

# A3 Workshop in Applied Inverse Problems

January 28-30, 2019

Okinawaken Seinenkaikan  
2-15-23 Kume, Naha, Okinawa, Japan

**January 28, Monday** (at Deigo(梯梧) Room on the 2nd floor)

9:20            Opening

9:30-10:10 Masato Kimura (Kanazawa University)  
Conformal mapping method and shape optimization approach  
for an inverse free boundary problem

10:20-11:00 Jin Cheng (Fudan University)  
Unique continuation for Helmholtz equations on the analytic surface

11:10-11:50 Soomin Jeon (KAIST)  
Kernel deconvolution based scattering correction method for x-ray CT

12:00-12:40 Goro Nishimura (Hokkaido University)  
Sensitivity of fluorescence signal in strong scattering medium  
with background fluorescence

12:40-13:50 Lunch Break

13:50-14:30 Yuko Hatano (Tsukuba University)  
Short-term estimation of the radiation dose rate by the particle filter

14:40-15:20 Ting Wei (Lanzhou University)  
Identification of time-dependent convection coefficient  
in a time-fractional diffusion equation

15:30-16:10 Takashi Ohe (Okayama University of Science)  
Real-time reconstruction of moving directional wave sources  
from boundary measurements

16:20-17:00 Igor Trushin (Tohoku University)  
On inverse scattering on quantum graphs

**January 29, Tuesday** (at Sango (珊瑚) Room on the 1st floor)

9:30-10:10 Chang-Ock Lee (KAIST)

Shape prior beam hardening correction for industrial 3D conebeam CT

10:20-11:00 Manabu Machida (Hamamatsu University School of Medicine)

Stability analysis of inverse problems for  $1+1/2$  fractional parabolic equations

11:10-11:50 Jijun Liu (Southeast University)

On the source identifications for time-fractional order diffusion process

12:00-12:40 Chunlong Sun (Hokkaido University, Southeast University)

Fluorescence diffuse optical tomography using a cuboid approximation

12:40-13:50 Lunch Break

13:50-14:30 Yu Jiang (Shanghai University of Finance and Economics)

A hybrid Inversion schemes for diffusion optical tomography

14:40-15:20 Guanghui Hu (Beijing Computational Science Research Center)

Reflection principle with applications to unique determination of an obstacle with a single incoming wave

15:30-16:10 Xiang Xu (Zhejiang University)

Carleman estimate on a network for telegrapher's equations and applications

16:20-17:00 June-Yub Lee (Ewha Womens University)

Image analysis technique using FSI-model based AI

17:30-20:00 Banquet

**January 30, Wednesday** (at Sango (珊瑚) Room on the 1st floor)

9:30-10:10 Cheng Hua (Fudan University)

Group velocity and wave packet amplitude of flexural wave propagation  
in one dimensional acoustic black hole structure

10:20-11:00 Dinghua Xu (Zhejiang Sci-Tech University)

Data modeling in functional clothing design:  
forward and inverse problems approaches

11:10-11:50 Shuai Lu (Fudan University)

Balancing principle in supervised learning for a general regularization scheme

11:50 Closing

**Organized by:**

Masahiro Yamamoto (The University of Tokyo)

Jin Cheng (Fudan University)

Takashi Takiguchi (National Defense Academy of Japan)

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