

ALGODAN

Algorithmic Data Analysis

Finnish Centre of Excellence for Algorithmic Data Analysis (Algodan 2008-2013)

Scientific Advisory Board (SAB) Meeting

Time: 16 May 2012, 8:45 – 16:45

Place: Room D122, Department of Computer Science, Exactum, University of Helsinki

Agenda

8:45 – 9:00 Opening and coffee

9:00 – 9:15 Introductions

- Greetings from the Academy of Finland,
- News of the Algodan Centre, Esko Ukkonen, Director of the Centre

9:15 – 10:20 Research themes

- *Data Mining*
 - Panos Papapetrou: "Influence attribution in citation networks"
 - Jeffrey Lijffijt: "A statistical significance testing approach to mining the most informative set of patterns"
 - Jaakko Hollmen: "On analyzing environment, natural and man-made"
 - Laura Langohr: "Relevant and Non-redundant Object Retrieval"
 - Fang Zhou: "Discovering Knowledge about the Evolution of Bacterial Metabolism: Weighted Graphs and Compression"

10:20-10:35 Break

10:35-11:50 Research themes

- *Sequence Analysis*
 - Veli Mäkinen: "Enhanced Variation Calling"
 - Juha Kärkkäinen: "Improving Burrows-Wheeler Compression"
- *Machine Learning Theory*
 - Mikko Koivisto: "Advanced algorithms for Bayesian network discovery"
 - Petteri Kaski: "Fast zeta transforms for lattices"
 - Panu Luosto: "Clustgrams: An extension to histogram densities based on the MDL principle"

11:50-12:00 Break

12:00-12:30 Research themes

- *Neuroinformatics and Probabilistic Models*
 - Aapo Hyvärinen: "Overview of Neuroinformatics, incl. brain imaging results"
 - Patrik Hoyer: "Learning linear cyclic causal models with latent variables"
 - Michael Gutmann: "Estimation of unnormalized probabilistic models"

12:30 – 13:30 Lunch

13:30 – 15:30 Poster exhibition and demonstrations, coffee

15:30 – 16:15 Scientific Advisory Board, internal discussion

16:15 – 16:45 Summary

- Comments from the Scientific Advisory Board
- Discussion

16:45 End of meeting

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List of participants

Scientific Advisory Board

- Professor Johannes Gehrke, Cornell University, USA
- Senior Principal Research Scientist Volker Tresp, Siemens AG, Germany

Academy of Finland

- Professor Erkki Oja, Research Council for Natural Sciences and Engineering
- Science Adviser Johanna Törnroos

University of Helsinki

- Vice-Dean, Professor Marja-Liisa Riekkola, Department of Chemistry, Algodan Centre-of-Excellence
- Professor Esko Ukkonen, Department of Computer Science and HIIT, Esko.Ukkonen@cs.helsinki.fi, tel. +358 9 191 51280
- Postdoctoral Researcher Michael Gutmann, Department of Computer Science and HIIT
- Academy Fellow Patrik Hoyer, Department of Computer Science and HIIT
- Professor Aapo Hyvärinen, Department of Computer Science/Department of Mathematics and Statistics and HIIT
- Professor Jyrki Kivinen, Department of Computer Science
- Academy Fellow Mikko Koivisto, Department of Computer Science and HIIT
- Senior Researcher Juha Kärkkäinen, Department of Computer Science
- Doctoral Student Laura Langohr, Department of Computer Science
- Doctoral Student Panu Luosto, Department of Computer Science
- Professor Veli Mäkinen, Department of Computer Science
- Professor Hannu Toivonen, Department of Computer Science and HIIT
- Senior Researcher Roman Yangarber, Department of Computer Science
- Doctoral Student Fang Zhou, Department of Computer Science
- Poster and demo chair, PhD Pekka Parviainen, Department of Computer Science and HIIT
- Web chair, Doctoral Student Janne Korhonen, Department of Computer Science and HIIT
- Researchers and Doctoral Students in the unit

Aalto University

- Chief Research Scientist Jaakko Hollmén, Dept. of Information and Computer Science and HIIT
- Assistant Professor Petteri Kaski, Dept. of Information and Computer Science and HIIT
- Doctoral Student Jeffrey Lijffijt, Dept. of Information and Computer Science and HIIT
- Postdoctoral Researcher Panos Papapetrou, Dept. of Information and Computer Science and HIIT
- Chief Research Scientist Kai Puolamäki, Dept. of Information and Computer Science and HIIT
- Associate Professor Juho Rousu, Dept. of Information and Computer Science and HIIT
- Researchers and Doctoral Students in the unit

Secretaries and technical help

- Research Coordinator, PhD Pirjo Moen, Department of Computer Science and HIIT, University of Helsinki, Pirjo.Moen@cs.helsinki.fi, tel. +358 9 191 51389 and gsm +358 40 581 4321
- Technical Assistant, Amanuensis Teija Kujala, Department of Computer Science, University of Helsinki