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

Wavelet methods in scientific computing
Workshop organized by:
Stephan Dahlke and Massimo Fornasier
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

- **Wednesday, November 14, 2012**
  10:00 - 11:00 Wolfgang Hackbusch
  Lînfty 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**
  10:00 - 11:00 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
  12:00 - 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