The 3rd International Symposium on Recent Advances in Exploration Geophysics in Kyoto (RAEG'98)

December 14 and 15, 1998

Siran Kaikan, Kyoto, Japan

Organized by

The Organizing Committee of RAEG

Supported by

The Society of Exploration Geophysicists of Japan

PROGRAM

Monday, December 14.

9:20∼ 9:30 **Opening Address**

Yuzuru Ashida (Kyoto University, Japan)

Seismic Method I (9:30∼10:30)

Chairperson: Toshifumi Matsuoka (Kyoto University, Japan)

9:30∼ 9:50 **Imaging the permeability-porosity structure within the near-surface sediments of Tokyo by acoustic crosswell tomography**

Tokuo Yamamoto (University of Miami, USA)

9:50∼10:10 **Vertical fractures and azimuthal anisotropy**

Michael Schoenberg (Schlumberger - Doll Research, USA)

10:10∼10:30 **Three dimensional velocity images of the north-south zone in China with LSQR algorithm**

Yike Liu and Xu Chang (Chinese Academy of Sciences, China)

Break (10:30~10:40)

Inversion / Electrical Method (10:40~12:00)

Chairperson: Toshihiro Uchida (Geological Survey of Japan)

10:40~11:00 **Focusing inversion of geophysical data**

Oleg Portniaguine and Michael S. Zhdanov (University of Utah, USA)

11:00~11:20 **Hydraulic well testing inversion for modeling fluid flow in fractured rocks using simulated annealing**

Shinsuke Nakao*, Julie Najita** and Kenzi Karasaki** (*Geological Survey of Japan, Japan, **Lawrence Berkeley National Laboratory, USA)

11:20~11:40 **Resistivity tomography experiment on samples with cracks and water**

Jinqi Hao (China Seismological Bureau, China)

11:40~12:00 **Application of gamma-ray spectrometry and electrical resistivity to detect subsurface karst structure in Pokhara Valley, central Nepal**

Pitambar Gautam*, Surendra R. Pant** and Hisao Ando*** (*Hokkaido University, Japan, **Tribhuvan University, Nepal, ***Institute of Hydrogeology Co., Ltd., Japan)

Lunch (12:00~13:20)

Seismic Method II (13:20~15:00)

Chairperson: Toshiki Watanabe (Kyoto University, Japan)

13:20~13:40 **Propagation of guided waves in a fluid layer bounded by two viscoelastic anisotropic solids**

Ahmed Shaaban Ashour (International Islamic University Malaysia, Malaysia)

13:40~14:00 **Picking first break in seismic traces by fractal method**

Xu Chang*, Yike Liu* and Yuzuru Ashida (*Chinese Academy of Sciences, China, **Kyoto University, Japan)

14:00~14:20 **Fresnel zone wavepath tomography —Theory—**

Bagus Endar B. Nurhandoko and Yuzuru Ashida (Kyoto University, Japan)

14:20~14:40 **Improvement of data quality in seismic while drilling**

Tetsuro Tsuru* and Toshiyuki Yokota** (*Japan Marine Science and Technology Center, Japan, **Japan National Oil Corporation, Japan)

14:40~15:00 **Joint imaging fractures from resistivity and seismic surveys**

Rui Feng, Zhengqin He, Qingju Wu, and Jinqi Hao (China Seismological Bureau, China)

Coffee Break (15:00~15:20)

Electromagnetic and Magnetic Method (15:20~17:00)

Chairperson: Akira Saito (Mitsui Mineral Development Engineering Co. Ltd, Japan)

15:20~15:40 **Recent advances in AMT/MT hardware (SSMT-Satellite Synchronized MT) and applications (High density 3-D MT survey and 3-D AMT for deep mining exploration)**

Mitsuru Yamashita, Leo Fox, Gary McNeice and Gerald Graham (Phoenix Geophysics Limited, Canada)

15:40~16:00 **New art for crosshole electromagnetic tomography**

Cao Junxing*, Nie Zaiping** and Zhu Jieshou* (*Chengdu University of Technology, China, **University of Electronic Science and Technology of China, China)

16:00~16:20 **New 2.5D GILD-Born modeling and inversion using magnetic integral equation**

Ganquan Xie, Jianhua Li and Ki Ha Lee (Lawrence Berkeley National Laboratory, USA)

16:20~16:40 **On the use of anisotropy of magnetic remanence to estimate the rotation of faulted blocks within the Mukawa Serpentinite Body in Hokkaido, Japan**

Pitambar Gautam*, Takeyuki Katoh** and Kohei Tanaka*** (*Hokkaido University, Japan, **Earth Science Co., Ltd., Japan, ***National Research Institute for Earth Science and Disaster Prevention, Japan)

16:40~17:00 **Magnetic susceptibility observation across Hiamlaya-Karakoram range, northern Pakistan**

Mirza Naseer Ahmad* and Mitsuo Yoshida** (*Geological Survey of Pakistan, Pakistan, **Geoscience Co., Ltd., Japan)

Tuesday, December 15.

Joint session with the Research Committee of Electrical Methods, the Society of Exploration Geophysicists of Japan (SEGJ)

Electromagnetic Method II (9:20~10:40)

Chairperson: Yutaka Murakami (Geological Survey of Japan, Japan)

9:20~ 9:40 **Three-dimensional magnetotelluric inversion using generalized RRI method**

Kazunobu Yamane*, Shinji Takasugi**, Hee Joon Kim*** and Ki Ha Lee**** (*Geothermal Energy Research and Development Co., Ltd., Japan, **JMC Geothermal Engineering Co., Ltd., Japan, ***Pukyung National University, Korea, ****Lawrence Berkeley National Laboratory, USA)

9:40~10:00 **Reverse time migration for ground penetrating radar using finite difference time domain method**

Yoshinori Sanada and Yuzuru Ashida (Kyoto University, Japan)

10:00~10:20 **Full 3-D inversion of electromagnetic data on PC**

Yutaka Sasaki (Kyushu University, Japan)

10:20~10:40 **New 3D particle tracking algorithm for prediction of transport flow in multiple porosity media**

Jianhua Li, G. S. Bodvarsson and Christine Doughty (Lawrence Berkeley National Laboratory, USA)

Break (10:40~10:50)

10:50~11:50 **Electrical and EM methods applied to engineering and environmental problems**

Ki Ha Lee (Lawrence Berkeley National Laboratory, USA)

11:50~12:00 **Closing Remarks**

Toshifumi Matsuoka (Kyoto University, Japan)

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