

TIMETABLE OF TALKS AND EVENTS

Saturday

Arrival and registration

19.00-20.00 *Dinner*

Sunday

From 7.45 *Breakfast*

MORNING SESSION - CHAIR MARCO MARLETTA

9.20 Introduction and Welcome by Malcolm Brown

9.30 **Konstantin Mischaikow** Using a finite number of computations to characterize global nonlinear structures

10.30 *Coffee*

11.00 **John R. Willis** Mathematics of Metamaterials

12.00-12.30 **Lance L Littlejohn** A generalization of Hardy's inequality

13.00 *Lunch*

AFTERNOON SESSION - CHAIR WOLFGANG REICHEL

14.00 **Michael I. Weinstein** Spectral Optimization Problems for Metastable States

15.00-15.30 **Andreas M. Hinz** The uncountability of the real numbers

16.00 *Tea*

19.00 *Dinner*

20.30 *Wine Reception*

Monday

From 7.45 *Breakfast*

MORNING SESSION - CHAIR HUBERT KALF

9.00	Brian Davies	Spectrum of a Feinberg-Zee Random Hopping Matrix
9.30	Daphne Gilbert	Scalar Spectral Functions associated with the Schrödinger Operator on the Line
10.00	Heinz Langer	Sturm-Liouville problems with an inner singularity and indefinite inner products
10.30	<i>Coffee</i>	
11.00	Annemarie Luger	Titchmarch-Weyl-theory for strongly singular Sturm-Liouville
11.30	Pavel B Kurasov	Inverse problems for Schrödinger operators on graphs
12.00	Rudi Weikard	The Inverse Resonance Problem for CMV Operators
12.30	Christer Bennewitz	Inverse scattering for left definite Sturm-Liouville equations
13.00	<i>Lunch</i>	

AFTERNOON SESSION - CHAIR CHRISTIANE TRETTER

14.00	Gerd Grubb	A Krein resolvent formula for the mixed problem, and its eigenvalue asymptotics
14.30	Kaori Nagatou	Eigenvalue excluding for 1D Schrödinger operators and related topics
15.00	Mitsuhiro T. Nakao	On a posteriori estimates of inverse operators for linear parabolic initial-boundary value problems
15.30	Sergey Naboko	Unbounded Jacobi matrices with a few gaps in the essential spectrum - constructive examples
16.00	<i>Tea</i>	
16.30	Robert Sims	Locality Estimates and Lieb-Robinson Bounds
17.00-17.30	Gunter Stolz	Localization in a disordered quantum spin chain
19.00	<i>Dinner</i>	

Tuesday

From 7.45 *Breakfast*

MORNING SESSION - CHAIR BRIAN DAVIES

9.00	John R. Willis	Effective constitutive relations and variational principles for waves in composites and metamaterials
10.00	Kirill Cherednichenko	High-frequency spectral analysis of thin periodic acoustic strips
10.30	<i>Coffee</i>	
11.00	Christiane Tretter	Spectral inclusions for operators with spectral gaps
11.30	Carsten Trunk	Singular indefinite Sturm-Liouville problems
12.00	Xuefeng Liu	High precision eigenvalue bounds for laplacian over general polygonal domain
12.30	Akitoshi Takayasu	A computer assisted proof method for semilinear elliptic equations on arbitrary polygonal domain
13.00	<i>Lunch</i>	

AFTERNOON FREE

19.00 *Dinner*

Wednesday

From 7.45 *Breakfast*

MORNING SESSION - CHAIR MICHAEL PLUM

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| 9.00 | Konstantin Mischaikow | Rigorous computation of equilibria, periodic orbits and connecting orbits for differential equations |
| 10.00 | Piotr Zgliczyński | On some computer assisted proofs of bifurcations in the dynamics of maps and ODEs |
| 10.30 | <i>Coffee</i> | |
| 11.00 | Ian Wood | Spectral information contained in Dirichlet-to-Neumann-type maps |
| 11.30 | Sylvie Monniaux | Maximal regularity in tent spaces |
| 12.00 | Carlos Kenig | Quick introductions to classical homogenization theory for elliptic systems with periodic coefficients and to boundary value problems on Lipschitz domains |
| 13.00 | <i>Lunch</i> | |

AFTERNOON SESSION - CHAIR HEINZ LANGER

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| 14.00 | Karl Michael Schmidt | Spectral Properties of Massless Dirac Operators |
| 14.30 | Daniel G. Hughes | Spectral Properties of Dirac Operators with Square Summable Potentials |
| 15.00 | Jean-Claude Cuenin | Diagonalization of Dirac operators |
| 15.30 | Daniel M. Elton | Zero Modes and Approximate Zero Modes of the Pauli Operator |
| 16.00 | <i>Tea</i> | |
| 19.00 | <i>Dinner</i> | |
| 20.00 | <i>Musical Recital</i> | Antje Siefert (Mezzo-soprano) & Sybille Hempel-Abromeit (Piano)
The recital and will be followed by a <i>Wine</i> Reception |

Thursday

From 7.45 *Breakfast*

MORNING SESSION - CHAIR IAN WOOD

9.00	Carlos Kenig	Homogenization of elliptic systems with periodic coefficients
10.00	Friedrich Philipp	Indefinite Sturm-Liouville operators with periodic coefficients
10.30	<i>Coffee</i>	
11.00	Michael S.P. Eastham	Generalised Meissner equations with an eigenvalue-inducing interface
11.30	Rainer Hempel	Spectral properties of some dislocation operators in two dimensions
12.00	Dagmar Roth	A computer-assisted multiplicity proof for a semilinear elliptic boundary value problem
12.30	Matthias Langer	Discrete fragmentation equations
13.00	<i>Lunch</i>	

AFTERNOON SESSION - CHAIR ANDREAS HINZ

14.00	Vu Hoang	Dispersion Relations for Arrays of Split Ring Resonators
14.30	Lutz Weis	Spectral multiplier theorems for Laplace-type operators
15.00	Thomas Østergaard Sørensen	Relativistic semi-classics for potentials with Coulomb-like singularities
15.30	Roland Möws	Eigenvalues in Spectral Gaps of Left-Definite Sturm-Liouville Operators
16.00	<i>Tea</i>	
19.00	<i>Workshop Dinner</i>	

Friday

From 7.45 *Breakfast*

MORNING SESSION - CHAIR RAINER HEMPEL

9.00	Michael I. Weinstein	Scattering, Homogenization and Waves in Microstructures
10.00	Tomáš Dohnal	Eigenvalues of the Linear Periodic Schrödinger Equation with an Interface
10.30	<i>Coffee</i>	
11.00	Michael Plum	A Computer-Assisted Band-Gap Proof for 3D Photonic Crystals
11.30	Wolfgang Reichel	Ground states for the nonlinear Schrödinger-equation with interface
12.00	<i>Lunch</i>	End of meeting