Conference

Asymptotic Analysis and Spectral Theory (Aspect'22)

September 26 – 30, 2022

Carl von Ossietzky University of Oldenburg
Building W32 (Experimentierhörsaal)

Program

Version: 26.09.2022 at 18:12

Binding Hygiene Rules of the University of Oldenburg, Version 2.1 from 08.06.2022

Section 2.3. Mask mandate

- Medical masks are mandatory (for employees, students, guest students, participants in events, guests, ...) in all high-traffic areas inside rooms and buildings as well as in lecture halls, classrooms, study areas and venues used for events, academic or otherwise, off-campus sites included.
- Whenever possible, and adhering to the respective instructions for use, FFP2 masks are recommended for voluntary use at one's own responsibility.
- At meetings, gatherings or other events, a medical mask or, if required by federal or state regulations, an FFP2 mask must be worn.
- Masks may be removed briefly while eating and drinking. If possible, a sufficient distance to others must be maintained.
- Unless otherwise specified, the mask mandate may be waived in stationary workplaces (sitting or standing) if the minimum distance (1,5 m) is maintained at all times.
- Likewise, the mask mandate may be waived for instructors able to maintain a safe distance from others at all times.

https://uol.de/en/info-coronavirus

Monday, 26.09.2022

	Main lecture room (W32 0-005), Chair: Pankrashkin	
08:55-09:00	Opening	
09:00–09:40	Jérémy Faupin (Metz) *Spectral decomposition of some non self-adjoint operators*	
09:45–10:25	Nadine Große (Freiburg) *Boundary value problems on domains with cusps*	
Coffee break		
	Main lecture room (W32 0-005), Chair: Faupin	
11:00–11:25	Michael Hinz (Bielefeld) *Boundary value problems on non-Lipschitz uniform domains: Stability, compactness and the existence of optimal shapes*	
11:30–11:55	Albrecht Seelmann (Dortmund) *Spectral inequalities with sensor sets of decaying density*	
12:00–12:25	Serge Richard (Nagoya) *Scattering theory and an index theorem on the radial part of SL(2,R)*	
Lunch		
	Main lecture room (W32 0-005), Chair: Exner	
14:00–14:40	Bernard Helffer (Nantes) *Computing nodal deficiency with a refined spectral flow*	
14:45–15:25	Yuri Latushkin (Missouri) *Fredholm determinants, Evans functions and Maslov indices for partial differential equations*	
Coffee break		
	Main lecture room (W32 0-005) Chair: Richard	**Seminar room 1st floor (W32 1-112) Chair: Lotoreichik**
16:00–16:25	Paul Holst (Bremen) *Sharp Gaussian upper bounds for Schrödinger semigroups on the half-line*	Daniele Ferretti (Roma) *Hamiltonian for a system of N bosons with regularized zero-range interactions*
16:30–16:55	Christian Rose (Potsdam) *Large scale Gaussian upper bounds for heat kernels on graphs with unbounded geometry*	Matej Tusek (Prague) *Approximations of relativistic point and delta-shell interactions by regular potentials*
17:00–17:25	Nicolas Frantz (Metz) *Scattering theory for some non-self-adjoint operators*	Louis Garrigue (Paris) *Homogenization of Schrödinger's operators having oscillating potentials*

Tuesday, 27.09.2022

	Main lecture room (W32 0-005), Chair: Post	
09:00–09:40	Pavel Exner (Prague) *Spectral properties of quantum graphs violating the time-reversal invariance*	
09:45–10:25	Volodymyr Mikhailets (Prague/Kyiv) *Self-adjointness of Sturm-Liouville operators with singular coefficients*	
Coffee break		
	Main lecture room (W32 0-005) Chair: Große	**Seminar room 1st floor (W32 1-112) Chair: Rose**
11:00–11:25	Olena Atlasiuk (Prague/Kyiv) *Limit theorems for solutions to one-dimensional boundary-value problems in Sobolev spaces*	Lech Zielinski (Calais) *Asymptotic behavior of eigenvalues of the quantum Rabi model*
11:30–11:55	Kiyan Naderi (Oldenburg) *Trace theorems for self-similar metric trees*	Fabian Gabel (Hamburg) *Finite sections of periodic Schrödinger operators*
12:00–12:25	Nataliia Goloshchapova (Sao Paulo) *Spectral instability for NLS equations on metric graphs*	
Lunch		
	Main lecture room (W32 0-005), Chair: Nistor	
14:00–14:25	Tomas Sanz Perela (Madrid) *Confinement models in relativistic quantum mechanics: spectral analysis and shape optimization*	
14:30–14:55	Badreddine Benhellal (Oldenburg) *Poincaré-Steklov operators for the MIT bag model*	
15:00-15:25	Stefan Haller (Vienna) *Analytic torsion of the Rumin complex on filtered 5-manifolds with growth vector (2,3,5)*	
Coffee break		
	Main lecture room (W32 0-005) Chair: Helffer	**Seminar room 1st floor (W32 1-112) Chair: Lledo**
16:00–16:25	Pierre Amenoagbadji (Paris) *Wave propagation in unbounded quasiperiodic media: the non-absorbing case*	Anna Muranova (Olsztyn) *Spectrum of a normalized complex Laplacian on finite electrical networks*
16:30–16:55	Rayan Fahs (Angers) *On the semi-classical analysis of Schrödinger operators with linear electric potentials in a bounded domain*	John Stewart Fabila Carrasco (Edinburgh) *Permutation entropy for graphs and the Cartesian graph product*
17:00–17:25	Marco Vogel (Oldenburg) *Spectral properties of Robin-Laplacians on sharp infinite cones*	Vsevolod Chernyshev (Moscow) *Asymptotics of the number of endpoints of a random walk on a directed Hamiltonian metric graph*

Wednesday, 28.09.2022

	Main lecture room (W32 0-005), Chair: Mikhailets	
09:00–09:40	Mirela Kohr (Cluj-Napoca) *Boundary value problems and spectral theory on manifolds with boundary and cylindrical ends*	
09:45–10:25	Guido Sweers (Cologne) *On fourth order elliptic problems and domains with corners*	
Coffee break		
	Main lecture room (W32 0-005) Chair: Lamberti	**Seminar room 1st floor (W32 1-112) Chair: Kerner**
11:00–11:25	Fedor Bakharev (St Petersburg) *Spectra of Dirichlet fractional Laplacians in domains with cylindrical outlets to infinity*	Dinh Thi Nguyen (Lyon) *Thomas-Fermi profile of a fast rotating Bose-Einstein condensate*
11:30–11:55	Alejandro Rosas Martínez (Paris) *Electromagnetic guided waves formed by a slab of metamaterial embedded in the vacuum*	Paul Pfeiffer (Hagen) *Szegő type asymptotics for the three dimensional Landau Hamiltonian*
12:00–12:25	Atsuhide Ishida (Tokyo) *Mourre inequality for non-local Schrödinger operators*	Koen Reijnders (Nijmegen) *Semiclassical quantization of collective excitations in a spatially inhomogenenous quantum plasma*

Lunch

Free time

17:00 Guided city tour

19:00 Conference dinner
(registration required)

Thursday, 29.09.2022

	Main lecture room (W32 0-005), Chair: Kohr
09:00–09:40	Pier Domenico Lamberti (Padova) *Spectral stability of Maxwell's equations on varying cavities*
09:45–10:25	Lucas Chesnel (Paris) *Acoustic passive cloaking using thin outer resonators*
Coffee break	
	Main lecture room (W32 0-005), Chair: Sweers
11:00–11:25	Vladimir Lotoreichik (Prague) *Isoperimetric inequality for the two-dimensional magnetic Robin Laplacian*
11:30–11:55	Ayman Kachmar (Beirut) *Helical magnetic fields and semi-classical asymptotics of the lowest eigenvalue*
12:00–12:25	Elke Rosenberger (Potsdam) *The tunneling effect for Schrödinger operators on a vector bundle*
Lunch	
	Main lecture room (W32 0-005), Chair: Seelmann
14:00–14:25	Fernando Lledó (Madrid) *A geometrical construction of isospectral magnetic graphs*
14:30–14:55	Marcello Seri (Groningen) *Quantum confinement for singular Laplacians and their Weyl asymptotics*
15:00-15:25	Mahran Rihani (Paris) *The 3D scalar transmission problem in the presence of a conical tip of negative material*
Coffee break	
	Main lecture room (W32 0-005), Chair: Kachmar
16:00–16:25	Andrii Khrabustovskyi (Hradec Kralove) *Spectral properties of the Laplacian on a domain perturbed by small resonators*
16:30–16:55	Mikhail Cherdantsev (Cardiff) *High-contrast random composites: homogenisation framework and new spectral phenomena*
17:00–17:25	Joachim Kerner (Hagen) *Spectral gaps of Schrödinger operators on domains of increasing volume*

Friday, 30.09.2022

	Main lecture room (W32 0-005), Chair: Grieser
09:00–09:25	Illia Karabash (Bonn/Sloviansk) *Boundary tuples, m-dissipative Maxwell operators, and applications to Leontovich boundary conditions*
09:30–09:55	Selim Sukhtaiev (Auburn) *Asymptotic perturbation theory for extensions of symmetric operators*
10:00–10:25	Moritz Doll (Bremen) *Heat trace asymptotics for the generalized harmonic oscillator on scattering manifolds*
Coffee break	
	Main lecture room (W32 0-005), Chair: Pankrashkin
11:00–11:40	Olaf Post (Trier) *Norm resolvent convergence in varying spaces: different concepts and examples*
11:45–11:50	Closing
Lunch Departures	

http://uol.de/aspect22