** 413–415.

R G Douglas [1969], "On the operator equation  $S^*XT = X$  and related topics," Acta Math Sci (Szeged) **30** 19–32.

R G Douglas [1972], Banach Algebra Techniques in Operator Theory, Academic Press, New York.

R G Douglas and V I Paulsen [1986], "Completely bounded maps and hypo-Dirichlet algebras," Acta Sci Math (Szeged) 50 143–157.

J J Dudziak [1981], "Spectral mapping theorems for subnormal operators," Ph D thesis, Indiana University.

J J Dudziak [1984], "Spectral mapping theorems for subnormal operators," J Funct Analysis 56 360–387.

J J Dudziak [1986], "The minimal normal extension problem for subnormal operators," J Funct Analysis 65 (1986) 314–338.

J J Dudziak [1989], "A weak-star rational approximation problem connected with subnormal operators," *Proc Amer Math Soc* **107** 679–686.

N Dunford and J Schwartz [1963], Linear Operators II, Interscience, New York.

P L Duren [1970], H<sup>p</sup>-spaces, Academic Press, New York.

P L Duren [1983], Univalent Functions, Springer-Verlag, New York.

P Duren, D Khavinson, H S Shapiro, and C Sundberg [1993], "Contractive zerodivisors in Bergman spaces," *Pacific J Math* **157** 37–56.

P Duren, D Khavinson, H S Shapiro, and C Sundberg [1994], "Invariant subspaces in Bergman spaces and the biharmonic equation," *Michigan Math J* **41** 247–259.

J Dydak and N S Feldman [1992], "Major theorems on compactness: a unified exposition," *Amer Math Monthly* **99** 220–227.

H A Dye [1953], "The unitary structure in finite rings of operators," *Duke math J* **20** 55–69.

J Dyer, E Pedersen, and P Porcelli [1972], "An equivalent formulation of the invariant subspace conjecture," *Bull Amer Math Soc* **78** 1020–1023.

H Dym and H P McKean [1972]. *Fourier Series and Integrals*, New York and London, Academic Press.

 $\mathbf{E}$ 

D. A. Edwards [1961]. "On translates of  $L^p$ -functions," J London Math Soc **36** 431–432.

N Elias [1988], "Toeplitz operators on weighted Bergman spaces," Integral Equations Operator Theory 11 310–331.

M R Embry [1973], "A generalization of the Halmos-Bram criterion for subnormality," *Acta Sci Math (Szeged)* **31** 61–64.

M R Embry-Wardrop [1981], "Quasinormal extensions of subnormal operators," *Houston J Math* **7** 191–204.

M R Embry and A Lambert [1977], "Subnormal weighted translation semigroups," J Func Analysis 24 268–275.

P Enflo, "On the invariant subspace problem for Banach spaces," Acta Math 158 (1987) 213–313.

### $\mathbf{F}$

O J Farrell [1934], "On approximation to an analytic function by polynomials," *Bull Amer Math Soc* **40** 908–914.

N S Feldman, "Tensor products of subnormal operators," Proc. Amer. Math. Soc., to appear.

N S Feldman [1999], "Essentially subnormal operators," *Proc. Amer. Math. Soc.*, **127** 1171–1181.

N S Feldman [1997], "The Berger-Shaw theorem for cyclic subnormal operators," *Indiana Univ. Math. J.* **46** 741–751.

C Fernstrom [1976], "Bounded point evaluations and approximation in Lp by analytic functions," *Spaces of Analytic Functions*, Springer-Verlag Lecture Notes vol 512, pp 65–68.

P A Fillmore [1970], Notes on Operator Theory, Van Nostrand-Reinhold, New York. P A Filmore and J P Williams [1971], "On operator ranges," Adv Math 7 254–281. S D Fisher, Function Theory on Planar Regions, Wiley, New York (1983).

Y Fisher, J H Hubbard, and B S Wittner [1988], "A proof of the uniformization theorem for arbitrary plane domains," *Proc Amer Math Soc* **104** 413–418.

C H Fitzgerald and C Pommerenke [1985], "The de Branges Theorem on univalent functions," *Trans Amer Math Soc* **290** 683–690.

C Foias [1959], "Some applications of spectral sets I: harmonic spectral measure," Acad R P Roumaine Stud Cerc Math 10 365–401. Also, Amer Math Soc Translations (2) 61 (1967) 25–62.

C Foias and W Mlak, "The extended spectrum of completely non-unitary contractions and the spectral mapping theorem," *Studia Math* **46** (1966) 239–245.

C K Fong [1977], "Quasi-affine transforms of subnormal operators,"  $Pacific \ J \ Math$  70 361–368.

L R Ford [1972], Automorphic Functions, Chelsea Publ Co, New York

R Frankfurt [1975], "Subnormal weighted shifts and related function spaces," J Math Anal Appl **52** 471–489.

R Frankfurt [1976], "Subnormal weighted shifts and related function spaces, II," J Math Anal Appl 55 2–17.

R Frankfurt [1977a], "Function spaces associated with radially symmetric measures," J Math Anal Appl **60** 502–541.

R Frankfurt [1977b], "Quasicyclic subnormal semigroups," *Canad J Math* **29** 1230–1232.

B Fuglede [1950], "A commutativity theorem for normal operstors," *Proc nat Acad Sci* **36** 35–40.

# G

T W Gamelin [1969], Uniform Algebras, Prentice Hall, Inglewood Cliffs.

T W Gamelin, [1973], "Uniform algebras on plane sets," *Approximation Theory*, 100–149, Academic Press (New York).

T W Gamelin, [1985], "On an estimate of Axler and Shapiro," *Math Ann* **272** 189–196.

T W Gamelin and J Garnett [1969], "Constructive techniques in rational approximation," *Trans Amer Math Soc* **143** 187–200.

T W Gamelin and J Garnett [1970], "Distinguished homomorphisms and fiber algebras," Amer J Math  $\, {\bf 92}$  455–474.

T W Gamelin and J Garnett [1971], "Pointwise bounded approximation and Dirichlet algebras," *J Funct Analysis*, **8** 360–404.

T W Gamelin and J Garnett [1973], "Bounded approximation by rational functions," *Pacific J Math* 45 129–150.

T W Gamelin and D Khavinson [1989], "The isoperimetric inequality and rational approximation," *Amer Math Monthly* **96** 18–30.

T W Gamelin, Rational Approximation Theory, unpublished lecture notes.

T W Gamelin, P Russo, and J E Thomson [1989], "A Stone-Weierstrass Theorem for weak-star approximation by rational functions," *J Funct Analysis* **87** 170–176. F. R. Gantmacher, *The Theory of Matrices*, vol. 1, Chelsea, New York (1959).

J Garnett [1972], Analytic capacity and measure, Springer-Verlag Lecture notes vol 297, Berlin.

J Garnett [1981], Bounded Analytic Functions, Academic Press (New York).

T. A. Gillespie, "Logarithms of  $L^p$  translations," Indiana Univ Math J 24 (1975) 1037–1045.

R Gellar [1977], "Circularly symmetric subnormal and normal operators," *J d'Analyse Math* **32** 93–117.

R Gellar and L J Wallen [1970], "Subnormal weighted shifts and the Halmos-Bram criterion," *Proc Japan Acad* 46 375–378.

P Ghatage [1976], "Subnormal shifts with operator-valued weights," *Proc Amer Math Soc* 57 107–108.

B K Ghosh, B E Rhoades, and D Trutt [1977], "Subnormal generalized Hausdorff operators," *Proc Amer Math Soc* 66 261–265.

F Gilfeather [1971], "On the Suzuki structure of non self-adjoint operators on Hilbert space," Acta Sci Math (Szeged) **32** 239–249.

I Glicksberg, "Measures orthogonal to algebras and sets of antisymmetry," Trans  $Amer\ Math\ Soc\ 105\ (1962)\ 415-435$  .

I Glicksberg, [1967], "The abstract F and M Riesz Theorem," J Funct Analysis 1 109–122.

J Glimm [1960], "A Stone-Weierstrass Theorem for C\*-algebras," Ann Math 72 216–244.

G M Goluzin, *Geometric Theory of Functions of a Complex Variable*, Amer. Math. Soc. Translations, Providence (1969).

I P Ginsburg, "On the factorization of matrices of functions," *Doklady Akad Nauk* SSSR **159** (3) (1964) 489–492.

#### Η

D W Hadwin, "An addendum to limsups of lats," *Indiana Univ. Math. J.* **29** (1980) 313–319.

D Hadwin [1994], "A general view of reflexivity," Trans Amer Math Soc **344** 325–360.

D Hadwin and E Nordgren [1982], "Subalgebras of reflexive algebras," J Operator Theory 7 3–23.

D Hadwin and E Nordgren [1988], "Extensions of the Berger-Shaw Theorem," *Proc* Amer Math Soc **102** 517–525.

P R Halmos, [1950], "Normal dilations and extensions of operators," *Summa Bras Math* **2** 125–134.

P R Halmos, [1952], "Spectra and spectral manifolds," Ann Soc Polon Math 25 43–49.

P R Halmos, [1961], "Shifts on Hilbert space," *J Reine Angew Math* **208** 102–112. P R Halmos, "Quasitriangular operators," *Acta Sci Math (Szeged)* **29** (1968) 283–293.

P R Halmos, "Ten problems in Hilbert space," Bull Amer Math Soc **76** (1970) 887–933.

P. R. Halmos, "Continuous functions of hermitian operators," *Proc Amer Math Soc* 81 (1972) 130–132.

P R Halmos, "Limsups of lats," Indiana Univ. Math. J. 29 (1980) 293-311.

P R Halmos [1982] A Hilbert Space Problem Book, Springer-Verlag, New York.

P. R. Halmos and G. Lumer, "Square roots of operators, II," *Proc Amer Math Soc* 5 (1954) 589–595.

P. R. Halmos, G. Lumer, and J. J. Schäffer, "Square roots of operators," *Proc Amer Math Soc* 4 (1953) 142–149.

P R Halmos and J von Neumann, "Operator methods in classical mechanics," Ann Math 43 (1942) 332–350.

G Hansel and J P Troallic [1976]. "Demonstration du théorèm de point fixe de Ryll-Nardzewskii par extension de la méthode de F Hahn,"  $C\,R\,Acad\,Sci\,Paris\,$ Sér A-B ${\bf 282},\,$ A ${\bf 857-A}$ 859 .

R Harte [1982], "Fredholm theory relative to a Banach algebra homomorphism,"  $Math\ Zeit\ {\bf 179}\ 431{-}436$  .

W W Hastings [1975], "A Carleson measure theorem for Bergman spaces," *Proc* Amer Math Soc 52 237–241.

W W Hastings [1978], "Commuting subnormal operators simultaneously quasisimilar to unilateral shifts," *Illinois J Math* **22** 506–519.

W W Hastings [1979a], "Subnormal operators quasisimilar to an isometry," *Trans* Amer Math Soc **256** 145–161.

W W Hastings [1979b], "A construction in Hilbert spaces of analytic functions," *Proc Amer Math Soc* **74** 295–298.

W W Hastings [1981], "The approximate point spectrum of a subnormal operator," J Operator Theory 5 119–126.

M Hasumi [1983], Hardy Classes on Infinitely Connected Riemann Surfaces, Springer - Verlag, New York.

M Hasumi, "Invariant subspaces for finite Riemann surfaces," *Canadian J Math* **18** (1966) 240–255.

M Hasumi, "Hardy classes on plane domains," Ark Math 16 (1978) 213-217.

V P Havin, S V Hruscev, and N K Nikolskii [1984], *Linear and Complex Analysis Problem Book*, Lecture Notes vol 1043, Springer-Verlag, Berlin.

W K Hayman and P B Kennedy [1976], *Subharmonic Functions*, Academic Press, New York.

L I Hedberg [1972a], "Approximation in the mean by analytic functions," *Trans* Amer Math Soc 163 157–171.

L I Hedberg [1972b], "Non-linear potentials and approximation in the mean by analytic functions," *Math Zeit* **129** 299–319.

L I Hedberg [1993], "Approximation by harmonic functions and stability of the Dirichlet problem," *Expo Math* **11** 193–259.

H Hedenmalm [1991], "A factorization theorem for square area-integrable analytic functions," *J Reine Angew Math* **422** 45–68.

H Hedenmalm [1993], "An invariant subspace of the Bergman space having the codimension two property," *J Reine Angew Math* **443** 1–9.

H Hedenmalm, B Korenblum, and K Zhu [1996], "Beurling type invariant subspaces of the Bergman spaces," J London Math Soc (2) 53 601–614.

H Hedenmalm, S Richter, and K Seip [preprint], "Interpolating sequences and invariant subspaces of given index in Bergman spaces."

D A Hedjhal, "Classification theory for Hardy classes of analytic functions," Ann Acad Sci Fenn, Ser A I, no. 566 (1973) 1–28.

M Heins [1969], Hardy Classes on Riemann Surfaces, Springer-Verlag, Berlin.

H Helson [1964], Invariant Subspaces, Academic Press, New York.

H Helson [1983], "Boundedness from measure theory," *Operator Theory: Advances and Applications*, vol 11, Birkhäuser (Basel).

H Helson and D Lowdenslager [1958], "Prediction theory and Fourier series in several variables," *Acta Math* **99** 165–202.

J W Helton and R Howe [1973], "Integral operators, commutator traces, index and homology," *Proc Conf Operator Theory*, Springer lecture Notes 345 (Heidelberg).

J Hennefeld [1980]. "A nontopological proof of the uniform boundedness theorem," *Amer Math Monthly* 87 217.

D A Herrero [1972], "Eigenvectors and cyclic vectors for bilateral weighted shifts," *Rev Un Math Argentina* **26** 24–41.

D A Herrero, "Inner functions under uniform topology, II," revista Unión de la Matemática Argentina **28** (1976) 23–35.

D A Herrero [1978], "On multicyclic operators," *Integral Equations Operator Theory* **1** 57–102.

D A Herrero, *Approximation of Hilbert Space Operators, I*, Pitman Publ Co London (1982).

D A Herrero [1990], "A metatheorem on similarity and approximation of operators," J. London Math Soc. (2) 42 535–554.

D A Herrero [preprint], "Spectral pictures of hyponormal bilateral operator weighted shifts," *Proc Amer Math Soc* (to appear).

E Hille, "On the roots and logarithms of elements of a complex Banach algebra," *Math Ann* **136** (1958) 46–57.

E Hille [1962], Analytic Function Theory, Ginn and Co, Boston.

C J Himmelberg [1975], "Measurable relations," Fund Math 87 53–72.

J G Hocking and G S Young [1961], Topology, Addison-Wesley, Reading MA.

K Hoffman [1962], Banach Spaces of Analytic Functions, Prentice-Hall, Englewood Cliffs.

K Hoffman and R Kunze [1971], Linear Algebra, Prentice Hall, Englewood Cliffs.

T B Hoover [1972], "Quasi-similarity of operators," Illinois J Math 16 678–686.

C Horowitz [1974], "Zeros of functions in Bergman spaces," Duke Math J 41 693–710.

R Howe [1974], "A functional calculus for hyponormal operators," *Indiana Univ* Math J 23 631–644.

R A Hunt [1967], "On the convergence of Fourier series, orthogonal expansions and their continuous analogies," pp 235–255, *Proc Conference at Edwardsville, Ill*, Southern Illinois Univ Press, Carbondale.

J Hyvönen and J Riihentaus, "On the extension in the Hardy class and in the Nevanlinna class," *Bull Soc Math France* **112** (1984) 469–480.

## Ι

T Ito, "On the commutative family of subnormal operators," *J Faculty Sci Hokkaido Univ* **14** (1958) 1–15.

T Ito and T K Wong [1972], "Subnormality and quasinormality of Toeplitz operators," *Proc Amer Math Soc* **34** 157–164.

N Ivanovski [1973], "Subnormality of operator valued shifts," PhD thesis, Indiana University.

J

J Janas [1983a], "Spectral inclusion theorems for commuting subnormal pair," Ann Soc Math Polon 23 219–229.

J Janas [1983b], "A note on invariant subspaces under multiplication by z in Bergman space," *Proc Royal Irish Acad* 83A 157–164.

J Janas [1983c], "Some applications of functions of several complex variables to Toeplitz and subnormal operators," Ann Polon Math **40** 185–192.

J Janas [1984], "Spectral properties of doubly commuting hyponormal operators," Ann Pol Math 44 185–195.

J Janas [1989], "On unbounded hyponormal operators," Arkiv Mat 27 273–281.

P Järvi, "Removable singularities for Hp-functions,"  $Proc\ Amer\ Math\ Soc\ 86\ (1982)$ 596–598.

J A Jenkins [1991], "On analytic paths," Constantine Carathéodory: An International Tribute, edited by Th. M. Rassias, World Scientific Publ Co, 548–553.

K H Jin [1989], "On unbounded Bergman operators," Ph D thesis, Indiana University.

B E Johnson [1979], "Characterisation and norms of derivations on von Neumann algebras," Lecture Notes in Math, **725** 228–236, Springer-Verlag, New York.

P W Jones and D E Marshall, "The corona problem for planar domains," (preprint).

### $\mathbf{K}$

R V Kadison [1957], "Irreducible operator algebras," *Proc Nat Acad Sci USA* **43** 273–276.

R V Kadison [1985], "The von Neumann algebra characterization theorems," Exp Math 3 193-227. (263)

R V Kadison [1985], "The von Neumann algebra characterization theorems," Exp Math  ${\bf 3}$  193-227.

R V Kadison and J R Ringrose [1983], Fundamentals of the Theory of Operator Algebras, I, Academic Press, New York.

R V Kadison and J R Ringrose [1986], Fundamentals of the Theory of Operator Algebras, II, Academic Press, New York.

R V Kadison and I M Singer [1957], "Three test problems in operator theory," *Pacific J Math* **7** 1101–1106.

R V Kadison and D Kastler [1972], "Perturbations of von Neumann algebras. I. Stability of type," *Amer J Math* **94** 38–54.

G K Kalisch [1957], "On similarity, reducing manifolds, and unitary equivalence of certain Volterra operators," Ann Math ${\bf 66}$ 481–494.

T Kato [1957], "Perturbation of continuous spectra by trace class operators," *Proc Japan Acad* **33** 260–264.

Y Katznelson [1976], An Introduction to Harmonic Analysis, Dover, New York.

E Kay, H Soul, and D Trutt [1976], "Some subnormal operators and hypergeometric kernel functions," J Math Anal Appl 53 237–242.

J L Kelley [1966], "Decomposition and representation theorems in measure theory," *Math Ann* **163** 89–94.

16

G E Keough [1981], "Subnormal operators, Toeplitz operators, and spectral inclusion," *Trans Amer Math Soc* **263** 125–135.

S Kobayashi, "On a classification of plane domains for Hardy classes," *Proc Amer Math Soc* 68 (1978) 79–82.

H Koenig and G L Seever [1969], "The abstract F and M Riesz Theorem," *Duke Math J* **36** 791–797.

P Koosis [1980], *Introduction to Hp spaces*, London Math Soc Lecture Notes, vol 40, Cambridge Univ Press (Cambridge).

S Krantz, Function Theory of Several Complex Variables, Wiley, New York (1982). J Kraus and D Larson [1985], "Some applications of a technique for constructing reflexive operator algebras," J Operator Theory 13 227–236.

J Kraus and D Larson [1986], "Reflexivity and distance formulae," *Proc London Math Soc* (3) **53** 340–356.

T L Kriete [1979], "On the structure of certain  $H^2(\mu)$  spaces," Indiana Univ Math J 28 757–773.

T L Kriete [1986], "An elementary approach to the multiplicity theory of multiplication operators," *Rocky Mountain J Math* **16** 23–32.

T L Kriete and T T Trent [1977], "Growth near the boundary in  $H^2(\mu)$  spaces," *Proc Amer Math Soc* **62** 83–88.

T L Kriete and D Trutt [1971], "The Cesàro operator in  $\ell^2$  is subnormal," Amer J Math  $~{\bf 93}$  215–225.

T L Kriete and D Trutt [1974], "On the Cesàro operator," *Indiana Univ Math J* **24** 197–214.

R Kulkarni [1970], "Subnormal operators and weighted shifts," Ph D thesis, Indiana University.

[Kur] S Kurepa, "On nth roots of normal operators," Math Zeit 78 (1962) 285–292.

# $\mathbf{L}$

A Lambert [1976], "Subnormality and weighted shifts," J London Math Soc 14 476–480.

N S Landkof [1972], Foundations of Modern Potential Theory, Springer-Verlag, Heidelberg.

D R Larson [1982], "Annihilators of operator algebras," *Operator Theory: Adv and Appl* **6** 119–130.

D Larson [1986], "Hyperreflexivity and a dual product construction," *Trans Amer Math Soc* **294** 79–88.

D R Larson and W Wogen [1990], "Reflexivity properties of  $T \oplus 0$ ," J Funct Anal **92** 448–467.

G Lasser [1972], "Topological algebras of operators," Rep Math Phs 3 279–293.

R Lautzenheiser, "Spectral sets, reducing subspaces, and function algebras," Ph D thesis, Indiana University (1973).

R Lautzenheiser, [1979], "Spectral theory for subnormal operators," *Trans Amer Math Soc* **255** 301–314.

P Lax [1959], "Translation invariant subspaces," Acta Math 101 163–178.

P Lax [1961], "Translation invariant subspaces," *Proc Internat Symp Linear Spaces, Jerusalem, 1960* 251–262, Macmillan, New York.

A Lebow, "On von Neumann's theory of spectral sets," J Math Anal Appl 7 (1963) 64–90.

A Lebow [1968], "A Schroeder-Bernstein theorem for projections," *Proc Amer Math* Soc **19** 144–145.

K A Lewis [1990], "Intersections of K-spectral sets," J. Operator Theory 24 129–135.

P Lindberg [1982], "A constructive method for  $L^p$ -approximation by analytic functions," Ark Math **20** 61–68.

J M Lindsay [1984], "A family of operators with everywhere dense graph," *Expos* Math **2** 375–378.

J E Littlewood [1925], "On inequalities in the theory of functions," *Proc London Math Soc* (2) **23** 481–519.

A I Loginov and V S Sulman [1975], "Hereditary and intermediate reflexivity of W<sup>\*</sup>-algebras (Russian)," *Izv Akad Nauk SSSR Ser Mat* **39** 1260–1273; English trans.: *Math USSR-Izv* **9** 1189–1201.

V I Lomonosov, "Invariant subspaces for the family of operators which commute with a completely continuous operator," *Funct Anal Appl* **7** (1973) 213–214.

W E Longstaff [1979], "On the operation AlgLat in finite dimensions," *Lin Alg Appl* **27** 27–29.

A Lubin, "Weighted shifts and products of subnormal operators," Indiana Univ Math J ${\bf 26}~(1977)$ 839–845.

A Lubin, [1978], "A subnormal semigroup without normal extension," *Proc Amer Math Soc* 68 176–178.

A Lubin, [1979], "Weighted shifts and commuting normal extensions," *Proc Amer Math Soc* **27** 17–26.

A Lubin, [1980], "Lifting subnormal double commutants," *Studia Math* 67 315–319.

#### $\mathbf{M}$

I J Maddox [1980], *Infinite Matrices of Operators*, Lecture Notes in Mathematics vol 786, Springer-Verlag, New York.

N G Makarov [1987], "Perturbations of normal operators and stability of the continuous spectrum," AMS Translation, Math USSR Izvestia **29** 535–558.

A I Markusevic [1934], "Conformal mapping of regions with variable boundary and applications to the approximation of analytic functions by polynomials," Dissertation, Moskow.

M Martin and M Putinar, "A unitary invariant for hyponormal operators," J Funct Analysis **73** (1987) 297–323.

M Martin and M Putinar, *Lectures on Hyponormal Operators*, Birkhäuser, (Basel) [1989].

P Masani [1978], "Dilations as propagators of Hilbertian varieties," SIAM J Math Analysis 9 414–456.

W S Massey, *Algebraic Topology: An Introduction*, Springer-Verlag, New York (1977).

J E McCarthy [1990], "Analytic structures for subnormal operators," *Integral Equations Operator Theory* **13** 251–270.

J E McCarthy [1990], "Common range of co-analytic Toeplitz operators," J Amer Math Soc **3** 793–799.

J E McCarthy [1990], "Quasisimilarity of rationally cyclic subnormal operators," J Operator Theory **24** 105–116.

J E McCarthy [1993], "Reflexivity of subnormal operators," *Pacific J. Math* 161 359–370.

S McCullough and V Paulsen [1989], "A note on joint hyponormality," *Proc Amer Math Soc* **107** 187–195.

G McDonald and C Sundberg [1986], "On the spectra of unbounded subnormal operators," *Canadian J Math* **38** 1135–1148.

P McGuire [1988 a], "C\*-algebras generated by a subnormal operators," J Funct Analysis **79** 423–445.

P McGuire [1988 b], "On the spectral picture of an irreducible subnormal operator," *Proc Amer Math Soc* **104** 801–808.

R Mercer [1986], "Dense  $G_{\delta}$ 's containing orthonormal bases," *Proc Amer Math Soc* **97** 449–452.

S N Mergeljan [1953], "On the completeness of systems of analytic functions," Uspeki Math Nauk 8 3–63. Also, Amer Math Soc Translations 19 (1962) 109–166. S N Mergeljan, "Obwij metriceskij kriterij polnoty sictemy polinomov," Doklady Akad Nauk CCCP 105 [1955] 901–904.

S Merril [1968], "Maximality of certain algebras  $H^{\infty}(dm)$ ," Math Zeit **106** 261–266. L Miller, R F Olin, and J E Thomson [1986], "Subnormal operators and representations of bounded analytic functions and other uniform algebras," Memoirs Amer Math Soc **63** number 354.

C D Minda [1977], "Regular analytic arcs and curves," Colloq Math 38 73-82.

W Mlak [1967], "Hyponormal contractions," Colloq Math 18 137–142.

W Mlak [1971], "Commutants of subnormal operators," *Bull Acad Polon Sci* **19** 837–842.

W Mlak [1972a], "Intertwining operators," Studia Math 43 219–233.

W Mlak, "Partitions of spectral sets," Ann Polon Math 25 (1972) 273–280.

F Morgan, Geometric Measure Theory, Academic Press, Boston (1988).

B B Morrel [1973], "A decomposition for some operators," *Indiana Univ Math J* **23** 497–511.

C J Mozzochi, On the Pointwise Convergence of Fourier Series, Springer-Verlag Lecture Notes vol 199, Berlin [1971].

G J Murphy [1982], "Self dual subnormal operators," *Comment Math Univ Carolin* **23** 467–473.

F J Murray and J von Neumann [1936], "On rings of operators," Ann Math **37** 116–229.

F J Murray and J von Neumann [1937], "On rings of operators, II," *Trans Amer Math Soc* **41** 208–248.

### $\mathbf{N}$

M Nagumo, "Einige analytische Untersuchungen in linearen metris-chen Ringen," Jap J Math **13** (1936) 61–80.

B Sz-Nagy [1953], "Sur les contractions de l'espace de Hilbert," Acta Sci Math 15 87–92.

B Sz-Nagy [1960], "Extensions of linear transformations in Hilbert space which extend beyond this space," Appendix to *Functional Analysis* by F Riesz and B Sz-Nagy, Fredrick Ungar Publ, New York.

B Sz-Nagy and C Foias [1970], *Harmonic Analysis of Operators on Hilbert Space*, North Holland, Amsterdam.

B Sz-Nagy and C Foias [1975], "An application of dilation theory to hyponormal operators," *Acta Sci Math (Szeged)* **37** 155–159.

Z Nehari [1975], Conformal Mapping, Dover, New York.

J von Neumann [1929]. "Zur Algebra der funktional-operatoren und theorie der normalen operatoren," *Math Ann* **102** 370–427.

J von Neumann [1936], "On a certain topology for rings of operators," Ann Math **37** 111–115.

J von Neumann [1951], "Eine Spektraltheorie für allgemeine Operatoren eines unitären Raumes," *Math Nachr* 4 258–281.

M H A Newman [1964], *Elements of the topology of plane sets of points*, Cambridge University Press, Cambridge.

N K Nikolskii [1965], "Invariant subspaces of certain completely continuous operators," Vestmik Leningrad Univ (Math 1) 7 68–77.

N K Nikolskii [1969], "On perturbations of the spectrum of unitary operators," *Mat Zametki* **5** 341–349. English translation in *Math Notes* **5** (1969).

N K Nikolskii [1985], Treatise on the Shift Operator, Springer-Verlag, Berlin.

E Nordgren [1967], "Reducing subspaces of analytic Toeplitz operators," Duke Math J **34** 175–181.

A E Nussbaum [1976], "Semigroups of subnormal operators," J London Math Soc (2) 14 340–344.

## 0

M Ohtsuka [1970], Dirichlet Problem, Extremal Length, and Prime Ends, Van Nostrand-Reinhold, New York.

R F Olin, "Functional relationships between a subnormal operator and its minimal normal extension," *Pacific J Math* **63** (1976) 2211–229.

R F Olin, [1977], "A class of pure subnormal operators," *Mich Math J* 24 115–118. R F Olin and J E Thomson [1977a], "Limacons, normal operators, and polar factorizations," *J Reine Angew Math* 291 133–144.

R F Olin and J E Thomson, [1977b], "The spectrum of a normal operator and the problem of filling in holes," *Indiana Univ Math J* **26** 541–544.

R F Olin and J E Thomson, [1979], "Lifting the commutant of a subnormal operator," Canadian Math J  ${\bf 31}$  148–156.

R F Olin and J E Thomson, "Some index theorems for subnormal operators," J Operator Theory **3** (1980) 115–142.

R F Olin and J E Thomson [1980], "Algebras of subnormal operators," J Funct Analysis **37** 271–301.

R F Olin and J E Thomson, [1980c], "Irreducible operators whose spectra are spectral sets," *Pacific J Math* **91** 431–434.

R F Olin and J E Thomson, [1982], "Algebras generated by a subnormal operator," *Trans Amer Math Soc* **271** 299–311.

R F Olin and J E Thomson, [1984], "Cellular-indecomposable subnormal operators," *Integral Equations Operator Theory* **7** 392–430.

R F Olin and J E Thomson, [1986], "Cellular-indecomposable subnormal operators, II," *Integral Equations Operator Theory* **9** 600–609.

R F Olin, J E Thomson, and T T Trent [preprint], "Subnormal operators with finite rank self-commutator."

21

Ρ

P J De Paepe, "A maximal subalgebra of R(X)," *Math Scand* **43** (1978) 322–324. R Pallu de la Barrière [1954], "Sur les algèbras d'opérateurs dans les espaces hilbertiens," *Bull Soc Math France* **82** 1–52.

M Parreau, "Sur les moyennes des fonctions harmoniques et la classification des surfaces de Riemann," Ann Inst Fourier **3** (1951) 103–197.

V I Paulsen [1986], Completely bounded maps and dilations, Longman, Essex.

V I Paulsen [1988], "Toward a theory of K-spectral sets," *Surveys of Some Recent Results in Operator Theory*, vol 1, J B Conway and B B Morrel, Editors, 221–240, Research Notes in Mathematics, Longman, London.

G K Pedersen [1972], "Monotone closures in operator algebras," Amer J Math 94 955–962.

G K Pedersen [1979], C<sup>\*</sup>-Algebras and Their Automorphism Groups, London Math Soc Monographs, vol 14, Academic Press, London.

A Pfluger [1969], *Lectures on Conformal Mapping*, Lecture Notes from Indiana University.

C Pommerenke, Univalent Functions, Vandenhoeck & Rup-recht, Göttingen [1975]. M Putinar, "Spectral inclusion for subnormal n-tuples," Proc Amer Math Soc **90** (1984) 405–406.

C R Putnam [1951], "On normal operators in Hilbert space," Amer J Math 73 357–362.

C R Putnam [1957], "On square roots of normal operators," *Proc Amer Math Soc* 8 768–769.

C R Putnam [1963], "On the structure of semi-normal operators," *Bull Amer Math* Soc **69** 818–819.

C R Putnam, [1967], Commutation properties of Hilbert Space Operators and Related Topics, Springer-Verlag Ergeb Math, vol 36, New York.

C R Putnam, "The spectra of operators having resolvents of first order growth," *Trans Amer Math Soc* **133** (1968) 505–510.

C R Putnam, [1970], "An inequality for the area of hyponormal spectra," *Math Zeit* **116** 323–330.

C R Putnam, [1971a], "The spectra of completely hyponormal operators," Amer J Math **93** 699–708.

C R Putnam, [1971b], "The spectra of subnormal operators," *Proc Amer Math Soc* **28** 473–477.

C R Putnam, [1972], "Trace norm inequalities for the measure of hyponormal spectra," *Indiana Univ Math J* **21** 775–779.

C R Putnam, [1974a], "Spectra of polar factors of hyponormal operators," *Trans* Amer Math Soc **188** 419–428.

C R Putnam, [1974b], "Invariant subspaces of certain subnormal operators," *Indiana Univ Math J* **17** 262–272.

C R Putnam, [1974c], "The role of zero sets in the spectra of hyponormal operators," *Proc Amer Math Soc* **43** 137–140.

C R Putnam, [1976a], "Generalized projections and reducible subnormal operators," Duke Math J 43 101–108.

C R Putnam, [1976b], "Almost isolated spectral parts and invariant subspaces," *Trans Amer Math Soc* **216** 267–277.

C R Putnam, [1977a], "Rational approximation and Swiss cheeses," *Mich Math J* **24** 193–196.

C R Putnam, [1977b], "Peak sets and subnormal operators," *Illinois J Math* **21** 388–394.

J D Pyrce [1966], "Weak compactness in locally convex spaces,"  $Proc\ Amer\ Math\ Soc\ 17,\ 148–155$  .

# $\mathbf{Q}$

### $\mathbf{R}$

M Radjabalipour [1975], "On subnormal operators," *Trans Amer Math Soc* **211** 377–389.

M Radjabalipour [1977], "Some decomposable subnormal operators," *Rev Roum Math Pures Appl* **22** 341–345.

H Radjavi and P Rosenthal [1969], "On invariant subspaces and reflexive algebras," *Amer J Math* **91** 683–692.

H Radjavi and P Rosenthal [1973], Invariant subspaces, Springer-Verlag, Berlin.

H Radjavi and P Rosenthal, "On roots of normal operators," J Math Anal Appl **34** (1971) 653–664.

M Raphael [1982], "Quasisimilarity and essential spectra for subnormal operators," *Indiana Univ Math J* **31** 243–246.

M Raphael [1985a], "Quasisimilar operators in the commutant of a subnormal operator," *Proc Amer Math Soc* **94** 265–268.

M Raphael [1985b], "The uniform algebra associated with a cyclic subnormal operator," *Integral Equations Operator Theory* **8** 557–572.

M Raphael [1986], "Commutants of quasisimilar subnormal operators," *Pacific J Math* **122** 449–454.

C J Read, "A solution to the invariant subspace," *Bull London Math Soc* 16 (1984) 337–401.

C J Read, "A solution to the invariant subspace problem on the space 11," Bull London Math Soc 17 (1985) 305–317.

C J Read, "A short proof concerning the invariant subspace theorem," J London Math Soc (2) **34** (1986) 335–348.

C E Rickart, *General Theory of Banach Algebras*, D van Nostrand, Princeton (1960).

W C Ridge [1970], "Approximate point spectrum of a weighted shift," *Trans Amer Math Soc* **147** 349–356.

J R Ringrose [1971], *Compact Non-self-adjoint Operators*, Van Nostrand-Reinhold, New York.

J R Ringrose [1971], "Lectures on the trace in a finite von-Neumann algebra," Springer-Verlag lecture Notes vol 247.

J R Robertson [1965], "On wandering subspaces for unitary operators," *Proc Amer Math Soc* 16 233–236.

M Rosenblum [1956], "On the operator equation BX - XA = Q," Duke Math J **23** 263–269.

M Rosenblum [1957], "Perturbation of the continuous spectrum and unitary equivalence," *Pacific J Math* **7** 997–1010.

M Rosenblum [1958], "On a theorem of Fuglede and Putnam," *J London Math Soc* **33** 376-377.

M Rosenblum and J Rovnyak [1985], *Hardy Classes and Operator Theory*, Oxford Univ Press, New York.

S Rosenoer [1982], "Distance estimates for von Neumann algebras," *Proc Amer Math Soc* 86 248–252.

P Rosenthal [1968], "Completely reducible operators," *Proc Amer Math Soc* **19** 826–830.

L A Rubel and A L Shields [1964], "Bounded approximation by polynomials," *Acta Math* **112** 145–162.

L A Rubel and A L Shields [1966], "The space of bounded analytic functions," Ann Inst Fourier 16 235–277.

W Rudin, "Analytic functions of class  $H^p$ ," Trans Amer Math Soc 78 (1955) 46–66.

W Rudin, "Some theorems on bounded analytic functions," *Trans Amer Math Soc* **78** (1955) 333–342.

W Rudin, "Essential boundary points," Bull Amer Math Soc 70 (1964) 321-324.

W Rudin, Function Theory in Polydiscs, Benjamin, New York (1969).

W Rudin, Function Theory in the Ball of  $\mathbb{C}^n$ , Springer-Verlag, New York (1980).

K Rudol, "The functional model for a class of subnormal operators," *Bull Acad Polon Sci Math* **30** (1982) 71–77.

K Rudol, "Multiplication by the spectral coordinate as a model for subnormal operators," (preprint).

K Rudol, [1988], "The generalized Wold decomposition for subnormal operators," *Integral Equations Operator Theory* **11** 420–436.

K Rudol, [1989], "On bundle shifts and cluster sets," *Integral Equations Operator Theory* **12** 444–448.

K Rudol, [preprint], "A model for analytic Toeplitz operators."

## $\mathbf{S}$

R Saerens, "Interpolation theory in Cn : a survey," *Complex analysis*, S G Krantz (editor), Lecture Notes vol 1268, Springer-Verlag, Berlin (1987).

M-F Sainte-Beuve [1974], "On the extension of von Neumann-Aumannn's theorem," J Functional Analysis 17 112–129.

T Saito [1972], "Hyponormal operators and related topics," *Lectures on Operator Algebras*, Springer-Verlag Lecture Notes, vol 247, 534–664, New York.

S Sakai [1971], C\*-algebras and W\*-algebras, Springer-Verlag, New York.

N Salinas [1975], "Subnormal limits of nilpotent operators," Acta Sci Math (Szeged) **37** 117–124.

D Sarason, "The  $H^p$  space of an annulus," *Memoirs Amer Math Soc* 56 (1965) Providence.

D Sarason, "On spectral sets having connected complements," Acta Sci Math (Szeged) 26 (1965) 289–299.

D Sarason [1965], "A remark on the Volterra operator," J Math Anal Appl 12 244–246.

D Sarason, "Invariant subspaces and unstarred operator algebras," *Pacific J Math* **17** (1966) 511–517.

D Sarason, "Weak-star generators of  $H^{\infty}$ ," Pacific J math 17 (1966) 519–528.

D Sarason [1967], "Generalized interpolation in  $H^{\infty}$ ," Trans Amer Math Soc 127 179–203.

D Sarason, "A remark on the weak-star topology of  $\ell^\infty,$ " Studia Math 30 (1968) 355–359.

D Sarason [1972], "Weak-star density of polynomials," J Reine Angew Math 252 1–15.

R Schatten, Norm Ideals of Completely Continuous Operators, Springer - Verlag, Berlin [1960].

M Schecter [1965], "Invariance of the essential spectrum," Bull Amer Math Soc 71 365–367.

J F Scroggs [1959], "Invariant subspaces of a normal operator," *Duke Math J* 26 95–111.

K Seddighi [1983], "Essential spectra of operators in the class Bn(W)," *Proc Amer Math Soc* 87 453–458.

K Seddighi [1984], "Weak-star closed algebras and generalized Berg-man kernels," *Proc Amer Math Soc* **90** 233–239.

G L Seever [preprint], "Operator representations of uniform algebras."

J H Shapiro [1987], "The essential norm of a composition operator," Ann Math 125 375–404.

B J Shelburne [1982], "The operator  $M_z$  on Hilbert spaces of analytic functions," Indiana Univ Math J **31** 191–207.

A L Shields [1974], "Weighted shift operators and analytic function theory," *Math Surveys*, Amer Math Soc **13** 49–128.

A L Shields and L J Wallen [1971], "The commutants of certain Hilbert space operators," *Indiana Univ Math J* **20** 777–788.

Simons [1967], "Krein's theorem without sequential convergence,"  $Math\ Ann\ {\bf 174}$ 157–162 .

M Slocinski [1975], "Normal extensions of commutative subnormal operators," *Stu- dia Math* **54** 259–266.

B Solomyak [1986], "On the multiplicity of the spectrum of analytic Toeplitz operators," *Dokl Akad Nauk CCCP* **286**; *AMS Translation Soviet Math Dokl* **33** 286–290. J Spraker [preprint a], "The minimal normal extension for  $M_z$  on the Hardy space of a planar region," *Trans Amer Math Soc* (to appear).

J S Spraker [1991], "Multiplicity theory and the outer boundary," *Proc Amer Math Soc* **112** 391–392.

J Spraker [preprint b], "Multiplicity and uniformization maps."

J G Stampfli, "Roots of scalar operators," *Proc Amer Math Soc* **13** (1962) 796–798.

J G Stampfli [1962], "Hyponormal operators," Pacific J Math 12 1453–1458.

J G Stampfli [1965], "Hyponormal operators and spectral density," *Trans Amer Math Soc* **117** 469–476.

J G Stampfli [1966], "Which weighted shifts are subnormal?" *Pacific J Math* **17** 367–379.

J G Stampfli [1969], "On hyponormal and Toeplitz operators," *Math Ann* 183 328–336.

J G Stampfli [1974], "Compact perturbations, normal eigenvalues, and a problem of Salinas," *J London Math Soc* **9** 165–175.

J G Stampfli, "An extension of Scott Brown's invariant subspace theorem: K-spectral sets," J Operator Theory **3** (1980) 3–21.

J G Stampfli and B L Wadhwa [1976], "An asymmetric Putnam-Fuglede Theorem for dominant operators," *Indiana Univ Math J* **25** 359–365.

J G Stampfli and B L Wadhwa [1977], "On dominant operators," *Monat Math* 84 143–153.

W F Stinespring [1955], "Positive functionals on C\*-algebras," *Proc Amer Math Soc* 6 211–216.

J Stochel [1991], "Characterizations of subnormal operators," *Studia Math* **97** 227–238.

J Stochel and F H Szafraniec [1984], "A characterization of subnormal operators," *Operator Theory: Advances Appl* **14** Birkhäuser, Basel.

J Stochel and F H Szafraniec [1985], "On normal extensions of unbounded operators, I," J Operator Theory 14 31–55.

J Stochel and F H Szafraniec [1989], "Unbounded weighted shifts and subnormality," *Integral Equations Operator Theory* **12** 146–153.

J Stochel and F H Szafraniec [preprint a], "The normal part of an unbounded operator," *Idag Math* (to appear).

J Stochel and F H Szafraniec [preprint b], "A few assorted questions about unbounded subnormal operators," *Univ Iagel Acta Math* (to appear).

J Stochel and F H Szafraniec [preprint c], "On normal extensions of unbounded operators, II."

J Stochel and F H Szafraniec [preprint d], "On normal extensions of unbounded operators, III: spectral properties."

E Stormer [1963], "Positive linear maps of operator algebras," *Acta Math* **110** 233–278.

E L Stout [1971], *The Theory of Uniform Algebras*, Bogden and Quigley, Tarrytown. S Stratila and L Zsido [1979], *Lectures on von Neumann Algebras*, Abacus Press, Tunbridge Wells.

M A Subin [1967], "Factorization of parameter-dependent matrix functions in normal rings and certain related questions in the theory of Noetherian operators," *Mat Sb* **73** (113), 610–629. Also, *AMS Translation, Math USSR Sb* **2** 543–560.

N Suzuki [1966], "The algebraic structure of non self-adjoint operators," Acta Sci Math (Szeged) **27** 173–184. (MR **35** 5971.)

F H Szafraniec [1982], "Subnormals in C\*-algebras," Proc Amer Math Soc 84 533–534.

W Szymanski [1987], "Dilations and subnormality," *Proc Amer Math Soc* **101** 251–259.

W Szymanski [1990], "The boundedness condition of dilation characterizes subnormals and contractions," *Rocky Mountain J Math* **20** 591–602.

### $\mathbf{T}$

Z. Takeda [1951], "On a theorem of R. Pallu de la Barrière" *Proc Japan Acad* 28 558–563.

J E Thomson, "Invariant subspaces for algebras of subnormal operators," *Proc* Amer Math Soc **96** (1986) 462–464.

J E Thomson [1975], "Intersections of commutants of analytic Toeplitz operators," *Proc Amer Math Soc* **52** 305–310.

J E Thomson, [1976a], "The commutants of certain analytic Toeplitz operators," *Proc Amer Math Soc* 54 165–169.

J E Thomson, [1976b], "The commutant of a class of analytic Toeplitz operators, II," *Indiana Univ Math J* **25** 793–800.

J E Thomson, [1977], "The commutant of a class of analytic Toeplitz operators," *Amer J Math* **99** 522–529.

J E Thomson, "Invariant subspace for subnormal operators," *Surveys of Some Recent Results in Operator Theory*, vol 1, J B Conway and B B Morrel, Editors, Research Notes in Mathematics, Longman, London (1988).

J E Thomson, [1988b], "Factorization over algebras of subnormal operators,"  $Indiana\ Univ\ Math\ J$  37 191–199.

J E Thomson, [1991], "Approximation in the mean by polynomials," Annals Math 133 477–507.

D Topping [1971], *Lectures on Von Neumann Algebras*, van Nostrand Reinhold (London).

T T Trent [1979a], " $H^2(\mu)$  spaces and bounded point evaluations," *Pacific J Math* **80** 279–292.

T T Trent [1979b], "Extension of a theorem of Szegö," Mich Math J 26 373–377.

T T Trent [1981], "New conditions for subnormality," Pacific J Math 93 459–464.

T T Trent [1984], "Carleson measure inequalities and kernel functions in  $H^2(\mu)$ ," J Operator Theory 11 157–169.

T T Trent [1985], "A characterization of  $P^2(\mu) \neq L^2(\mu)$ ," J Func Analysis 64 163–177.

T T Trent, "Invariant subspaces for operators in subalgebras of  $L^{\infty}(\mu)$ ," *Proc Amer Math Soc* **99** [1987] 268–272.

T T Trent and J L Wang [1984], " $P^2(\mu)$  and bounded point evaluations," Proc Amer Math Soc **91** 421–425.

K Tsuji [1983], "Annihilators of operator algebras," *Mem Fac Sci Kochi Univ* **4** 9–21.

M Tsuji [1975], Potential Theory in Modern Function Theory, Chelsea, New York.

## U

### $\mathbf{V}$

A van Daele [1978], Continuous Crossed Products and Type III von Neumann Algebras, Cambridge University Press, Cambridge.

W A Veech [1967], A Second Course in Complex Analysis, W. A. Benjamin, New York.

M Voichick, "Ideals and invariant subspaces of analytic functions," *Trans Amer Math Soc* **111** (1964) 493–512.

D Voiculescu [1976], "A non-commutative Weyl-von Neumann Theorem," *Rev Roumaine math Pures Appl* **21** 97–113.

D Voiculescu [1980], "A note on quasitriangularity and trace-class self -commutators," *Acta Math Sci (Szeged)* **42** 195–199.

#### W

B L Wadhwa [1973], "A hyponormal operator whose spectrum is not a spectral set," *Proc Amer Math Soc* **38** 83–85.

J L Walsh [1929], "The approximation of harmonic functions by harmonic polynomials and harmonic rational functions," *Bull Amer Math Soc* **35** 499–544.

J H G Wedderburn, Lectures on Matrices, Dover, New York (1964).

L Weinstein [1991], "The Bieberbach conjecture," Intenational Research J (Duke Math J) 5 61–64.

J Wermer [1952], "On invariant subspaces of normal operators," *Proc Amer Math Soc* **3** 276–277.

J Wermer [1955], "Report on subnormal operators," *Report on an International Conference on Operator Theory and Group Representations*, National Acad Sci-National Research Council, Harriman, New York, 1–3.

J Wermer [1960], "Dirichlet algebras," Duke Math J 27 373–382.

J Wermer [1964], Seminar über Funktionen Algebren, Springer-Verlag Lecture Notes vol 1, Berlin.

J Wermer [1974], *Potential Theory*, Springer-Verlag Lecture Notes vol 408, Berlin. H Weyl [1909], "Über beschrankte quadratischen Formen deren Differenz vollstetig ist," *Rend Circ Mat Palermo* **27** 373–392.

R J Whitley [1967], "An elementary proof of the Eberlein-Smulian Theorem,"  $Math~Ann~{\bf 172}~116{-}118$  .

R Whitley [1978], "Normal and quasinormal composition operators," *Proc Amer Math Soc* **70** 114–118.

G T Whyburn [1964], Topological Analysis, Princeton Univ Press, Princeton.

A Wilansky [1951], "The bounded additive operation on Banach space,"  $Proc\ Amer\ Math\ Soc\ {\bf 2}\ 46$  .

J P Williams [1967], "Minimal spectral sets of compact operators," Acta Sci Math (Szeged) **28** 93–106.

L R Williams [1980a], "Equality of essential spectra of certain quasisimilar seminormal operators," *Proc Amer Math Soc* **78** 203–209.

L R Williams [1980b], "Equality of spectra of quasisimilar quasinormal operators," J Operator Theory **3** 57–69.

A Wintner, "On the logarithms of bounded matrices," Amer J Math **74** (1952) 360–364.

W R Wogen [1971], "On special generators for properly infinite von Neumann algebras," *Proc Amer Math Soc* **28** 107–113.

W R Wogen [1978], "On some operators with cyclic vectors," *Indiana Univ Math J* 27 163–171.

W R Wogen [1979], "Quasinormal operators are reflexive," *Bull London Math Soc* **11** 19–22.

W Wogen [1985], "Subnormal roots of subnormal operators," Integral Equations Operator Theory 8 432–436.

W Wogen, [1986], "Counterexamples in the theory of nonselfadjoint operator algebras," *Bull Amer Math Soc* **15** 225–227.

W Wogen, [1987], "Some counterexamples in nonselfadjoint algebras," Ann of Math **126** 415–427.

S Wright [1989], Uniqueness of the injective  $III_1$  factor, Springer-Verlag lecture Notes **1413**.

D Xia [1987a], "The analytic model of a subnormal operator," *Integral Equations Operator Theory* **10** 258–289.

D Xia [1987b], "Analytic theory of subnormal operators," *Integral Equations Operator Theory* **10** 880–903.

### $\mathbf{Y}$

S Yamashita, "On some families of analytic functions on Riemann surfaces,"  $Nagoya\ Math\ J\ {\bf 31}\ (1968)\ 57{-}68$ 

K Yan [1985], "U-self-adjoint operators and self-dual subnormal operators," J Fudan Univ Natur Sci **24** 459–463 (Chinese).

K Yan [1988], "On the quasisimilarity of subnormal operators," *Acta Math Sinica* 4 76–82.

K Yan [preprint], "Invariant subspaces for joint subnormal systems."

K W Yang , "A note on reflexive Banach spaces ,"  $Proc\ Amer\ Math\ Soc\ {\bf 18}\ (1967)$ 859–860.

L Yang [preprint], "Equality of essential spectra of quasisimilar subnormal operators."

F J Yeadon [1971], "A new proof of the existence of a trace in a finite von Neumann algebra," *Bull Amer Math Soc* **77** 257–260.

T Yoshino, "Subnormal operators with a cyclic vector,"  $Tohoku\ Math\ J\ {\bf 21}\ (1969)$ 47–55.

T Yoshino, [1973], "On commuting extensions of nearly normal operators," *Tohoku Math J* **25** 263–272.

T Yoshino, [1976], "A note on a result of J Bram," Duke Math J 43 875.

## $\mathbf{Z}$

K Zhu [1990], Operator theory in function spaces, Dekker, New York.

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