

# Modern Time-Frequency Analysis

Strobl 2016, AUSTRIA

Monday, June 6. - Friday, June 10. 2016



NuHAG

## Monday, June 06.

08:30 - 09:00 : *Registration*

09:00 - 09:05 : *Welcome*

09:05 - 09:55 : **Arieh Iserles:** *Fast computation of orthogonal expansions*

10:00 - 10:30 : *Coffee break*

### Session: Bürgelsaal

10:30 - 10:55 : **Martin Ehler:** *Kernel-based function approximation and Quasi Monte Carlo integration on Grassmannians*

11:00 - 11:25 : **Götz Pfander:** *Time-frequency shift invariant spaces and the Balian Low theorem*

11:30 - 11:55 : **Palina Salanevich:** *Phase Retrieval for Gabor Measurements: Algorithm and Stability*

12:00 - 12:25 : **Franziska Nestler:** *Particle simulation based on the nonequispaced FFT*

### Session: Seehaus

10:30 - 10:55 : **Alessandro Oliaro:** *Local Uncertainty Principles for the Cohen Class*

11:00 - 11:25 : **Ferenc Weisz:** *Lebesgue points of two-dimensional Fourier transforms*

11:30 - 11:55 : **Paolo Boggiatto:** *An Uncertainty principle of Donoho-Stark type for localization operators*

12:00 - 12:25 : **Ron Levie:** *New uncertainty principles for generalized wavelet transforms*

12:30 - 13:30 : *Lunch*

14:00 - 14:50 : **Gitta Kutyniok:** *Shearlets on Bounded Domains: Theory and Applications*

### Session: Bürgelsaal

15:30 - 15:55 : **Felix Voigtlaender:** *Embeddings of Decomposition Spaces*

16:00 - 16:25 : **Henning Kempka:** *Function spaces with variable smoothness and integrability*

16:30 - 16:55 : **Therese Mieth:** *Weighted Sobolev embeddings and Dirichlet-Neumann bracketing in  $L_p$*

### Session: Seehaus

15:30 - 15:55 : **Jan Vybiral:** *Carl's inequality for quasi-Banach spaces*

16:00 - 16:25 : **Davide Barbieri:** *Noncommutative shift-invariant spaces*

16:30 - 16:55 : **Stefan Alexander Kahler:** *Harmonic analysis of orthogonal polynomials*

## Tuesday, June 07.

### Session: Bürgelsaal

09:00 - 09:25 : **Michael Speckbacher:** *Reproducing pairs and Gabor systems at critical density*

09:30 - 09:55 : **Fabio Nicola:** *Time-frequency Analysis of the Feynman path integral*

10:00 - 10:25 : **Franz Luef:** *Rational Gabor frames*

10:30 - 10:55 : **Ville Turunen:** *Theory and applications of time-frequency analysis*

### Session: Seehaus

09:00 - 09:25 : **Tino Ullrich:** *Haar projection numbers and failure of unconditional convergence*

09:30 - 09:55 : **Maria Charina:** *Multiwavelets via system theory*

10:00 - 10:25 : **Hartmut Führ:** *Wavefront set characterization using continuous wavelet transforms*

10:30 - 10:55 : **Stephan Dahlke:** *The alpha-modulation transform: Admissibility, coorbit theory, and frames of compactly supported functions*

11:00 - 11:30 : *Coffee break*

11:30 - 12:20 : **Anders C. Hansen:** *What is the Solvability Complexity Index (SCI) of your problem? - On the SCI Hierarchy and the foundations of computational mathematics*

12:30 - 13:30 : *Lunch*

14:00 - 16:00 : *Poster session*

### Session: Bürgelsaal

16:00 - 16:25 : **Stephen Casey:** *Sampling in Euclidean and Non-Euclidean Domains: A Unified Approach*

16:30 - 16:55 : **W. R. Madych:** *Spline summability of cardinal sine series and the Bernstein class*

17:00 - 17:25 : **Luís Daniel Abreu:** *Harmonic Analysis of the Landau Levels equation*

### Session: Seehaus

16:00 - 16:25 : **Elena Cordero:** *Gaussian Beams for the Schrödinger equation*

16:30 - 16:55 : **Jayson Cunanan:** *On  $L^p$ -boundedness of pseudo-differential operators of Sjostrand class*

## Wednesday, June 08.

### Session: Bürgelsaal

09:00 - 09:25 : Jakob Lemvig: *On the frame set of B-splines and Hermite functions*  
09:30 - 09:55 : Isaac Pesenson: *Parseval frames on compact manifolds with applications*  
10:00 - 10:25 : Jose Luis Romero: *Multi-taper spectral estimation and accumulation phenomena*  
10:30 - 10:55 : Joachim Stöckler: *Extension of the finite section method for computing dual Gabor windows*

### Session: Seehaus

09:00 - 09:25 : Armenak Petrosyan: *Frames and Bessel systems from iterative actions of normal operators*  
09:30 - 09:55 : Leszek Skrzypczak: *Some properties of multi-radial function*  
10:00 - 10:25 : Diana Stoeva: *Invertible frame multipliers with not necessarily semi-normalized symbols*  
10:30 - 10:55 : Ilya Krishtal: *On the spectral theory of operator polynomials with coefficients in a Banach algebra.*

11:00 - 11:30 : *Coffee break*

11:30 - 12:20 : Hans Triebel: *PDE models for chemotaxis in supercritical function spaces*

12:30 - 13:30 : *Lunch*

## Thursday, June 09.

### Session: Bürgelsaal

09:00 - 09:25 : Roza Aceska: *Fusion Frames and Local Sparsity*  
09:30 - 09:55 : Thomas Peter: *A multivariate generalization of Prony's method*  
10:00 - 10:25 : Wojciech Czaja: *Solving Fredholm integrals from incomplete measurements*  
10:30 - 10:55 : Frank Filbir: *Recovery of the Support of Atomic Measures*

### Session: Seehaus

09:00 - 09:25 : Ubertino Battisti: *Characterization of Sobolev spaces via Stockwell frames*  
09:30 - 09:55 : Marco Capiello: *Microlocal Analysis on quasi-analytic Gelfand-Shilov spaces*  
10:00 - 10:25 : Joachim Toft: *Small test function and large distribution spaces, which are invariant under Fourier transformation*  
10:30 - 10:55 : Nenad Teofanov: *Beyond Gevrey regularity*

11:00 - 11:30 : *Coffee break*

11:30 - 12:20 : Albrecht Boettcher: *Five short stories about large Toeplitz matrices*

12:30 - 13:30 : *Lunch*

14:00 - 14:50 : Rachel A. Ward: *Extracting governing equations in chaotic systems from highly corrupted data*

### Session: Bürgelsaal

15:30 - 15:55 : Ziemowit Rzeszutnik: *MUB, phase retrieval, chirps and biunimodular vectors*  
16:00 - 16:25 : Stefan Steinerberger: *Nonlinear Fourier Analysis via Blaschke products*

### Session: Seehaus

15:30 - 15:55 : Axel Flinth: *PROMP - An Algorithm for Recovery of Sparse Lattice-Valued Signals*  
16:00 - 16:25 : Rene Schulz: *Detection of global singularities by integral transforms*

## Friday, June 10.

### Session: Bürgelsaal

09:00 - 09:25 : Nicki Holighaus: *Adaptive time-frequency representations through warping - new developments*  
09:30 - 09:55 : Antonio Galbis: *Gabor systems and almost periodic functions*  
10:00 - 10:25 : Markus Faulhuber: *Optimizing Frame bounds for the Gaussian window over separable lattices*  
10:30 - 10:55 : Ole Christensen: *Partition of unities and construction of frames*

### Session: Seehaus

09:00 - 09:25 : Joao Pereira: *Orthogonal Pseudo eigenfunctions of Toeplitz Localization Operators*  
09:30 - 09:55 : Miroslav Englis: *Laguerre polynomials, Barut-Girardello Fock space, and Toeplitz operators*  
10:00 - 10:25 : Arpad Benyi: *Commutators and weighted estimates: a unified approach*  
10:30 - 10:55 : Maurice de Gosson: *On Weyl and Born-Jordan Operators with Symbol in the Shubin Classes*

11:00 - 11:30 : *Coffee break*

11:30 - 12:20 : Maciej Zworski: *Scattering resonances and inverse problems*

12:30 - 13:30 : *Lunch*

14:00 - 14:25 : Daniel Potts: *High dimensional approximation with trigonometric polynomials and sparse FFTs*

14:30 - 14:55 : Thomas Strohmer: *You can have it all: Rapid, robust, and reliable blind deconvolution*