

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, 2019.

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.

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(3) All publications, in inverse chronological order

Submitted

(with B. Gustafsson) *Finite term relations for exponential orthogonal polynomials*

(with Pham Viet Hai) *Complex symmetric evolution equations*

(with B. Beckermann, E. B. Saff, N. Stylianopoulos) *Perturbations of Christoffel-Darboux kernels. I: detection of outliers*

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

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

(with E. Pauwels, J. B. Lasserre), *Data analysis from empirical moments and Christoffel*

function

Accepted for publication

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

(with B. Gustafsson) *A field theoretic operator model and Cowen-Douglas class*, Banach J. Math. Analysis

(with A. Belton, D. Guillot, A. Khare) *A panorama of positivity I: Free-dimension, part II: Fixed-Dimension*

2019

1. (with H. Ammari, M. Ruiz, S. Yu, H. Zhang) *Shape reconstruction of nanoparticles from their associated plasmonic resonances*, J. Math. Pures Appl. 122(2019), 23-48.
2. (with M. Charina, C. Conti, M. Cotronei) *System Theory and orthogonal multi-wavelets*, J. Approx. Theory 238(2019), 85-102.
3. (with J.B. Lasserre) *Positive functionals and Hessenberg matrices*, Proc. Amer. Math. Soc. 147(2019), 1097- 1108.

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2. (with J. Tener) *Singular values of weighted composition operators and second quantization*, Int. Mat. Research Notes 20(2018), 6426–6441.
3. (with M. Korda, I. Mezic) *Data driven computation of the spectrum of the Koopman operator*, Appl. Comp. Harmonic Analysis, doi.org/10.1016/j.acha.2018.08.002
4. (with Pham Viet Hai) *Complex symmetric differential operators on Fock space*, J. Differential Equations 265(2018), 4213-4250.
5. (with A. Belton, D. Guillot, A. Khare) *Simultaneous kernels of matrix Hadamard powers*, Linear Alg. Appl., doi.org/10.1016/j.laa.2018.03.035
6. (with D. Kimsey) *Complex orthogonal polynomials and numerical quadrature via hyponormality*, Comp. Methods Function Theory 18(2018), 495-510.
7. (with H. Kang) *Spectral permanence in a space with two norms*, Revista Matematica Iberoamericana 34(2018) no 2, 621-635.
8. (with B. Gustafsson) *Lines Bundles defined by the Schwarz Function*, Analysis Math. Physics 8(2018), 171–183.

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

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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.

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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.

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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).
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