

EUCETIFA - PUBLICATIONS

PUBLISHED OR IN PRINT

(1) Norbert Kaiblinger and Markus Neuhauser

Metaplectic operators for finite abelian groups and \mathbb{R}^d

[article] Indag. Math., (to appear)

(2) Karlheinz Gröchenig and Tomasz Hrycak

Pseudospectral Fourier Reconstruction with the Modified Inverse Polynomial Reconstruction Method

[article] J. Comput. Phys., Vol.229 (2010) p.933--946

(3) John E. Gilbert and Ziemowit Rzeszutnik

The norm of the Fourier transform on finite abelian groups

[article] Ann. Inst. Fourier (Grenoble), (2010)

(4) Richard F. Bass and Karlheinz Gröchenig

Random sampling of entire functions of exponential type in several variables

[article] Israel J. Math., (2010)

(5) Karlheinz Gröchenig, Stephan Dahlke and Massimo Fornasier

Optimal Adaptive Computations in the Jaffard Algebra and Localized Frames

[article] J. Approx. Theory, Vol.162 (2010) p.153 - 185

(6) Darian Onchis and Hans Feichtinger

Constructive reconstruction from irregular sampling in multi-window spline-type spaces

[article] General Proceedings of the 7th ISAAC Congress, London, (2010)

(7) Hans G. Feichtinger, Werner Kozek and Franz Luef

Gabor Analysis over finite Abelian groups

[incollection] Appl. Comput. Harmon. Anal., Vol.26 No.2, (2009) p.230--248

(8) Franz Luef

Projective modules over non-commutative tori are multi-window Gabor frames for modulation spaces

[article] J. Funct. Anal., Vol.257 No.6, (2009) p.1921--1946

(9) Franz Luef and Yu.I. Manin

Quantum theta functions and Gabor frames for modulation spaces

[article] Lett. Math. Phys., Vol.88 No.1-3, (2009) p.131-161

(10) Marcin Bownik and Ziemowit Rzeszotnik

Construction and reconstruction of tight framelets and wavelets via matrix mask functions

[article] J. Funct. Anal., Vol.256 No.4, (2009) p.1065--1105

(11) Karlheinz Gröchenig and Yurii Lyubarskii

Gabor (super)frames with Hermite functions

[article] Math. Ann., Vol.345 No.2, (2009) p.267-286

(12) Karlheinz Gröchenig and Mariusz Piotrowski

Molecules in coorbit spaces and boundedness of operators

[article] Studia Math., Vol.192 No.1, (2009) p.61-77

(13) Franz Luef and Maurice A. de Gosson

Symplectic Capacities and the Geometry of Uncertainty: the Irruption of Symplectic Topology in Classical and Quantum Mechanics

[article] Physics Reports, (2009)

(14) Maurice A. de Gosson and Franz Luef

On the usefulness of modulation spaces in deformation quantization

[article] J. Phys. A: Math. Theor., Vol.42 (2009) p.315205-315221

(15) Hans G. Feichtinger, Michiel Hazewinkel, Norbert Kaiblinger, Ewa Matusiak and Markus Neuhauser

Metaplectic operators on \mathbb{C}^n

[article] Quart. J. Math. Oxford Ser., Vol.59 No.1, (2008) p.15--28

(16) Maurice A. de Gosson and Franz Luef

Principe d'incertitude et positivité des opérateurs à trace; applications à l'opérateur densité

[article] Ann. Inst. H. Poincar'e, Vol.9 No.2, (2008) p.329--346

(17) Aicke Hinrichs, Iwona Piotrowska and Mariusz Piotrowski

On the degree of compactness of embeddings between weighted modulation spaces

[article] J. Funct. Spaces Appl., Vol.6 No.3, (2008) p.303--317

(18) Karlheinz Gröchenig

The Homogeneous Approximation Property and the Comparison Theorem for Coherent Frames

[article] Sampl. Theory Signal Image Process., Vol.7 No.3, (2008) p.271-279

- (19) Mariusz Piotrowski, Susana D. Moura and S. Neves
Growth Envelopes of Anisotropic Function Spaces
[article] Z. Anal. Anwend., Vol.27 No.1, (2008) p.95--118
- (20) Maurice A. de Gosson and Franz Luef
*A new approach to the *-genvalue equation*
[Article] Lett. Math. Phys., Vol.85 No.2-3, (2008) p.173--183
- (21) Karlheinz Gröchenig, Gero Fendler and Michael Leinert
Convolution-dominated operators on discrete groups
[article] Integral Equations Operator Theory, Vol.61 No.4, (2008) p.493--509
- (22) Karlheinz Gröchenig, Gitta Kutyniok and Kristian Seip
Landau's necessary density conditions for LCA groups
[article] J. Funct. Anal., Vol.255 No.7, (2008) p.1831-1850
- (23) Franz Lehner, Markus Neuhauser and Wolfgang Woess
On the spectrum of lamplighter groups and percolation clusters
[article] Math. Ann., Vol.342 No.1, (2008) p.69--89
- (24) Karlheinz Gröchenig and Ziemowit Rzeszotnik
Banach algebras of pseudodifferential operators and their almost diagonalization
[article] Ann. Inst. Fourier (Grenoble), Vol.58 No.7, (2008) p.2279-2314
- (25) G. Matz, D. Schafhuber, Karlheinz Gröchenig, M. Hartmann and Franz Hlawatsch
Analysis, Optimization, and Implementation of Low-Interference Wireless Multicarrier Systems
[article] IEEE Trans. Wireless Comm., Vol.6 No.4, (2007) p.1--11
- (26) Elena Cordero and Karlheinz Gröchenig
On the product of localization operators
[incollection] in "Modern Trends in Pseudo-differential Operators ", Birkhäuser, Modern Trends in Pseudo-Differential Operators, Proceeding of ISAAC 2005, Oper. Theory Adv. Appl., Vol.172 (2007) [Basel] p.279--295
- (27) Karlheinz Gröchenig and Thomas Strohmer
Analysis of pseudodifferential operators of Sjöstrand's class on locally compact abelian groups
[article] J. Reine Angew. Math., Vol.613 (2007) p.121-146
- (28) Maurice A. de Gosson and Franz Luef
Quantum States and Hardy's Formulation of the Uncertainty Principle: a Symplectic Approach
[article] Lett. Math. Phys., Vol.80 No.1, (2007) p.69-82

(29) Karlheinz Gröchenig and Yurii Lyubarskii

Gabor Frames with Hermite Functions

[article] C. R. Acad. Sci. Paris S'er. I Math., Vol.344 No.3, (2007) p.157--162

(30) Maurice A. de Gosson and Franz Luef

Remarks on the Fact that the Uncertainty Principle Does not Determine the Quantum State

[article] Phys. Lett. A, No.364, (2007) p.453-457

(31) Karlheinz Gröchenig and Thomas Strohmer

Pseudodifferential operators on locally compact abelian groups and Sjöstrand's symbol class

[article] J. Reine Angew. Math., Vol.613 (2007) p.121-146

(32) Arpad Benyi, Karlheinz Gröchenig, Kasso A. Okoudjou and Luke G. Rogers

Unimodular Fourier multipliers for modulation spaces

[article] J. Funct. Anal., Vol.246 No.2, (2007) p.366-384

(33) Hans G. Feichtinger, Ursula Molter and J.L. Romero

Perturbation techniques in irregular spline-type spaces.

[article] Int. J. Wavelets Multiresolut. Inf. Process., Vol.6 No.2, (2007) p.249-277

(34) Maurice A. de Gosson

Semi-Classical Propagation of Wavepackets for the Phase Space Schrödinger Equation; Interpretation in terms of the Feichtinger Algebra

[article] J. Phys. A, Vol.41 No.9, (2007) p.095202, 13

(35) Piotrowska Iwona, Mariusz Piotrowski Susana D. Moura

Non-smooth atomic decompositions of anisotropic function spaces and some applications

[article] Studia Math., Vol.180 No.2, (2007) p.169--190

(36) Karlheinz Gröchenig

Gabor frames without inequalities

[article] Int. Math. Res. Not. IMRN, No.23, (2007) p.Art. ID rnm111, 21

(37) Ewa Matusiak

Some aspects of Gabor analysis on elementary locally compact Abelian groups

[phdthesis] (2007)

(38) H. Führ and K. Gröchenig

Sampling theorems on locally compact groups from oscillation estimates.

[article] Math. Z., Vol.255 No.1, (2007) p.177-194

(39) Monika Dörfler, Hans G. Feichtinger and Karlheinz Gröchenig
Time-frequency partitions for the Gelfand triple $\{S_0, L^2, S_0'\}$
[article] Math. Scand., Vol.98 No.1, (2006) p.81-96

(40) Franz Luef
On spectral invariance of non-commutative tori
[incollection] in "Operator Theory, Operator Algebras, and Applications", Amer. Math. Soc.,
Contemp. Math., Contemp. Math., Vol.414 (2006) [Providence, RI] p.131--146

(41) Elena Cordero and Karlheinz Gröchenig
Symbolic calculus and Fredholm property for localization operators
[article] J. Fourier Anal. Appl., Vol.12 No.3, (2006) p.371--392

(42) Karlheinz Gröchenig, Alexander Borichev and Yurii Lyubarskii
Frame constants of Gabor frames near the critical density
[article] J. Math. Pures Appl.,

SUBMITTED

(1) Maurice A. de Gosson and Franz Luef

Spectral and Regularity properties of a Weyl calculus related to Landau quantization
[article] Journal of Pseudo-Differential Operators and Applications, (2010)

(2) Karlheinz Gröchenig, Benedikt Pötscher and Holger Rauhut

Learning trigonometric polynomials from random samples and exponential inequalities for eigenvalues of random matrices
[article] (2009)

(3) Karlheinz Gröchenig and Monika Dörfler

Time-Frequency partitions and characterizations of modulations spaces with localization operators
[article] preprint, (2009)

(4) Franz Luef and Maurice A. de Gosson

The Multi-Dimensional Hardy Uncertainty Principle and its Interpretation in Terms of the Wigner Distribution; Relation With the Notion of Symplectic Capacity
[article] preprint, (2008)

(5) Franz Luef

The density theorem of Gabor analysis: An operator algebraic approach
[article] preprint, (2007)

(6) Maurice A. de Gosson and Franz Luef

A Geometric Interpretation of Hardy's Uncertainty Principle in Terms of the Notion of Symplectic Capacity
[article] preprint, (2007)

(7) Karlheinz Gröchenig, Ziemowit Rzeszotnik and Thomas Strohmer

Quantitative estimates for the finite section method
[article] preprint, (2006)

(8) Maurice A. de Gosson

Gaussian Quantum States and the Uncertainty Principle of Hardy
[article] (2006) p.1-12

(9) Karlheinz Gröchenig, Ziemowit Rzeszotnik and Thomas Strohmer

Convergence Analysis of the Finite Section Method and Banach Algebras of Matrices
[article]

(10) Karlheinz Gröchenig and Andreas Klotz

Noncommutative approximation: Inverse-Closed Subalgebras and Off-Diagonal Decay of Matrices.

[article] Constr. Approx.,

(11) Karlheinz Gröchenig and Joachim Toft

Isomorphism properties of Toeplitz operators in time-frequency analysis

[article]

CHAPTERS IN BOOKS

(1) Karlheinz Gröchenig, Ole Christensen, Brigitte Forster, Demetrio Labate, Peter Massopust, Pierre Vandergheynst, Yves Wiaux and Guido Weiss

Wiener's Lemma: Theme and Variations. An Introduction to Spectral Invariance.

[incollection] in "Four Short Courses on Harmonic Analysis", Birkhäuser Boston, Applied and Numerical Harmonic Analysis, (2010)

(2) E. Cordero, Hans G. Feichtinger and Franz Luef

Banach Gelfand triples for Gabor analysis

[incollection] in "Pseudo-differential operators", Springer, Lecture Notes in Mathematics, Vol.1949 (2008) [Berlin] p.1--33

(3) Hans G. Feichtinger, Franz Luef and Tobias Werther

A Guided Tour from Linear Algebra to the Foundations of Gabor Analysis

[incollection] in "Gabor and Wavelet Frames", World Sci. Publ., Hackensack, NJ, Lect. Notes Ser. Inst. Math. Sci. Natl. Univ. Singap., Vol.10 (2007) p.1--49

(4) Franz Luef

Gabor analysis, noncommutative tori and Feichtinger's algebra

[incollection] in "Gabor and Wavelet Frames", World Sci. Publ., Hackensack, NJ, Lect. Notes Ser. Inst. Math. Sci. Natl. Univ. Singap., Vol.10 (2007) p.77--106

(5) Karlheinz Gröchenig

Weight functions in time-frequency analysis

[incollection] in "Pseudodifferential Operators: Partial Differential Equations and Time-Frequency Analysis", Amer. Math. Soc., Fields Inst. Commun., Vol.52 (2007) [Providence, RI] p.343--366

(6) Gero Fendler, Karlheinz Gröchenig and Michael Leinert

On spectrality of the algebra of convolution dominated operators

[incollection] in "Noncommutative Harmonic Analysis with Applications to Probability ", Polish Acad. Sci., Banach Center Publications, Banach Center Publ., Vol.78 (2007) [Warsaw] p.145--149

(7) Karlheinz Gröchenig

A pedestrian's approach to pseudodifferential operators

[incollection] in "Harmonic Analysis and Applications", Birkhäuser Boston, Appl. Numer. Harmon. Anal., Vol.in Honor of John J. Benedetto's 65th Birthday (2006) [Boston, MA] p.139--169

(8) Elena Cordero, Luigi Rodino and Karlheinz Gröchenig

Localization operators and time-frequency analysis

[in collection] in "Harmonic, Wavelet and p-adic Analysis", World Sci. Publ., Hackensack, NJ,
(2006) p.83--110

CONFERENCES ARTICLES

(1) Karlheinz Gröchenig, Mario Hampejs, Pavol Svac, Franz Hlawatsch and Gerald Matz
Sequential LSQR-based ICI equalization and decision-feedback ISI cancellation in pulse-shaped multicarrier systems

[inproceedings] in "Proceedings of the Tenth IEEE International Workshop on Signal Processing Advances in Wireless Communications (Spawc)", (2009)

(2) Georg Tauböck, M. Hampejs, Gerald Matz, Franz Hlawatsch and Karlheinz Gröchenig
LSQR-based ICI equalization for multicarrier communications in strongly dispersive and highly mobile environments

[inproceedings] Proc. IEEE SPAWC07, (2007)

(3) Tomasz Hrycak and G. Matz

Low-Complexity Time-Domain ICI Equalization for OFDM Communications over Rapidly Varying Channels

[inproceedings] Accepted for presentation at the 40th Asilomar Conference on Signals, Systems and Computers, held on October 29 - November 1, 2006, at the Asilomar Conference Grounds, Pacific Grove, California, (2006)

IN PREPARATION

(1) Franz Luef

Projections in noncommutative tori and Gabor frames

[article] preprint, (2009)

(2) Hans Feichtinger, Markus Neuhauser and Mariusz Piotrowski

The Homogeneous Approximation Property and localized Gabor frames

[article]

(3) Hans Feichtinger, Anna Grybos and Darian Onchis

Randomized Local Approximation of Dual Atom for Finite Gabor Frames

[article]

(4) Markus Neuhauser and MauriceA. deGosson

On the Asymptotic Behavior of the Wigner Transform for Large Values of Planck's Constant

[article]

(5) Karlheinz Gröchenig and Markus Neuhauser

An uncertainty principle for the time-frequency plane

[article]

(6) Michael Leinert and Karlheinz Gröchenig

Inverse-closed Banach subalgebras of non-commutative tori

[article]

OTHER OUTPUT

(1) Karlheinz Gröchenig

Book review (Time-frequency and time-scale methods, Hogan, Lakey)

[article] Bull. Amer. Math. Soc., Vol.44 No.2, (2006) p.285--290

(2) Franz Luef

Gabor Analysis meets Noncommutative Geometry

[phdthesis] University of Vienna (2005)