LITHOSPHERE 2012 Symposium
Programme

Tuesday, November 6

09:00 - 10:00 Registration at the Geological Survey of Finland, Espoo, Sederholm Auditorium
10:00 - 10:05 Opening

10:05 - 11:50 Session 1: Lithosphere structure and evolution from upper crust to asthenosphere
Chair: Ilmo Kukkonen

10:05 - 10:50 T. F. Redfield, P.T. Osmundsen and B.W.H. Hendriks [Invited]
From the Gneiss Age to the Ice Age: Lithosphere, landscape, and the shaping of Fennoscandia

Vintage and retro conductivity models of the Bothnian Bay region: implications for the crustal structure and processes of the Svecofennian orogen

Feeding the ‘aneurysm’: Orogen - parallel mass transport into Nanga Parbat and the western Himalayan syntaxis

11:50 - 13:00 Lunch

13:00 - 14:30 Session 2: Lithosphere structure and evolution from upper crust to asthenosphere (cont.)
Chair: Pekka Heikkinen

13:00 - 13:30 E. Kozlovskaya, L. Vinnik, G. Kosarev, S. Oreshin and POLENET/LAPNET Working Group
Structure of the upper mantle in the northern Fennoscandian Shield obtained by joint inversion of POLENET/LAPNET P- and S- receiver functions

13:30 - 14:00 K. Moisio and P. Kaikkonen
Effective elastic thickness of the lithosphere in the seismic POLAR profile, Northern Finland

14:00 - 14:30 E. Lanne
Coda waves of local earthquakes: A case history from northern Finland

14:30 - 15:00 Coffee/Tea
15:00 - 16:30 Session 3: Lithosphere evolution, structures and mineral resources
Chair: Raimo Lahtinen

15:00 - 15.30 A. Kärki, T. Korja, M. Mahmoud, M. Pirttijärvi, J. Tirronniemi, P. Tuisku and J. Woodard
Structure of the Raahe –Ladoga Shear Complex

15:30 - 16:00 J. Salminen, S. Mertanen, D. Evans, and Z. Wang
Paleomagnetic and geochemical studies of the Subjotnian Satakunta diabase dykes – implications to Mesoproterozoic supercontinent Nuna

16:00 - 16:30 R. Alviola
Distribution of rare element pegmatites in Finland

16:30 - 17:00 I. Kukkonen, S. Heinonen, P. Heikkinen and P. Sorjonen-Ward
Delineating ophiolite-derived host rocks of massive sulfide Cu-Co-Zn deposits with 2D high-resolution seismic reflection data in Outokumpu, Finland

Wednesday, November 7

09:20 - 12:20 Session 4: Archaean and Proterozoic lithosphere evolution
Chair: O. Eklund

09:20 - 09:50 M.B. Stephens and J. Andersson
Contrasting orogenic systems in the Fennoscandian Shield, southern Sweden

Evolution of the middle crust in Central Fennoscandia - MIDCRUST

Lateral flow in the middle crust– Experiments from the Svecofennian orogen

10:50- 11:20 Coffee/Tea

11:20 - 11:50 F. Chopin, A. Korja and P. Hölttä
Tectonometamorphic evolution of the Bothian belt within the Svecofennian orogen - a case study for the building of a large dome in the Paleoproterozoic

11:50 - 12:20 M. Kurhila, E. Suikkanen and A. Kotilainen
Geochronology and isotopic characterization of the Vaasa complex in western Finland

12:20 - 13:30 Lunch

13.30 - 17:00 Session 5: 3D and 4D modeling of lithosphere structures and evolution
Chair: A. Korja

13:30 - 14:00 S. Gradmann, J. Ebbing and J. Fullea
Juxtaposed Lithospheres of Norway and Sweden – insights from 3D integrated geophysical modelling

14:00 - 14:30 S. Heinonen, E. Koivisto, M. Heinonen and P. Heikkinen
Seismic 3D modelling: case studies from Pyhäsalmen and Kevitsa, Finland
14:30 - 15:00  **N. Juhojuntti, S. Bergman and S. Olsson**  
Crustal structure in the Kiruna district, northern Sweden: Preliminary results from a seismic reflection study

15:00 - 15:30  **Coffee/tea**

15:30 - 16:00  **D.B. Snyder, M. Hillier and B.A. Kjarsgaard**  
3-D structural model of the Slave craton mantle lithosphere, Northwest Territories, Canada

16:00 - 16:30  **R. Lahtinen**  
Evolution history of the Norrbotten-Lapland boundary: preliminary results

16:30 - 16:45  **Session 6: Poster introductions**  
Chair: M. Poutanen  
(2 min talks with two slides in the auditorium)

16:45 - 19:30  **Poster viewing and networking with refreshments**

**P01 P. Eilu and K. Rasilainen**  
Fennoscandian Neoarchaean–Palaeoproterozoic Ni and PGE metallogeny and supercontinent cycles

**P02 J. V. Korhonen**  
Indications of neotectonic movements at Swan Water (Joutenvesi) of the Saimaa Lake system

**P03 Korja, P. Heikkinen, Y. Roslov and S. Mertanen**  
North European Transect (NET) – Growth of Northern Europe in Supercontinent Cycles

**P04 E. Lehtonen, T. Halkoaho, P. Hölttä, H. Huhma, E. Luukkonen, E. Heilimo and A. Käpyaho**  
Constraining the age and evolution of Archean greenstone belts in the Kuhmo and Suomussalmi areas, Finland

**P05 K. Nikkilä and A. Korja**  
Shearing in the northern part of the Central Finland granitoid complex

**P06 H. Silvennoinen, E. Kozlovskaya, E. Kissling and POLENET/LAPNET Working Group**  
Structure of the upper mantle beneath the northern Fennoscandian Shield revealed by high-resolution teleseismic P-wave traveltime tomography

**P07 I. Virshylo, G. Prodaivoda and E. Kozlovskaya**  
Method of joint inversion of velocity model and gravity data based on mineralogical composition
Thursday, November 8

9:20 - 12.20  Session 7: Archaean and Proterozoic lithosphere evolution (cont.)
Chair: I. Kukkonen

Magmatic evolution of the Vaasa granite complex, western Finland: Preliminary constraints from in situ geochemistry of alkali feldspar megacrysts

9:50 - 10:20  O. Eklund and S. Fröjdö
Petrology of an enriched gabbro in the Bothnian core complex

10:20 - 10:50  J. Engström, A. Kärki and S. Paulamäki
The polyphase ductile deformation at Olkiluoto, SW Finland

10:50- 11:20  Coffee/Tea

11:20 - 11:50  Y. Kähkönen and H. Huhma
Revised U-Pb zircon ages of supracrustal rocks of the Paleoproterozoic Tampere Schist Belt, southern Finland

11:50 - 12:20  A. Soesoo and S. Hade
Geochemistry and age of some A-type granitoid rocks of Estonia

12:20 - 13:20  Lunch

13:20 - 15:30  Session 8: Other lithospheric topics: Neotectonics, scientific drilling projects, short communications
Chair: J.P. Lunkka

Ruokojärvi postglacial fault, northern Finland – A recent trenching study

13:50 - 14:05  J. V. Korhonen
Indications of neotectonic movements at Swan Water (Joutenvesi) of the Saimaa Lake system

14:05 - 14:20  M. Poutanen
Future of DYNAQLIM

14:20 - 14.35  T. Rämö
Short communication on a new project "Magma dynamics and crystallization of A-type granite magma chambers as revealed by in situ isotopic and elemental geochemical analysis of feldspar megacrysts"

14:35 - 14:50  J. Virtasalo
IODP Expedition 347 - Baltic Sea Paleoenvironment

14:50 - 15:05  I. Kukkonen, M.V.S. Ask and O. Olesen
Current status of the ICPD drilling proposal DAFNE – Drilling Active Faults in Northern Europe

15:05- 15:30  Final discussions and poster award
Chair: Ilmo Kukkonen