

Humboldt-Universität Berlin

**WORKSHOP: Modeling,
analysis, and approximation
theory toward applications in
tomography and inverse
problems**

Programm

August, 20-21, 2018
Berlin

MONDAY (20.08.2018)

8:30-9:00 Registration

Chair: Jürgen Prestin

9:00 - 9:45 Dirk Langemann, Shear modulus of elastic material and observable waves at the surface

9:45-10:15 *Coffee Break*

10:15-11:00 Victor Mikhaylov, Dynamic inverse problem for Jacobi matrices

11:05-11:50 Alexander Mikhaylov, Inverse dynamic and spectral problems for one-dimensional Dirac system on finite trees

12:30-13:30 *Lunch (Kamee Caffè)*

Chair: Tamara Fastovska

14:00-14:25 Oleksandr Rudnytskyi, Separating Heart Sound from Lung Sound Using Mathematical Morphology Approach

14:30-14:55 Victoria Filatova, Breast ultrasound tomography problem, simulation with noisy models

14:55-15:30 *Coffee Break*

Chair: Victor Mikhaylov

15:30-15:55 Ievgen Verbytskyi, A Noise Eliminating Algorithm for noncontact Photoacoustic Tomography

16:00-16:25 Dmytro Strelnikov, Spectral functions for Sturm-Liouville type integral systems on finite intervals

16:30-17:30 Meeting of coordinators

TUESDAY (21.08.2018)

Chair: Dirk Langemann

9:00 - 9:45 Sven Burger (invited speaker), Engineering electromagnetic fields in nanoscale environments by numerical optimization

9:45-10:15 *Coffee Break*

10:15-11:00 Vladimir Spokoiny (invited speaker), Inference for spectral projectors

11:05-11:35 Volodymyr Derkach, Indefinite Stieltjes moment problem

11:40-12:10 Illia Karabash, Resonances: their asymptotics and optimization

12:30-13:30 *Lunch (Kamee Caffè)*

Chair: Volodymyr Derkach

14:00-14:25 Tamara Fastovska, Uniform attractors for non-autonomous fluid-structure interaction systems

14:30-14:55 I. Ryzhkova-Gerasymova, A. Danilin, On numerical study of attractors of ordinary differential equations

14:55-15:30 *Coffee Break*

Chair: Illia Karabash

15:30-15:55 Aleksandr Krivoshein, Multivariate sampling-type expansions

16:00-16:25 Lidiia Tereshchenko, The action of the point thermal laser pulse on the half-space

18:30 Workshop dinner in the restaurant "Trattoria Peretti", Karl-Liebknecht Str. 5, 10178 Berlin