

Modern Methods of Time-Frequency Analysis II
Programme organized by:
Hans-Georg Feichtinger and Karlheinz Gröchenig
September 10 - December 15, 2012

Time-frequency methods for the applied sciences
Workshop organized by:
Stephan Dahlke and Massimo Fornasieri
November 12 - 16, 2012

• **Monday, November 12, 2012**

09:45 Welcome and Registration

10:10 - 11:10 Rob Stevenson

Adaptive wavelet Galerkin methods for solving well-posed operator equations

11:10 - 11:40 coffee break

11:40 - 12:10 Gantumur Tsogtgerel

Wavelets as an analysis tool for adaptive numerical methods

12:10 - 12:40 Ulrich Friedrich

Piecewise tensor product wavelet bases by extensions and approximation rates

12:40 - 14:30 lunch break

14:30 - 15:00 Dominik Lellek

Adaptive wavelet domain decomposition methods for nonlinear elliptic PDEs

15:00 - 15:30 Thorsten Raasch

Quarkonial frames of wavelet type - Stability, approximation and compression properties

• **Tuesday, November 13, 2012**

10:00 - 11:00 Claudio Canuto

Adaptivity and complexity in high-order discretizations of elliptic problems

11:00 - 11:30 coffee break

11:30 - 12:00 Silvia Bertoluzza

Wavelet collocation for fourth order problems

12:00 - 12:30 Sebastian Kestler

Adaptive wavelet Galerkin methods: Extension to unbounded domains and fast evaluation of system matrices

12:30 - 14:30 lunch break

14:30 - 15:00 Gerd Teschke

Generalized Sampling: Extension to Frames and Inverse Problems

18:00 - 21:00 Social Event

NuHag, Alserbachstrasse 23, 4th floor - approx. 5 minutes walk from the ESI

- **Wednesday, November 14, 2012**

10:00 - 11:00 Wolfgang Hackbusch

L[∞] Estimates for Tensor Truncation

11:00 - 11:30 coffee break

11:30 - 12:30 Reinhold Schneider

Vector tensorization and advances in tensor approximation

- **Thursday, November 15, 2012**

11:30 - 12:00 Helmut Harbrecht

On the construction of sparse tensor product spaces

11:00 - 11:30 coffee break

11:30 - 12:00 Angela Kunoth

Adaptive Approximations for PDE-Constrained Parabolic Control Problems with Stochastic Coefficients

11:30 - 12:30 Peter Maass

Uncertainty principles and localization measures

- **Friday, November 16, 2012**

10:00 - 11:00 Stig Larsson

Wavelet methods for stochastic evolution problems driven by noise

11:00 - 11:30 coffee break

11:30 - 12:00 Stephane Kinzel

On the convergence analysis of Rothe's method

12:00 - 12:30 Nicholas Kevlahan

Towards a new generation of adaptive climate models using wavelets

All lectures as well as the registration take place in the ESI Boltzmann Lecture Hall