

Computational and Analytic Problems in Spectral Theory

Programme

Monday

Location: Room WX/3.07-WX/3.14 West Extension Building

- 9.00** Registration
- 9.15** Opening remarks
- 9.20** *Ian Wood* Construction of the selfadjoint dilation of a maximal dissipative operator - an approach in the spirit of boundary triples
- 10.10** *Michiel van den Berg* On Pólya's inequality for torsional rigidity and first Dirichlet eigenvalue
- 11.00** Coffee
- 11.30** *Kirill Cherednichenko* Boundary triples, Krein formula and resolvent estimates for one-dimensional high-contrast periodic problems
- 12.20** *Shane Cooper* On the gaps in the spectrum of the periodic Maxwell operator
- 13.10** Lunch
- 14.10** *Mariana Haragus* Stability criteria for periodic waves in Hamiltonian systems
- 15.00** *Konstantin Pankrashkin* Effective Hamiltonians for spectral asymptotics of Robin Laplacians
- 15.50** Coffee
- 16.20** *Nicolas Popoff* Thresholds in the spectrum of Hamiltonian with translation invariant magnetic fields
- 17.10** *Des Evans* The Rellich inequality in $L^p(\Omega)$
- 18.00** Break
- 18.20** Introduction to Poster session
- 18.30** Poster session and wine and canapé reception (60 minutes)

Tuesday

Location: Room WX/3.07-WX/3.14 West Extension Building

- 9.20** *Heinz Langer* The Associated Legendre equation and generalized Nevanlinna functions
- 10.10** *Matthias Langer* Path-Laplacian operators on discrete graphs
- 11.00** Coffee
- 11.30** *Apala Majumdar* The Well Order Reconstruction Solution for Nematic Liquid Crystals
- 12.20** Lunch
- 14.00** *Joachim von Below* Stability of stationary solutions for reaction–diffusion–flows on finite metric graphs
- 14.50** *Olaf Post* Wildly perturbed manifolds: norm resolvent and spectral convergence
- 15.40** Coffee
- 16.10** *Alexander Pushnitski* Rational approximation of functions with logarithmic singularities

Wednesday

Location: Room C/2.07 Central Building

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|--------------|---------------------------|--|
| 9.20 | <i>Christer Bennewitz</i> | Scattering for Hamiltonian systems |
| 10.10 | <i>Jonathan Eckhardt</i> | The inverse spectral transform for the conservative Camassa–Holm flow |
| 11.00 | Coffee | |
| 11.30 | <i>Andrei Shkalikov</i> | Ordinary differential operators with singular coefficients |
| 12.20 | Lunch | |
| 14.00 | <i>Lauri Oksanen</i> | Inverse problems for the connection Laplacian |
| 14.50 | <i>Giovanni Alberti</i> | A version of the Radó-Kneser-Choquet theorem for solutions of the Helmholtz equation in 3D |
| 15.40 | Coffee | |
| 16.10 | <i>Pedro Caro</i> | An inverse scattering problem in random media |
| 19.30 | Conference dinner | |

Thursday

Location: Room WX/3.07-WX/3.14 West Extension Building

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|--------------|---------------------------|---|
| 9.50 | <i>Christiane Tretter</i> | Spectral bounds for non-selfadjoint operators and operator matrices |
| 10.40 | <i>Anders Hansen</i> | What is the Solvability Complexity Index (SCI) of your problem? - On the SCI Hierarchy and the foundations of computational mathematics |
| 11.30 | Coffee | |
| 12.00 | <i>Dirk Hundertmark</i> | Discrete diffraction managed solitons: Threshold phenomena and rapid decay for general nonlinearities |