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Fakultät für Mathematik

Vorträge
Mittwoch, 7. Mai 2014, Sky-Lounge (12 OG),
Oskar-Morgenstern-Platz 1, 1090 Wien
Mathematisches Kolloquium

15:15-15:45 Uhr
Prof. Dr. Gunther Uhlmann ((Department of Mathematics, University of Washington):
"How to build Harry Potter's Cloak"
Abstract: We describe theoretical and experimental progress on making objectsinvisible to detection by electromagnetic waves, acoustic waves and quantumwaves. We emphasize the method of transformation optics. For the case of electromagnetic waves, Maxwell's equations have transformation laws that allow for design of electromagnetic materials that steer light around a hidden region, returningit to its original path on the far side. Not only would observers be unaware of the contents of the hidden region, they would not even be aware that something was being hidden. The object, which would have no shadow, is said to be cloaked. We recount some of the history of the subject and discuss some of the mathematical issues involved.

Kaffejause

16:00-16:30 Uhr
Prof. Dr. Lenya Ryzhik (Department of Mathematics, Stanford University):
"Kinetic models for waves in random media"
Abstract: In many physical problems, waves propagate in media whose fine details are inaccessible. Fortunately, often their precise structure is also irrelevant for the macroscopic features of the wave. That is, while the microstructure modifies the wave profile in a highly non-trivial way, we may infer the macroscopic information about the wave simply from the statistics of the medium inhomogeneities without the need for their detailed nature. In such situations, kinetic models are an effective way to model the energy evolution. I will describe some old and recent results in this direction.

Kaffejause

16:45-17:15 Uhr
Prof. Dr. Simon Arridge (Centre for Medical Image Computing, Univ. College London)
"Diffuse Optical and PhotoAcoustic Tomography"
Abstract: Tomographic imaging using light remains a topic of increasing interest. One method is Diffuse Optical Tomography(DOT) in which light is detected after transmission through a highly scattering medium which is described by either a transport or a diffusion type forward model. Since the light is detected on the boundary this methodology is usually formulated as an inverse boundary value problem and is exponetially ill-posed. By contrast, Phot Acoustic Tomography (PAT) uses light to create sound sources (by heat generated on optical absorption)and image reconstruction consists of an inverse acoustic source reconstruction, which can be done using conventional ultrasound methods. In order to quantify the optical properties underlying the sound generation it is necessary to couple models for optical and acoustic propagation. In this talk I present some of our recent work on these problems, utilising a non-linear algorithm for recovering optical absorption coefficient.

Univ.-Prof. Dr. Otmar Scherzer
Dekan Univ.-Prof. Dr. Harald Rindler

Montag, 5. Mai 2014 ab 9:00 Uhr bis Freitag, 9. Mai 2014, ab 09:30 Uhr, Erwin Schrödinger Lecture Hall, Boltzmanng. 9, 1090 Wien
Workshop on "Theoretical and Applied Computational Inverse Problems"
Organized by: L. Borcea, O. Scherzer, J.C. Schotland
siehe Anhang

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Dienstag, 6. Mai 2014, von 11:15 Uhr bis 12:45 Uhr, SR 12, Oskar-Morgenstern-Platz 1, 1090 Wien
Complex Analysis Seminar
Frank Kutzschebauch: "An Oka principle for equivariant isomorphisms"
http://www.univie.ac.at/complexanalysis/Activities/Seminar2014.html

Dienstag, 6. Mai 2014, von 15:00 Uhr bis 17:00 Uhr , Seminarraum 8, 2. Stock Oskar-Morgenstern-Platz 1, 1090 Wien
Geometry and Analysis on Groups – Research Seminar
Martin Finn-Sell (Univ. of Southampton): "Boundary a-T-menability for large girth expander graphs"
http://www.mat.univie.ac.at/~dosaj/GGTWien/Seminar.html

Dienstag, 6. Mai 2014, ab 15:00 Uhr, SR 9 Biomathematik, Oskar-Morgenstern-Platz 1, 1090 Wien
Arbeitsgemeinschaft Biomathematik
Brian McLoone (KLI): „Individual and group fitness in the stag hunt game"

Dienstag, 6. Mai 2014, 19:00 Uhr, Institut Francais, Währingerstrasse 30, 1090 Wien
Themenschwerpunkt MATHEMATIK
Rudolf Taschner:" Mathematik als Leuchtfeuer der Aufklärung (Deutsch)"

Mittwoch, 7. Mai 2014, von 15:00 Uhr bis 15:45 Uhr, Skylounge (12. OG), Oskar-Morgenstern-Platz 1, 1090 Wien
Lectures for Everybody
Karlheinz Gröchenig (Universität Wien): "The Kadison-Singer Conjecture"
organized by H. Hauser

Donnerstag, 8. Mai 2014, 10:30-12:00 Uhr, Besprechungszimmer 3 Stk., Oskar-Morgenstern-Platz 1, 1090 Wien
Geometry, Analysis and Physics (GAP)
Clemens Sämann (Universität Wien): "On the interplay between Geometry, Regularity and Causality"
Link: http://www.mat.univie.ac.at/~gap_seminar/
Organized by M. Bauer , V. Branding, A. Burtscher, D. Fajman, F. Genoud, J. Joudioux

Donnerstag, 8. Mai 2014, von 16:00 Uhr bis 18:00 Uhr, Josephinum, SR (Zi. O2.101), Währingerstr. 25, 1090 Wien
KGRC Research Seminar
Diego Alejandro Mejia Guzmán (KGRC): "Matrix iterations of ccc posets"

Donnerstag, 8. Mai 2014, von 16:30 Uhr bis 18:00 Uhr, Seminarraum 101 C, 4. Stock, TU Wien, Wiedner Hauptstraße 8, 1040 Wien
Arbeitsgemeinschaft Finanzmathematik
Fabio Bellini: "Elicitable risk measures and expectiles"
Link: http://www.fam.tuwien.ac.at/events/agfm/

Freitag, 9. Mai 2014, um 12:15 Uhr, TU Institut für Diskrete Mathematik und Geometrie, Freihaus, grüner Turm (A), 5. Stock, kleiner Seminarraum (DA 05 C22), Wiedner Hauptstraße 8-10, 1040 Wien
Algebra Seminar
Kostadinka Lapkova: „Class numbers of quadratic fields"

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