

**Workshop on**  
**“Theoretical and Applied Computational Inverse Problems”**  
**organized by**  
**Liliana Borcea, Otmar Scherzer, John C. Schotland**  
**May 5 - 16, 2014**

**Workshop Schedule, Week 1: May 5 - 9, 2014**

• **Monday, May 5, 2014**

09:00 **Opening & Registration**

09:30 – 10:30 **Lenya Ryzhik**

*Waves in weakly random media, I*

10:30 – 11:00 *coffee break*

11:00 – 12:00 **Lenya Ryzhik**

*Waves in weakly random media, II*

12:00 – 14:00 *lunch break*

14:00 – 15:00 **Gunther Uhlmann**

*Multiwave Imaging, I*

15:00 – 16:00 **Lauri Oksanen**

*Computational approaches to the Boundary Control method*

16:00 – 16:30 **Peter Elbau**

*A Model for Photoacoustic Sectional Imaging*

• **Tuesday, May 6, 2014**

09:30 – 10:30 **Lenya Ryzhik**

*Waves in weakly random media, III*

10:30 – 11:00 *coffee break*

11:00 – 12:00 **Lenya Ryzhik**

*Waves in weakly random media, IV*

12:00 – 14:00 *lunch break*

14:00 – 15:00 **Gunther Uhlmann**

*Multiwave Imaging, II*

15:00 – 16:00 **Josselin Garnier**

*Correlation-based imaging with moving sensors*

16:00 – 16:30 **Thomas Widlak**

*Stability in linearized elastography*

- **Wednesday, May 7, 2014**

09:30 – 10:30 **Chrysoula Tsogka**

*Signal to Noise Ratio analysis in passive correlation based imaging*

10:30 – 11:00 *coffee break*

11:00 – 12:00 **Panel discussion**

12:00 – 15:15 *lunch break*

15:15 – 15:45 **Gunther Uhlmann**

*How to build Harry Potter's Cloak*

16:00 – 16:30 **Lenya Ryzhik**

*Kinetic models for waves in random media*

16:45 – 17:15 **Simon Arridge**

*Diffuse Optical and PhotoAcoustic Tomography*

} Math.-Colloquium, these lectures  
take place in the OMP1 lounge  
(Oskar Morgenstern-Platz 1, 12th  
floor)

- **Thursday, May 8, 2014**

09:30 – 10:30 **Simon Arridge**

*Reconstruction in PhotoAcoustic Tomography, I*

10:30 – 11:00 *coffee break*

11:00 – 12:00 **Simon Arridge**

*Reconstruction in Quantitative PhotoAcoustic Tomography, II*

12:00 – 14:00 *lunch break*

14:00 – 15:00 **Gunther Uhlmann**

*Multiwave Imaging, III*

15:00 – 16:00 **Alexander Mamonov**

*Krein-Gelfand-Levitan algorithm for inverse hyperbolic problems via spectrally matched finite-difference grids. Joint with V. Druskin and M. Zaslavsky.*

16:00 – 17:00 **Maarten de Hoop**

*Inverse problem of electroseismic conversion*

- **Friday, May 9, 2014**

09:30 – 10:30 **Gunther Uhlmann**

*Multiwave Imaging, IV*

10:30 – 11:00 *coffee break*

11:00 – 11:30 **Wolf Naetar**

*Quantitative photoacoustic tomography with piecewise constant material parameters*

**Most lectures take place in the ESI Boltzmann Lecture Hall**