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September 7-8, 2010



Geological Survey of Finland, Espoo, Finland
<http://en.gtk.fi/>

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DEADLINES

Abstracts Due: **April 26, 2010**

Author Notification: May 31, 2010

Early Registration: June 30, 2010

Camera Ready Paper Due: June 30, 2010

The abstracts was reviewed by at least two referees selected by the Organizing Committee. Interested contributors should submit electronically one-page abstract of 200 to 400 words in English without figures or references before April 26, 2010 to [<ISME-XI@M.AIST.GO.JP>](mailto:ISME-XI@M.AIST.GO.JP). Please include title, author(s), affiliation, mailing address, phone & fax, e-mail address, 3-5 keywords, and corresponding author with your submittal.

Abstract submission completed on April 26, 2010

Registration Fee: **280 Euro**

Refer to <http://www.isme-detec.org/ISME/ISME.htm> and
contact to ISME-XI@M.AIST.GO.JP

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Contact to the official address: ISME-XI [atmark] M.AIST.GO.JP



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ISME-XI: The technological challenges and innovation of resources exploration, subsurface waste disposal and environment

DETEC

September 7-10, 2010

Geological Survey of Finland, Espoo, Finland

<http://en.gtk.fi/>

Abstract Due: March 31, 2010

Registration Fee: 280 Euro

ISME-XI

"The purpose of ISME symposia is to bring together scientists actively working on some diverse fields in order to foster the exchanges of ideas related to the methods or resource exploration."

after Singer, D. A. and Kouda, R. (1993) Nonrenewable Resources, v. 2, no. 2, pp. 65-66.

ISME (International Symposium on Mineral Exploration) is an international activity of the Division of Exploration Technology (DETEC) in Mining and Materials Processing Institute of Japan (MMIJ). Symposia have been held ten times in every two years since 1990 in Japan, Austraria, and USA, and jointly with the annual conference of IAMG (International Association for Mathematical Geology) and the IGC (International Geological Congress) as one session in them. Proceedings have been published in several special issues in the journals of IAMG (Nonrenewable Resources and Natural Research).

International Organizing Committee

Ryoichi Kouda (GS Japan; Chairperson)
Zhao Pengda (China University of Geosciences)
Donald A. Singer (USGS)
Margie Scott (GS Queensland)
Roussos Dimitrakopoulos (McGill University)
Anna Nguno (GS Namibia)
Jorge Yamamoto (University of Sao Paulo)
Mohamad Nur Heriawan (Institut Teknologi Bandung)
Tetsuro Yoneda (Hokkaido Univ.)
Toshiaki Ueki (OHTI)
Toshiyuki Tosha (GS Japan)
Atsunao Marui (GS Japan)
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Vesa Nykanen (GTK)

Mikael Rinne (Helsinki University of Technology)

Liisa Wikstrom (Posiva Oy)

Refer to <http://www.isme-detec.org/ISME/ISME.htm> and
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(Call for papers)



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The Schedule of September 7-8, 2010

Geological Survey of Finland, Espoo, Finland <http://en.gtk.fi/>

September 6

15:00 - 17:00 Registration at GTK Lobby in Espoo, Finland

17:00 - 20:00 Ice Breaker at GTK Restaurant near the Lobby

Each presentation by oral has 15 minutes talk with 5 minutes discussion.

Representing speakers have 15 minutes without discussion.

Keynote speakers have 25minutes talk wit 5 minutes discussion.

September 7

(Convener: P. Nurmi and R. Kouda)

9:00 - 9:10 Opening address (MMIJ)

9:10 - 9:20 Welcome address (GTK)

9:20 - 9:30 Organizational issues

Assessment methods of undiscovered mineral resources

(Convener: M. Scott)

9:30 - 10:00 From mapping of mineral prospectivity to quantitative estimation of undiscovered mineral resources (Emmanuel John M. Carranza)

Keynote

10:00 - 10:30 Probabilistic estimates of total tonnage of mineral deposits in permissive tracts using deposit densities (Donald A. Singer and Ryoichi Kouda) Keynote

(Convener: M. Rinne)

10:30 - 10:50 The role of geological survey organizations in the accounting of geological resources - insights into Finnish approach (Vuori, S., Aatos, S., Tuusjarvi, M., and Holmijoki, O.)

10:50 - 11:10 The undiscovered PGE resources of Finland (Rasilainen, K., Eilu, P., Halkoaho, T., Iljina, M., Karinen, T.)

11:10 - 11:40 Widening the Search to Enhance Queensland's Resource Inventory (Margaretha Scott) keynote

Integrated modeling of exploration

(Convener: T. Ueki)

11:40 - 11:55 GIS-based Modeling of Kaolin Resources Prospectivity (Alaa Masoud and Katsuaki Koike)

11:55 - 12:00 Short and sharp introduction to posters (J. Lerssi)

12:00 ? 12:10 (Gathering Photograph)

12:10 - 13:30 Lunch break with posters

13:00 - 13:30 Posters with authors' explanations

- Assessment of hydrothermal processes associated with Proterozoic mineral systems in Finland using self-organizing maps (J. Lerssi, P. Sorjonen-Ward, S. J. Fraser, and A. Ruotsalainen)

- Development of geo-environment risk assessment system, An exposure model for contaminated site (Yasuhide Sakamoto, Yoshishige Kawabe, Satoshi Murao, Takeshi Komai)

- Performance evaluation of a developed low-cost and simplified borehole camera (Tomoshi Yamashita, Tamotu Ota, and Sunao Kunimatsu)

Integrated modeling of exploration (continued)

(Convener: D. Singer)

13:30 - 14:00 Cloud computing and free and open source environment to accelerate global exploration (Ryoichi Kouda) Keynote

14:00 - 14:20 Spatial data analysis as a tool for mineral prospectivity mapping applied to gold exploration in Central Lapland Greenstone Belt, Fennoscandian Shield (Vesa Nyk?nen)

14:20 - 14:40 Ore-Grade Modeling of a Laterite Nickel Deposit by Integrating Geological Information (Asran Ilyas and Katsuaki Koike)

14:40 - 15:00 (Scientific promotion: Result by SELENE mission of lunar exploration)

15:00 - 15:30 Coffee and tea break

(Convener: V. Nyk?nen)

15:30 - 15:45 A GIS-based weights-of-evidence model for mineral potential mapping of porphyry copper in Dehsalm area, east of Iran (Mansour Ziiai, Abolghasem Kamkar- Rouhani, and Saeed Yousefi)

15:45 - 16:00 Design of an inference network to combine input Boolean evidential maps for predictive modeling of preliminary exploration of gold deposits in frontier areas (M.Yousefi and A.Kamkar-Rouhani)

16:00 - 16:15 Using spatial analysis and weight of evidence method for recognition and separation of lens and fault zone mineralization of fluorite in south of Mazandaran province, Iran (M.Yousefi and A.Kamkar-Rouhani)

(Convener: E.J.M. Carranza)

16:15 - 16:35 A GIS-based weights-of-evidence model for site selection of decorative stone plant in Bajestan mining area, Iran (Amir Masoud Jafari , Amir Mohsen Nikzad Mansour Ziaee and Abolghasem Kamkar-Rouhani)

16:35 - 16:55 An integrated geological, geochemical and geophysical investigation for delineation of listwaenite gold deposits in east of Iran (Abolghasem Kamkar-Rouhani, Mansour Ziiai, and Hossein Shahi)

16:55 - 17:15 New mobile on-line mineral analysis technology speeds up exploration projects (Timo Viitanen)

(Convener: R. Kouda)

17:15 - 17:40 Discussion I

17:40 - 17:50 Organizational issues

18:00 - Bus leaves at GTK for Helsinki Kauppatori.

15 min boat transfer to Suomenlinna island.

Guided 30 min walking at the historical maritime fortress.

20:00 - 22:30 Hosted Conference Dinner at the restaurant Panimo, Suomenlinna.

September 8

Exploration methods in fields

(Convener: A. Nguno)

9:00 - 9:30 JOGMEC's mineral exploration and technology development activities (Hiroyuki Katayama)

Key note

9:30 - 9:50 Seismic reflection surveys in mineral exploration (Ilmo T. Kukkonen)

(Convener: I. Kukkonen)

9:50 - 10:10 Significance of phyllosilicate mineralogy as hydrothermal indicators in exploration of ore deposits: Availability of chemical and structural properties of chlorite-smectite series minerals (Tetsuro Yoneda, Hiroshi Mokko and Tsutomu Sato)

10:10 - 10:30 A comparison of mineralogy and leaching behavior of arsenic between two types of epithermal Au ore deposits in the southwestern Hokkaido, Japan (Tomoya Bando, Tetsuro Yoneda, Megumi Hatayama, Tsutomu Sato and Toshihiko Ito)

10:30 - 10:50 Coffee and tea break

(Convener: T. Tosha)

10:50 - 11:10 The fracturing propagation rate monitoring due to block caving mining system using the resistivity method (B. Sulistijo and R. Luhans)

11:10 - 11:30 Detection of fractures containing metallic mineralization by inversion of helicopter electromagnetic data using a new inverse modeling method in Alut area, Kurdistan Province, Iran (Y. Alireza Arab-Amiri, Ali Moradzadeh, Abolghasem Kamkar-Rouhani, Nader Fathianpour, Davood Rajabi, and Bernard Siemon)

11:30 - 12:30 Lunch break

Environmental issues

(Convener: H. Asaue)

12:30 - 12:50 The New Industrial System on CO₂ Recovery Process with Biomass Factory (Morihiro Kurushima)

12:50 - 13:10 A monitoring method using Self Potential variation in the CO₂ geological storage (Toshiyuki Tosha and Tsuneo Ishido)

(Convener: R. Kouda)

13:10 - 13:25 Mercury Awareness Among Artisanal Gold Miners In Indonesia (Chusharini Chamid)

13:25 - 13:45 A progress report of in-air PIXE development to support risk management in local communities (Satoshi Murao, Koichiro Sera, Yoshishige Kawabe and Tsuyoshi Nakamura)

13:45 - 14:00 Coffee and tea break

Geological disposal of high level nuclear waste

(Convener: T. Yoneda)

14:00 - 14:20 Geological Model of the Olkiluoto Site (Ismo Aaltonen)

14:20 - 14:40 Conceptual understanding as a basis for data acquisition, analysis and 3-D deterministic geological modelling, Forsmark, Sweden (Michael B. Stephens and Assen Simeonov)

(Convener: R. Lahtinen)

14:40 - 15:00 Characterization of Large-Scale Groundwater Environment in a Granite Site by Spatial Modeling of Fracture and Hydrogeologic Distributions (Katsuaki Koike, Chunxue Liu, Alaa Masoud, Arata Kurihara, Kenji Amano)

15:00 - 15:20 Modelling Coupled F-T-H processes of Rock Mass (Mikael Rinne, Baotang Shen, and Ove Stephansson)

(Convener: K. Koike)

15:20 - 15:40 Three-dimensional Modeling of Deep Geological Structure and Groundwater System Using MT Resistivity (Hisafumi Asaue, Taiki Kubo, Masahito Sasahara, Toru Yoshinaga and Katsuaki Koike)

15:40 - 16:00 Disposal of Spent Nuclear Fuel in Finland (Ismo Aaltonen)

16:00 - 16:15 Deep Groundwater and Geological Structure Research on a Coastal Area, in Japan (Atsunao Marui, Toshihiro Uchida, and Ryoichi Kouda)

(Convener: K. Koike)

16:15 - 16:30 Discussion II

16:30 - 16:40 Closing remarks and invitation of ISME-XII, 2012, in Brisbane, Australia(M. Scott)

16:50 - (Leave for Olkiluoto excursion)

Cancelled 9-10th September 2010

Short Course in Spatial Modelling, Helsinki University of Technology (TKK)

Excursion will be between 8th in the evening to 9th in the evening(Due will be announced later)



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Themes and Speakers

1) Assessment of mineral resources and potential

- Pasi Eilu, GTK / Kalevi Rasilainen, GTK: Assessment of PGE resources in Finland.
- Saku Vuori et al., GTK: Geological resource accounting and the role of national Geological Surveys ? insights into Finnish approach

2) New techniques and innovations in mineral exploration

- John Carranza, ITC: From Mapping of Mineral Prospectivity to Quantitative Estimation of Undiscovered Mineral Resources
- Ilmo Kukkonen, GTK: Seismic reflection surveys in mineral exploration
- Vesa Nykanen, GTK: Spatial data analysis as a tool for mineral prospectivity mapping

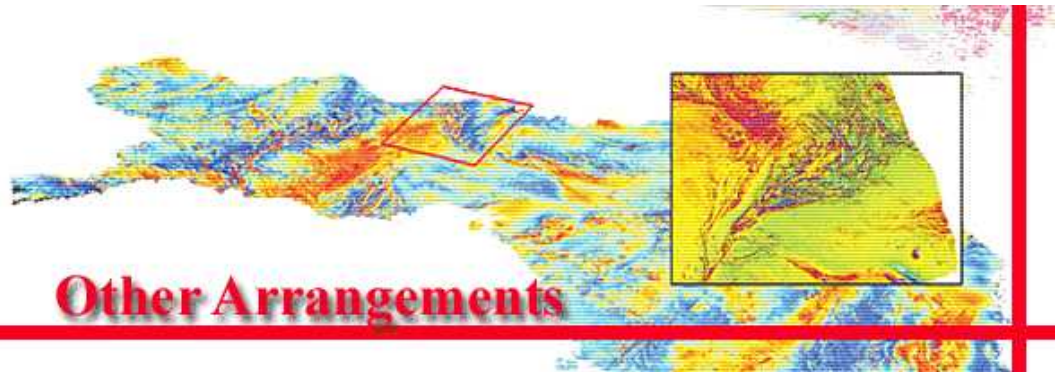
3) Subsurface waste disposal

- Ismo Aaltonen, Posiva: Geological Model of the Olkiluoto Site
- Liisa Wikstrom, Posiva: (topic not yet specified)
- Michael Stephens, SGU: (topic not yet specified)
- Mikael Rinne, TKK: (topic not yet specified)



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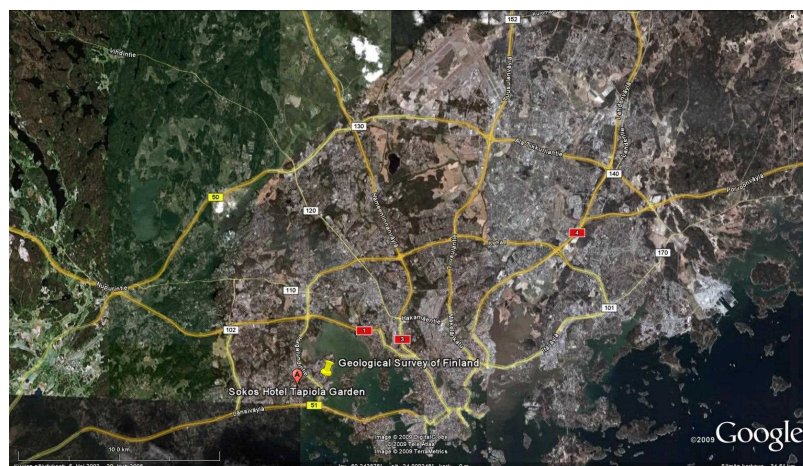
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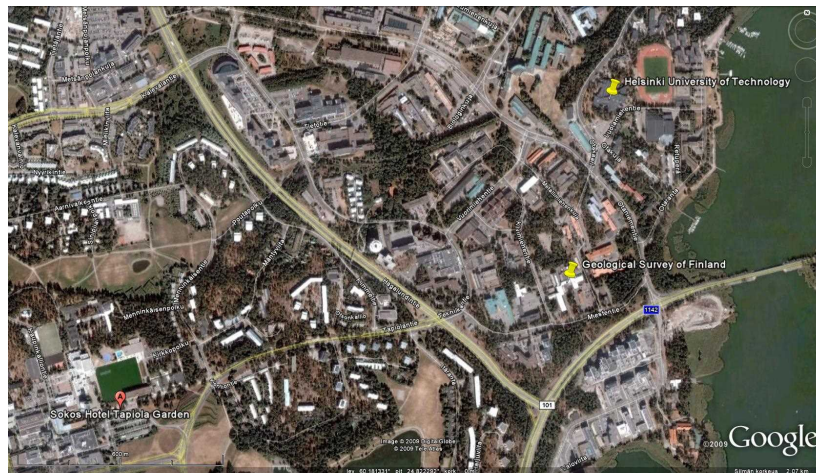


Other Arrangements

We have made a preliminary booking of 40 rooms at Sokos Hotel Tapiola Garden. The hotel website can be found at <http://www.sokoshotels.fi/en/hotels/espoo>. The distance between the hotel and GTK is 1.6 km. The location of the hotel and GTK can be viewed in the images below (click to enlarge).

The special hotel price for the participants of the ISME-XI is 119 EUR/night in a single room and 139 EUR/night in a double room (i.g., in total 139 EUR for 2 persons per night in a double room). The rates include room charge, service, breakfast buffet and sauna. All participants needing the hotel accommodation should make the final booking by themselves before 9th August 2010. Detailed instructions about the final booking will be sent to registered participants at the beginning of July.





In addition to the Sederholm auditorium, we have also booked the Granite meeting room at GTK during the conference. It could be used for meetings of less than 20 people. Internet access and projector are available also there.

Posters can be on display during the conference in the main lobby and/or in front of the Sederholm auditorium. They can be hung up in the frames before the Ice-breaker Party. We have frames for 36 posters and they should have maximum dimensions of 90 x 120 cm (width x height).