

## TIMETABLE OF TALKS AND EVENTS

SUNDAY JULY 21ST, 2002

1900 Dinner

MONDAY JULY 22ND, 2002

0800 *Breakfast*

Chair M Marletta

0855 **Malcolm Brown** *Introductory remarks*

0900 **John Ball** *Compatibility condition for microstructures*

1000 **Christiane Tretter** *The spectrum of some quadratic operator pencils associated with damped dynamical systems*

1030 **Marianna A Shubov** *Asymptotic and spectral analysis of aircraft wing model in subsonic airflow*

1100 *Coffee*

Chair E B Davies

1130 **Michael S P Eastham** *The Hurwitz theorem for Bessel functions and its consequences for antibound states*

1200 **Michael Hitrik** *Eigenvalue asymptotics for non-selfadjoint semiclassical operators*

1230 **D Hinton** *On the location of the least point of the essential spectrum*

1300 *Lunch*

Chair P Binding

1400 **Karl Michael Schmidt** *Eigenvalues in gaps of perturbed periodic Dirac operators - numerical evidence*

1430 **Gunter Stoltz** *The spectral minimum for random displacement models*

1500 **Peter K Jimack** *Optimal preconditioning for the finite element solution of elliptic partial differential equations*

1530 **P Kurasov** *Self-adjoint point interaction model of  $p$ -scattering*

1600 *Tea*

Chair H Langer

1630 **Sergey Naboko** *Fredholm analytic theorem on the boundary of a domain and its application to perturbation theory*

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Where there is more than one author the speaker is marked thus †.

1700-1730 **R Romanov** *Spectral analysis of the dissipative Boltzmann operator and spectral singularities*

1900 *Reception*

1930 *Dinner*

TUESDAY JULY 23RD, 2002

0800 *Breakfast*

Chair R Weikard

0900 **Ian Knowles** *Variational methods for inverse problems*

1000 **V S Samko** *Inverse spectral problem for the Sturm-Liouville equation, recovery of the potential from the spectral data*

1030 **Norbert Röhrl** *On a functional for solving inverse Sturm-Liouville problems*

1100 *Coffee*

Chair R T Lewis

1130 **A A Abramov<sup>†</sup>, V I Ul'yanova, K Balla and L F Yukhno** *On a spectral problem for certain differential algebraic equations of index 1*

1200 **Rainer Hempel** *Weakly coupled systems and avoided eigenvalue crossings*

1230 **Leon Greenberg** *Monotonicity of eigenvalues*

1300 *Lunch*

Chair B M Brown

1400 **Christer Bennewitz** *Uniqueness theorems in inverse spectral theory*

1500 **R Weikard** *A local Borg-Marchenko theorem for complex potentials*

1530 **William Rundell** *Some new inverse eigenvalue problems*

1600 *Tea*

Chair M S P Eastham

1630 **Matthias Langer** *A Sturm-Liouville problem depending rationally on the eigenvalue parameter*

1700-1730 **Heinz Langer** *A Pontryagin space approach to singular perturbations of differential operators*

1900 *Dinner*

2030 **Impromptu musical event**

*Wine reception*

WEDNESDAY JULY 24TH, 2002

0800 *Breakfast*

Chair M Plum

0900 **Juan J Manfredi** *Viscosity solutions of  $p$ -Laplacian type equations,  $1 < p \leq \infty$*

1000 **Wolfgang Reichel** *Eigenvalues and Fučík-spectrum of the radially symmetric  $p$ -Laplacian*

1030 **Jan Lang** *Precise behaviour of the approximation numbers of the Sobolev embedding in the one-dimension case*

1100 *Coffee*

Chair P K Jimack

1130 **H Behnke** *Bounds for eigenvalues of an eigenvalue problem arising in the design of integrated optical chips*

1200 **G Alefeld<sup>†</sup> and G Mayer** *Admissable sets for matrix eigenpairs*

1230 **Robin Williams** *Multiphase instabilities in astrophysics*

1300 *Lunch*

**Afternoon Free**

1900 *Dinner*

2030 **Piano Recital by Sybille Hempel-Abromeit**

*Wine reception*

THURSDAY JULY 25TH, 2002

0800 *Breakfast*

Chair W Reichel

0900 **B Kawohl** *Domain geometry and eigenvalues*

1000 **Guido Sweers** *Anti-maximum principles*

1030 **Catherine Bandle** *Rayleigh-Faber-Krahn inequalities and nonlinear boundary value problems*

1100 *Coffee*

Chair R Hempel

1130 **S Slavyanov** *Eigenfunctions generated by ODEs belonging to the Heun class and their applications in the Fourier analysis*

1200 **Paul Binding** *A hierarchy of Sturm-Liouville problems*

1230 **A B Mikhaylova and B S Pavlov<sup>†</sup>** *Scattering in networks and design of the resonance triadic quantum switch*

1300 *Lunch*

Chair A Zettl

1400 **Jiří Horák<sup>†</sup> and Wolfgang Reichel** *Fučík spectrum of the Laplacian on some subdomains of the plane*

1430 **B Breuer** *Existence and inclusion methods for nonlinear elliptic boundary value problems on unbounded domains*

1500 **R Pohler** *Enclosures and existence proofs of bifurcation points for nonlinear boundary value problems*

1530 **J Rohe** *Verified calculation of an error bound for a simplified elastoplasticity model*

1600 *Tea*

Chair D Hinton

1630 **A Watson** *Application of the Wittrick-Williams algorithm to the eigenvalues of the Sturm-Liouville problem on trees*

1700 **D J Gilbert** *An inverse spectral problem associated with the one-dimensional Schrödinger operator*

1730-1800 **A A Shkalikov** *Limit spectral curves for the Orr-Sommerfeld operator and quasi-classical eigenvalue distribution along these curves*

1930 **Conference Dinner**

FRIDAY JULY 26TH, 2002

0800 *Breakfast*

Chair W D Evans

0900 **L N Trefethen** *Wave packet pseudomodes of twisted Toeplitz matrices*

1000 **D B Pearson** *Spectral theory for the Schrödinger equation with  $L^2$ -sparse potentials*

1030 **Andreas M Hinz** *Delocalization for Schrödinger operators*

1100 *Coffee*

Chair A M Hinz

1130 **Jonatan Lenells** *The scattering approach for an integrable shallow water equation*

1200-1230 **A Zettl** *Left-definite Sturm-Liouville problems*

1300 *Lunch*

End of Workshop