## PUBLICATIONS

### (1) Monographs, Lecture Notes

(with M. Martin) *Lectures on Hyponormal Operators*, Birkhäuser Verlag, Basel-Boston-Berlin, 1989.

(with J. Eschmeier) *Spectral Decompositions and Analytic Sheaves*, London Math. Monographs Vol. 10, Clarendon Press, Oxford, 1996.

(with B. Gustafsson) *Hyponormal Quantization of Planar Domains. Exponential Transform in Two Dimensions*, Lect. Notes Math. vol. 2199, Springer, Berlin, 2017.

### (2) Edited volumes

*Analysis of Operators on Function Spaces, The Serguei Shimorin memorial Volume* (A. Aleman, H. Hedenmalm, D. Khavinson, M. Putinar, editors), Trends in Math., Birkhauser, Basel, in preparation.

*Mathematical methods in systems, optimization and control* (H. Dym, M. de Oliveira, M. Putinar, editors), Operator Theory: Advances and Applications, Birkhäuser, Basel, 2012.

*Notions of Positivity and the Geometry of Polynomials* (P. Brändén, M. Passare, M. Putinar, editors), Trends in Math., Birkhäuser, Basel, 2011.

*Björn Gustafsson Festschrift* (D. Crowdy, M. Mineev-Weinstein, M. Putinar, eds.), Complex Analysis and Operator Theory vol. 3-2, 2009.

*Emerging Applications of Algebraic Geometry* (M. Putinar, S. Sullivant, eds.), The IMA Volumes in Mathematics and its Applications, vol. 149, Springer, Berlin, 2009.

*Operator Theory, Structured Matrices, and Dilations* (M. Bakonyi, A. Gheondea, M. Putinar, J. Rovnyak, eds.), Theta, Bucharest, 2007.

*Physics and Mathematics of Growing Interfaces* - In honor of Stan Richardson's discoveries in Laplacian Growth and related free boundary problems (M. Mineev, M. Putinar, L. Sander, A. Zabrodin, eds.), Physica D 235, 2007.

*Quadrature Domains and Their Applications*, The Harold S. Shapiro Anniversary Volume (P.Ebenfelt, B.Gustafsson, D.Khavinson, M. Putinar, eds.) Birkhäuser, Basel, 2005.

*Operator algebras and operator theory* (W. B. Arveson, A. S. Mischenko, M. Putinar, M. Rieffel, S. Stratila, eds.), Pitman Res. Notes Math. vol 271-272, Longman Sci. and Techn. Harlow, 1992.

## (3) All publications, in inverse chronological order

### Submitted

(with A. Belton, D. Guillot, A. Khare) *Total positivity preservers*

(with M. Korda, I. Mezic) *Data driven computation of the spectrum of the Koopman operator*

(with A. Belton, D. Guillot, A. Khare) *Simultaneous kernels of matrix Hadamard powers*

*Ellipses and Polynomials*

(with S. Shimorin) *Positive integral kernels for polar derivatives*

(with A. Belton, D. Guillot, A. Khare) *Moment-sequence transforms*

### In press

(with D. Kimsey) Complex orthogonal polynomials and numerical quadrature via hyponormality, Comp. Methods Function Theory

(with H. Kang) *Spectral permanence in a space with two norms,* Revista Matematica Iberoamericana

### 2017

1. (with K.M. Perfekt) *The essential spectrum of the Neumann-Poincare operator on a domain with corners,* Arch. Rational Mechanics Appl. 223(2017), 1019-1033.

2. (with J. Tener) *Singular values of weighted composition operators and second quantization,* Int. Mat. Research Notes https://doi.org/10.1093/imrn/rnx077

3. (with H. Ammari, M. Ruiz, S. Yu, H. Zhang) *Shape reconstruction of nanoparticles from their associated plasmonic resonances,* J. Math. Pures Appl. https://doi.org/10.1016/j.matpur.2017.09.003

4. *Finite central truncation in a space with two norms,* Integral Equations Operator Theory 89(2017), 345-376.

5. (with M. Charina, C. Conti, M. Cotronei) *System Theory and orthogonal multi-wavelets,* J. Approx. Theory https://doi.org/10.1016/j.jat.2017.09.004

6. (with B. Gustafsson*) Lines Bundles defined by the Schwarz Function*, Analysis Math. Physics https://doi.org/10.1007/s13324-017-0201-9

**2016**

1. (with A. Belton, D. Guillot, A. Khare) *Matrix positivity preservers in fixed dimension*, C. R. Acad. Sci. Paris, Ser. I. 354(2016), 143-148.

2. (with M. Budisic) *Conditioning moments of singular measures for entropy optimization.*II, Contemp. Math. 661(2016), 283-297.

3. (with D. Plaumann) *A relative Grace theorem for complex polynomials,* Math. Proc.Cambridge Phil. Soc. **161**(2016), 17-30.

4. (with D. Henrion, I. Mezic) *Applied Koopmanism*, Oberwolfach Reports 7(2016), 43pp. DOI: 10.4171/OWR/2016/

5. (with A. Belton, D. Guillot, A. Khare) *Matrix positivity preservers in fixed dimension. I,* Adv. Math. 298(2016), 325-368.

6. *Hermitian algebra on generalized lemniscates,* Bull. Korean Math. Soc. 53(2016), 821-831.

7. (with A. Belton, D. Guillot, A. Khare) *Schur polynomials and matrix positivity preservers*, Discrete Math. Theor. Comp. Sci. B.C. (2016), 155-166.

## 2015

1. (with J.-B. Lasserre) A*lgebraic-exponential data recovery from moments,* Discrete and Comp. Geometry (54)2015, 993-1012.

2. (with M. Charina, C. Scheiderer, J. Stoeckler), *An algebraic perspective on multivariate tight wavelet frames. II,* Appl. Comp. Harmonic Analysis 39(2015), 185-213.

## 2014

1. (with K.-M. Perfekt), *Spectral bounds for the Neumann-Poincaré operator on planar domains with corners*, J. d'Analyse Math. 124(2014), 39-57.

2. (with S.R. Garcia, E. Prodan), *Mathematical and Physical aspects of Complex Symmetric Operators*, J. Phys. A: Math. Theor. 47(2014), 353001 (54 pp).

3. (with C. Scheiderer), *Quillen property of real algebraic varieties,* Muenster J. Math. 7 (2014), 671–696.

## 2013

1. (with M. Charina, C. Scheiderer, J. Stoeckler), *An algebraic perspective on multivariate tight wavelet frames*, Constr. Approx. 38(2013), 253-276.

2. *Matrix Models in Laplacian Growth*, in vol. Advances in Mathematics (L. Beznea et al., eds.), Romanian Acad. Publ. House, Bucharest, 2013.

3. (with M. Charina, J.-B. Lasserre, J. Stoeckler), *Structured function systems,* Oberwolfach Reports 10(2013), 579-655.

## 2012

1. (with John D'Angelo), *Hermitian complexity of real polynomial ideals*, International Journal Math. 23(2012), No. 6, 1250026, 14 p.

2. (with J. B. Lasserre), *Positivity and optimization: beyond polynomials*, in vol.

Handbook on Semidefinite, Cone and Polynomial Optimization (M. Anjos, J.-B. Lasserre, eds.), Springer, Basel, 2012, pp. 407-434.

3. (with S. Biswas and G. Misra), *Unitary invariants for Hilbert modules of finite rank*, J. reine angew. Mathematik 662(2012), 165-204.

4. (with M. Budisic), *Conditioning moments of singular measures for entropy optimization*.I, Indag. Math. 23(2012), 848-883.

5. (with R. G. Douglas, Kai Wang), *Reducing subspaces for analytic multipliers of the Bergman space*, J. Funct. Analysis 263(2012), 1744-1765.

6. *Sums of Hermitian Squares: Old and New*, in vol. Semidefinite optimization and convex alge- braic geometry, (G. Bleckherman, P. Parrilo, R. Thomas, eds.), SIAM, Philadelphia, 2012, pp. 407-446.

7. *Mathematical methods in systems, optimization and control* (H. Dym, M. de Oliveira, M. Putinar, editors), Operator Theory: Advances and Applications, Birkhäuser, Basel, 2012.

8. (with C. Scheiderer), *Hermitian algebra on the ellipse*, Illinois J. Math. 56(2012), 213-220.

## 2011

1. (with S. Niculescu), *A toric Positivstellensatz with applications to delay systems*, C. R. Acad. Sci. Paris, Ser. I. 349(2011), 327-329.

2. (with D. Khavinson, R. Pereira, E.B. Saff, S. Shimorin), *Borcea's variance conjectures on the critical points of polynomials*, in vol. Notions of Positivity and the Geometry of Polynomials (P. Brändén et al., eds.), Trends in Mathematics 2011, Birkhäuser, Basel, pp 283-309.

3. Book review: Jean-Bernard Lasserre: *Moments, Positive Polynomials and Their Applications*, Imperial College Press, World Sci., Singapore, 2010, ISBN: 978-1-84816-445-1. 384 pages, Foundations Comput. Math. 2011, DOI 10.1007/s10208-011-9092-6.

4. *Notions of Positivity and the Geometry of Polynomials* (P. Brändén, M. Passare, M. Putinar, editors), Trends in Math., Birkhäuser, Basel, 2011.

## 2010

1. (with C. Scheiderer), *Sums of hermitian squares on pseudoconvex boundaries*, Math. Res. Letters 17(2010), 1047-1053.

2. (with F. Jafari), *Extremal positive pluriharmonic functions on Euclidean balls*, Pure and Applied Mathematics Quarterly 6(2010), 1013-1025.

3. (with R.E. Curto): *Polynomially hyponormal operators*. in vol. A Glimpse at Hilbert Space Operators. Paul R. Halmos in Memoriam, Series: Operator Theory: Advances and Applications , Vol. 207, Axler, Sheldon; Rosenthal, Peter; Sarason, Donald (Eds.), Birkhäuser, Basel, 2010, pp. 195-207.

4. (with D. Khavinson, M. Mineev-Weinstein, R. Teodorescu), *Lemniscates do not survive Laplacian Growth*, Math. Res. Letters 17(2010), 337-343.

5. *The evolution of Erret Bishop's ideas in abstract spectral theory*, Ann. Univ. Bucharest (Mathematical Series) 1 (LIX) (2010), 145-154.

6. (with J. B. Lasserre), *Positivity and optimization for semi-algebraic functions*, SIAM J. Optimization 20(2010), 3364-3383.

## 2009

1. (with J. W.Helton, S. McCullough, V.Vinnikov), *Convex matrix inequalities versus linear matrix inequalities*, IEEE Trans. Automat. Control, Special Issue on Positive Polynomials in Control 54(2009), 952-964.

2. (with S. Kuhlmann), *Positive polynomials on projective limits of real algebraic varieties*, Bull. Sci. Math. 133(2009), 92-111.

3. *Emerging Applications of Algebraic Geometry* (M. Putinar, S. Sullivant, eds.), The IMA Volumes in Mathematics and its Applications, vol. 149, Springer, Berlin, 2009.

4. (with J. d'Angelo), *Polynomial optimization on odd-dimensional spheres*, in vol. Emerging Ap- plications of Algebraic Geometry, The IMA Volumes in Mathematics and its Applications, vol. 149, Springer, Berlin, 2009, pp. 1-16.

5. (with M. de Oliveira, J. W. Helton, S. McCullough), *Engineering systems and free real algebraic geometry*, in vol. Emerging Applications of Algebraic Geometry, The IMA Volumes in Mathematics and its Applications, vol. 149, Springer, Berlin, 2009, pp. 17-63.

6. *A Striktpositivstellensatz for measurable functions*, C. R. Acad. Sci. Paris, Ser. I. 347 (2009), 381-384.

7. (with D. Khavinson, M. Mineev-Weinstein), *Planar elliptic growth*, Complex Analysis Operator Theory 3(2009), 425-452.

8. (with V. A. Prokhorov), *Compact Hankel forms on planar domains*, Complex

Analysis Operator Theory 3(2009), 471-500.

9. (with B. Gustafsson, E. Saff, N. Stylianopoulos), *Bergman polynomials on an archipelago: estimates, zeros and shape reconstruction*, Adv. Math. 222(2009), 1405-1460.

## 2008

1. (with B. Gustafsson, E. Saff, N. Stylianopoulos), *Les polynômes orthogonaux de Bergman sur un archipel*, C. R. Acad. Sci. Paris, Ser. I 346(2008), 499-502.

2. (with J. Danciger, S. Garcia), *Variational principles for symmetric bilinear forms*, Math. Nachrichten 281(2008), 786-802.

3. (with S. Garcia), *Interpolation and complex symmetry*, Tohoku Math. Journal 60(2008), 423- 440.

4. (with J.W. Helton and J.-B. Lasserre), *Multivariate moment matrices with zeros in their inverse*, Ann. Probability 36(2008), 1453-1471.

5. (with M. Mineev-Weinstein, R. Teodorescu), *Random Matrix Theory in 2D, Laplacian Growth and Operator Theory*, J. Phys. A: Math. Theor. 41 No 26 (4 July 2008) 263001 (74pp).

6. (with K. Schmüdgen), *Multivariate determinateness*, Indiana Univ. Math. J. 57:6(2008), 2931- 2968.

## 2007

1. (with B. Gustafsson), *Analytic continuation of the exponential transform from convex cavities*, J. Math. Analysis Appl. 328(2007), 995-1006.

2. (with J.W. Helton and S. A. McCullough) *Strong majorization in a free $*$-algebra*, Math. Zeitschrift 255(2007), 579-596.

3. (with S. Garcia), *Complex symmetric operators and applications. II*, Trans. Amer. Math. Soc. 359 (2007), 3913-3931.

4. (with J.W. Helton), *Positive Polynomials in Scalar and Matrix Variables, the Spectral Theorem and Optimization*, in vol. Operator Theory, Structured Matrices, and

Dilations, Theta, Bucharest, June 2007, pp 229-306.

5. M. Bakonyi, A. Gheondea, M. Putinar, J. Rovnyak, eds., *Operator Theory, Structured Matrices, and Dilations*, Theta, Bucharest, 2007.

6. (with D. Khavinson and H.S. Shapiro), *On Poincaré's variational problem in potential theory*, Arch. Rational Mech. Appl. 185:1(2007), 143-184.

7. (with S. Kuhlmann), *Positive polynomials on fibre products*, C. R. Acad. Sci. Paris, Ser. I 344(2007), 681-684.

8. (with G. Putinar), *Reconstruction of algebraic sets from dynamic data*, Ann. Fac. Sci. Toulouse vol. XIV:3(2007), 647-664.

9. (with N. Stylianopoulos), *Finite term relations for planar orthogonal polynomials*, Complex Analysis and Operator 1(2007), 447-456.

10. (with B. Gustafsson), *Topics on quadrature domains*, Physica D 235(2007), 90-100.

11. M. Mineev, M. Putinar, L. Sander, A. Zabrodin, eds., *Physics and Mathematics of Growing Interfaces* - In honor of Stan Richardsons discoveries in Laplacian Growth and related free boundary problems, Preface, Physica D 235(2007), vii-x.

## 2006

1. (with S. Garcia), *Complex symmetric operators and applications*, Trans. Amer. Math. Soc. 358(2006), 1285-1315.

2. (with E. Prodan and S. Garcia), *Norm estimates of complex symmetric operators applied to quantum systems*, J. Physics A: Math. Gen. 39(2006), 389-400.

3. (with J.W.Helton and S. McCullough) *Matrix representation for positive non-commutative polynomials*, Positivity 10(2006), 145-163.

4. *On hermitian polynomial optimization*, Arch. Math. 87(2006), 41-51.

5. *Uniqueness in multivariate moment problems*, Proc. 17-th. Intern. Symp. Mathematical Theory of Networks and Systems, Kyoto 2006, (Y. Yamamoto, ed.), 667-671.

6. (with C. Scheiderer), *Multivariate moment problems: geometry and indeterminateness*, Ann. Scuola Norm. Sup. Pisa Cl. Sci. (5), vol. V (2006), 137-157.

7. (with C. Banica), *On the classification of complex vector bundles of stable rank*, Proc. Indian Acad. Sci. (Math. Sci.) 116(2006), 1-20.

8. (with G. Putinar), Restriction eigenfunctions in C^n, Electronic Trans. Numerical

Analysis 25(2006), 393-408.

9. (with Linda Patton), *On multivariable Fejér inequalities* , Acta Sci. Math (Szeged) 72(2006), 129-134.

## 2005

1. *Notes on generalized lemniscates*, Operator Theory: Adv. Appl. 157(2005), 243-266.

2. ((with J.W.Helton and S. McCullough), *Non-negative hereditary polynomials in a free $*$-algebra*, Math. Zeitschrift 250(2005), 515-522.

3. (co-editor with P.Ebenfelt, B.Gustafsson, D.Khavinson), *Quadrature Domains and Their Applications*, *The Harold S. Shapiro Anniversary Volume*, Birkhäuser, Basel, 2005.

4. (with B. Gustafsson), *Linear analysis of quadrature domains. IV, Quadrature Domains and Applications, The Harold S. Shapiro Anniversary Volume* (P. Ebenfelt et al. eds.), Operator Theory: Advances Appl. vol. 156, Birkhäuser, Basel, 2005, pp. 147-168.

5. (with S. McCullough), *Non-commutative sums of squares*, Pacific J. Math. 218(2005), 167-171.

6. (with S. Sandberg), *A skew normal dilation on the numerical range of an operator*, Math. Ann. 331(2005), 345-357.

7. (with J. McCarthy), *Positivity aspects of the Fantappie transform*, J. d'Analyse Math. 97(2005), 57-83.

## 2004

1. (with S.Sandberg), *Privilege on strictly convex domains*, Rend. Acad. Natl. Lincei s. 9, v. 15(2004), 39-45.

2. (with J.W.Helton and S. McCullough), *A non-commutative Positivstellensatz on isometries*, J. reine angew. Math. 568(2004), 71-80.

3. *A renormalized Riesz transform and applications*, Advances in Constructive Approximation (M.Neamtu and E. Saff, eds.), Nashboro Press, Brentwood, TN., 2004, pp. 433-465.

4. *Restriction operators on Bergman space*, Oberwolfach Reports 1(2004), 361-363.

## 2003

1. (with B. Gustafsson), *The exponential transform: a renormalized Riesz potential at critical exponent*, Indiana Univ. Math. J. 52(2003), 527-568.

2. (with F.-H. Vasilescu), *A uniqueness criterion in the multivariate moment problem*, Math. Scand. 92(2003), 295-300.

3. (with B. Gustafsson and H.S.Shapiro), *Restriction operators, balayage and doubly orthogonal systems of analytic functions*, J. Funct. Analysis 199(2003), 332-378.

4. (with J. Eschmeier), *On bounded analytic extension in C^n, Spectral Theory and Its Applications*, The I. Colojoara Anniversary volume (A.Gheondea and M. S □ abac, eds.) Theta 2003, Bucharest, pp. 153-160.

5. (with D.Alpay, V.Vinnikov), *A Hilbert space approach to bounded analytic extension in the ball*, Comm. Pure Appl. Analysis 2(2003), 139-145.

## 2002

1. (with J. Eschmeier), *Spherical contractions and interpolation problems on the ball*, J. reine angew. Math. 542(2002), 219-236.

2. *On a diagonal Padé approximation in two complex variables*, Numer. Math. 93(2002), 131-152.

3. (Book review) *An introduction to models and decompositions in operator theory*, Birkhäuser, Basel, 1997, by C. S. Kubrusly, Zentralblatt für Math. 918.47013.

4. (Book review) *Orthogonal rational functions*, by A. Bultheel, P. González-Vera, E. Hendriksen, O. Njastad, Cambridge Univ. Press, 1999, Zentralblatt für Math. 923.42017.

## 2001

1. *Operator dilations with prescribed commutators*, Proc. M. S. Livsic 80-th Birthday Confer- ence (Beer-Sheva, 1997) (D. Alpay, V. Vinnikov, eds.), Operator Theory: Advances and Applications 123(2001), Birkhäuser Verlag, pp. 453-460.

2. (with J. Eschmeier), *Some remarks on spherical isometries*, in vol. "Systems, Approximation, Singular Integral Operators, and Related Topics" (A.A.Borichev and N.K.Nikolskii, eds.), Birkhäuser, Basel et al., 2001, pp. 271-292.

3. (with H. Shapiro), *The Friedrichs operator of a planar domain. II*, "Béla Sz.-Nagy Memorial Volume" (L. Kérchy et al., eds.), Operator Theory: Advances and Applications vol. 127 (2001), Birkhäuser, Basel, pp. 519-551.

4. (with B. Gustafsson), *Analytic continuation of Cauchy and exponential transforms*, in vol. Analytic Extension Formulas and their Applications (S.Saitoh, N.Hayashi, M.Yamamoto, eds.), Kluwer, Dordrecht, 2001, pp. 47-58.

5. (with G. Putinar), *Root separation on generalized lemniscates*, Hokkaido Math. J. 30(2001), 705-716.

6. *An application of the Heisenberg group to abstract algebra*, Octogon Math. Magazine 9(2001), 744-745.

## 2000

1. (with B.Gustafsson), *Linear analysis of quadrature domains*. II, Israel J. Math. 119(2000), 187-216.

2. *A dilation theory approach to cubature formulas. II*, Math. Nachr. 211(2000), 159-175.

3. (with B. Gustafsson), *On exact quadrature formulas for harmonic functions on polyhedra*, Proc. Amer. Math. Soc. 128(2000), 1427-1432.

4. (with J. Eschmeier and L. Patton), *Carathéodory-Fejér interpolation on the bidisk*, Math. Res. Letters 7(2000), 25-34.

5. (with H. S. Shapiro),*The Friedrichs operator of a planar domain*, S. A. Vinogradov Memorial Volume (V. Havin, N. K. Nikolskii, eds.), Birkhäuser Verlag, Basel et al., 2000, pp. 303- 330.

6. (with B. Gustafsson, C. He and P. Milanfar), *Reconstructing planar domains from their moments*, Inverse Problems 16(2000), 1053-1070.

7. (with G. Golub, B. Gustafsson, P. Milanfar, J. Varah), *Shape reconstruction from moments: theory, algorithms, and applications*, SPIE Proceedings vol. 4116(2000), Advanced Signal Processing, Algorithms, Architecture, and Implementations X (Franklin T.Luk, ed.), pp. 406-416.

8. *Semi-normal Operator*, Encycl. Math. Sci. (M. Hazewinkel, ed.), 2nd addition, Kluwer, Dordrecht, 2000, pp. 418- 419.

## 1999

1. (with B. Prunaru), *The generic local spectrum of any operator is the full spectrum*, Bull. London Math. Soc. 31(1999), 332- 336.

2. *Linear analysis of quadrature domains. III*, J. Math. Anal. Appl. 239(1999), 101-117.

3. *On Weyl spectrum in several variables*, Math. Japon. 50(1999), 355-357.

4. (with F. -H. Vasilescu), *Solving moment problems by dimensional extension*, Ann. Math. 149(1999), 1087- 1107.

5. (with F. -H. Vasilescu), *Solution du problème des moments par extension dimensionnelle*, C. R. Acad. Sci. Paris, Série I, 328(1999), 495- 499.

6. (with F. -H. Vasilescu), *Sur les polynômes positifs sur des ensembles sémi-algébriques*, C. R. Acad. Sci. Paris, Série I, 328(1999), 585- 589.

7. (Featured review) *Flat extensions of positive moment matrices: recursively generated relations*, by R.E.Curto and L.A. Fialkow, Math. Reviews Amer. Math. Soc. 99d:47015.

8. (Book review) Flat extensions of positive moment matrices: recursively generated relations, by R.E.Curto and L.A. Fialkow, Zentralblatt für Math. 913.47016.

## 1998

1. *Extremal solutions of the L-problem of moments in two variables*. II, J. Approx. Theory 92(1998), 38-58.

2. *Matrix analysis and the Friedrichs operator of a quadrature domain*, Linear Alg. Appl. 270(1998), 215-229.

3. (with B.Gustafsson), *An exponential transform and regularity of free boundaries in two dimensions*, Ann. Scuola Norm Sup. (Pisa) 26(1998), 507- 543.

4. (Book review) *Solution of the truncated complex moment problem for flat data*, by R.E.Curto and L.A. Fialkow, Zentralblatt für Math. 876.30033.

5. (Featured review) *Dual piecewise analytic bundle shift models of linear operators*, by D.V. Yakubovich, Math. Reviews Amer. Math. Soc. 97b:47024.

## 1997

1. (with R. Wolff), *A natural localization of Hardy spaces in several complex variables*, Ann. Polon. Math. 66(1997), 183-201.

2. *An interpolation problem in tube domains*, Integral Eq. Operator Theory 28(1997), 330-342.

3. *A note on Tchakaloff's theorem*, Proc. Amer. Math. Soc. 125(1997), 2409-2414.

4. *Spectral sets and scalar dilations*, Houston J. Math. 23(1997), 247-265.

5. *A dilation theory approach to cubature formulas*, Expo. Math. 15(1997),183-192.

6. *A free boundary problem and a related trace formula*, in Differential Equations, Asymptotic Analysis, and Mathematical Physics (M. Demuth and B.-W. Schulze, eds.), Akademie-Verlag, Berlin 1997, pp. 267-275.

7. (Book review) *Holomorphic vector bundles over compact complex surfaces*, by V. Brânzanescu, Zentralblatt für Math. 848.32024.

## 1996

1. *Extremal solutions of the two dimensional L-problem of moments*, J. Funct. Analysis 136(1996), 331-364.

2. (with F. -H. Vasilescu), *Problème des moments sur les compacts semi-algébriques*, C. R. Acad. Sci Paris. t. 323, Série I, 787-791, 1996.

3. *Generalized eigenfunction expansions and spectral decompositions*, Linear Operators, Banach Center Publ. vol 38, Polish Acad. Sci., Warszawa, 1996, pp. 265-286.

4. (with J. Eschmeier), *Spectral Decompositions and Analytic Sheaves*, London Math. Mono- graphs Vol. 10, Clarendon Press, Oxford, 1996.

5. (Book review) *Principal currents for a pair of unitary operators*, by J. D. Pincus and Shaojie Zhou, Zentralblatt für Math. 810.47018.

## 1995

1. (with J. Eschmeier),*The finite fibre problem and an index formula for elementary operators*, Proc. Amer. Math. Soc. 123(1995), 743-746.

2. *Abstract d"-resolutions for several commuting operators*, Contemp. Math. 185(1995), 319-337.

3. *Linear analysis of quadrature domains*, Arkiv för Mat. 33(1995), 357-376.

4. *On joint spectra of pairs of analytic Toeplitz operators*, Studia Math. 115(1995), 129-134.

## 1994

1. *Analytically hyponormal weighted shifts*, in 'Linear and Complex Analysis Problem Book 3' (V. P. Havin and N. K. Nikolskii, eds.), Lect. Notes Math. vol. 1537 , Springer, Berlin, 1994, pp. 370-371 .

2. *Algebraic operators with rank one self-commutator*, in 'Linear and Complex Analysis Problem Book 3' (V. P. Havin and N. K. Nikolskii, eds.), Lecture Notes Math. vol. 1537, Springer, Berlin, 1994, pp. 372.

3. *Liftings of vector-valued analytic functions*, in 'Linear and Complex Analysis Problem Book 3' (V. P. Havin and N. K. Nikolskii, eds.), Lecture Notes Math. vol. 1537, Springer, Berlin, 1994 , pp. 207.

4. *On the rigidity of Bergman submodules*, Amer. J. Math 116(1994), 1421-1432.

5. *On dense ideals in spaces of analytic functions*, Ann. Inst. Fourier 44(1994), 1355-1366.

6. (Book review) *The homology of Banach and topological algebras* (2nd edition), by A. Ya. Helemskii, Acta Appl. Math. 35(1994), 306-307.

7. *On a class of finitely determined planar domains*, Mathematical Research Letters 1:3(1994), 389-398.

## 1993

1. (with R. Curto), *Nearly subnormal operators and moment problems*, J. Funct. Analysis 115(1993), 480-497.

2. (with J. Eschmeier), *Spectra of analytic Toeplitz tuples on Bergman spaces*, Acta Math. Sci. (Szeged) 57(1993), 83-100.

3. *On a criterion of coherence for Fréchet analytic sheaves*, Rev. Roum. Math. Pures Appl. 38(1993), 697-702.

4. *Positive polynomials on compact semi-algebraic sets*, Indiana Univ. Math. J. 42(1993), 969- 984.

## 1992

1. *Analytic transversality applied to function algebras*, in 'Operator algebras and opeartor theory' (W. B. Arveson et al eds. ), Pitman Res. Notes Math. vol 271, 1992, pp. 168-183.

2. *Sur la complexification du problème des moments*, C. R. Acad. Sci. Paris, t. 314,

Serie I(1992), 743-745.

3. (with N. Salinas), *Analytic transversality and Nullstellensatz in Bergman spaces*, Contemp. Math. 137 (1992), 367-381.

4. *Quasi-similarity of tuples with Bishop's property (β),* Int. Equations Operator Theory 15(1992), 1047-1052.

5. (co-editor with W. B. Arveson, A. S. Mischenko, M. A. Rieffel and S. Stratila), *Operator algebras and operator theory*, Pitman Res. Notes Math. vol. 270-271, Longman Sci. and Techn. Harlow, 1992.

6. *A reciprocal to the Oka-Grauert principle*, Math. Nachr. 159(1992), 149-152.

7. (with C. Banica), *Fibrés vectoriels complexes de rang stable sur les variétés complexes compactes*, C. R. Acad. Sci. Paris. t. 314, Serie I (1992), 829-832.

## 1991

1. *Une démonstration du théorème de platitude de Malgrange dans le cas analytique complexe*, Rev. Roum. Math. Pures Appl. 36(1991), 261-270.

2. *Inverse problems in perturbation theory and moment problems*, in vol. 'Functional analysis and related topics' (S. Koshi, ed.), World Sci., Singapore, 1991, pp 99-116.

3. (with R. Curto), *Existence of non-subnormal polynomially hyponormal operators*, Bull. Amer. Math. Soc. 25(1991), 373-378.

4. *Some problems of spectral analysis on Bergman spaces*, Rev. Union Mat. Argentina 37(1991), 149-155.

5. (with T. Albu, V. Nistor, S. Papadima, et al.), *Semisimple Lie Algebras* (in Romanian), Semin. Inst. Math. Romanian Academy, vol. 1(1991), Bucharest, pp. 255.

## 1990

1. *The L-problem of moments in two dimensions*, J. Funct. Anal. 94:2(1990), 288-307.

2. *Spectral theory and sheaf theory. IV*, Proc. Symp. Pure Math. 51:2(1990), 273-293.

3. *Invariant subspaces of several variable Bergman spaces*, Pacific J. Math. 147:2(1990), 355-364.

## 1989

1. (with J. Eschmeier), *On quotients and resctrictions of generalized scalar operators*, J. Funct. Anal. 84:1(1989), 115-134.

2. *Une caractérisation des modules analytiques quasicohérents*, C. R. Acad. Sci. Paris t. 309 s. I(1989), 881-884.

3. (with M. Martin), *Lectures on Hyponormal Operators*, Birkhäuser Verlag, Basel-Boston-Berlin, 1989.

## 1988

1. *Extreme hyponormal operators*, in vol. 'Special classes of linear operators and other topics', Birkhäuser, Basel-Boston-Stuttgart, 1988, pp. 249-265.

2. *A two dimensional moment problem*, J. Funct. Anal. 80:1(1988), 1-8.

3. (with J. Eschmeier), *Bishop's condition (β) and rich extensions of linear operators*, Indiana Univ. Math. J. 37:2(1988), 325-348.

4. (Book review) *Operators in indefinite metric spaces, scattering theory and other topics* (H. Helson et al eds.), Rev. Roum. Math. Pures Appl. 33(1988), 261-263.

## 1987

1. (with C. Banica), *On complex vector bundles on projective threefolds*, Invent. Math. 88(1987), 427-438.

2. (with M. Martin), *A unitary invariant for hyponormal operators*, J. Funct. Anal. 72(1987), 297-323.

3. (with J. Eschmeier), *The sheaf E is not topologically flat over O,* Ann. Univ. Craiova 15(1987), 1-4.

4. (Book review) *Homology in Banach and topological algebras* (in Russian), by A. Ya. Helem- skii, Zentralblatt für Mathematik 608(1987), 207-208.

## 1986

1. *Hyponormal operators and eigendistributions*, in vol. 'Advances in invariant subspaces and other results of operator theory', Birkhäuser, Basel-Boston-Stuttgart, 1986, pp. 249-273.

2. *Spectral theory and sheaf theory. II*, Math. Z. 192(1986), 473-490.

3. *On analytic modules: softness and quasi-coherence*, in vol. 'Complex Analysis and Applications '85', Publ. House Bulg. Acad. Sci. , Sofia 1986, pp. 534-547.

## 1985

1. (with C. Banica), *On complex vector bundles on rational threefolds*, Math. Proc. Camb. Philos. Soc. 97(1985), 279-288.

2. (with M. Martin), *On hyponormal operators*, St. Cerc. Mat. 37:5 (1985), 460-465.

3. *Base change and the Fredholm index*, Int. Eq. Operator Theory 8(1985), 674-692.

4. *Extensions scalaires et noyaux distribution des opérateurs hyponormaux*, C. R. Acad. Sci. Paris t. 301 s. I no. 15(1985), 739-741.

## 1984

1. *Elements of spectral theory of Stein algebras representations* (in Romanian), St. Cerc. Mat. I 36:3(1984), 193-220; II 36:4(1984), 293-310; III 36:5(1984), 387-408.

2. *Spectral inclusion for subnormal n-tuples*, Proc. Amer. Math. Soc. 90:3(1984), 405-406.

3. *Hyponormal operators are subscalar*, J. Operator Theory 12(1984), 385-395.

4. *Functional calculus and the Gelfand transformation*, Studia Math. 79:1(1984), 83-86.

5. (with J. Eschmeier), *Spectral theory and sheaf theory*. III, J. reine angew. Math. 354(1984), 150-163.

## 1983

1. (with F. -H. Vasilescu), *Continuous and analytic invariants for deformations of Fredholm complexes*, J. Operator Theory 9(1983), 3-26.

2. *Spectral theory and sheaf theory. I,* in vol. 'Dilation theory, Toeplitz operators and other topics', Birkhäuser, Basel-Boston-Stuttgart, 1983, pp. 283-298.

3. *Uniqueness of Taylor's functional calculus*, Proc. Amer. Math. Soc. 89:4(1983), 647-650.

## 1982

1. *The superposition property for Taylor's functional calculus*, J. Operator Theory 7(1982), 149- 155.

2. *Some invariants for semi-Fredholm systems of essentially commuting operators*, J. Operator Theory 8(1982), 65-90.

## 1981

1. *One generalization of Tzitzeica's invariant*, Bull Math. Soc. Sci Math. Roumanie.25(73),1(1981), 75-76

## 1980

1. (with C. Banica and G. Schumacher), *Variation der Globalen Ext in Deformationen kompakter komplexer Räume*, Math. Ann. 250(1980), 135-155.

2. *Functional calculus with sections of an analytic space*, J. Operator Theory 4(1980), 297-306.

3. *A remark on the sheaf of distributions* (in Romanian), St. Cerc. Mat. 32(1980), 709-713.

## 1979

1. *Un invariant centro-affine associé 'a quelques sous-variétés de l'espace euclidien*, Rev. Roum. Math. Pures Appl. 4(1979), 647-649.

2. *Sur les courbes et hypersurfaces de Tzitzeica*, Bull. Math. Soc. Sci. Math. Roumanie t. 23(71): 4(1979), 419-426.

3. *Algebraic properties of Fredholm systems*, Proc. IVth Operator Theory Conference, Timisoara and Herculane, Publ. House Univ. Timisoara 1979, pp. 187-198.