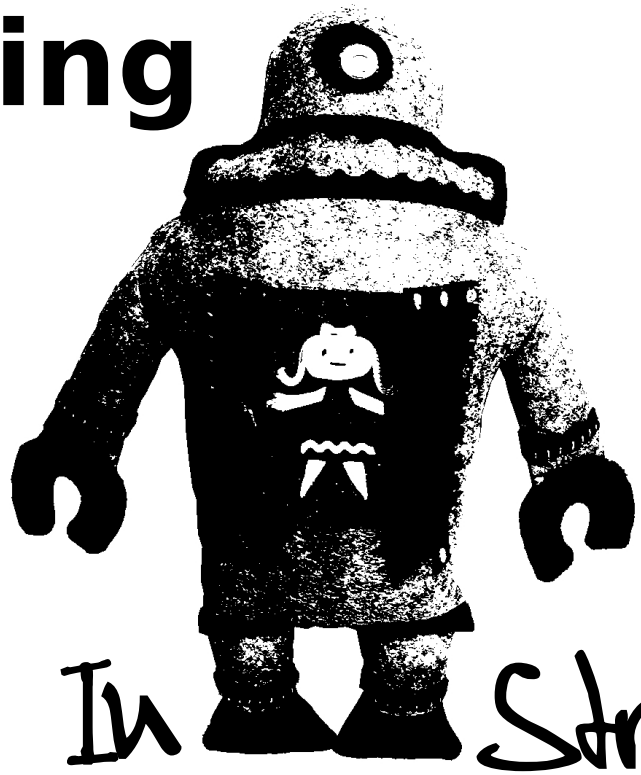
Machine Learning



In Structural Bioinformatics

One day conference@The Biocenter
University of Copenhagen, Denmark
Wednesday April 23rd, 2008

Speakers

Kanti V. Mardia, The University of Leeds, UK
Hans-Andrea Loeliger, ETH, Zürich, CH
Airlie McCoy, University of Cambridge, UK
Michael Habeck, Max Planck Institute for Biological Cybernetics, DE
Steen L. Hansen, University of Copenhagen, DK
Douglas Theobald, Brandeis University, US
Wouter Boomsma, University of Copenhagen, DK
Scott C. Schmidler, Duke University, Durham, US
Alexei Podtelezhnikov, Michigan Technological University, US

Organized by Thomas Hamelryck
Bioinformatics center, University of Copenhagen.
Registration is obligatory but free, and includes coffee+lunch.
Conference website: **http://wiki.binf.ku.dk/MLSB08**

Machine learning in Structural Bioinformatics

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Program

9h00-9h10
Welcome – Thomas Hamelryck, Thomas Schou (www.biosys.dk)

9h10-9h55
Can shape analysis and directional statistics revolutionize structural protein bioinformatics?
Kanti V. Mardia, The University of Leeds, UK

9h55-10h40
An introduction to Factor Graphs
Hans-Andrea Loeliger, ETH, Zürich, CH

10h40-11h25
Maximum likelihood methods in protein crystallography
Airlie McCoy, University of Cambridge, UK

Coffee break (11h25-11h45)

11h45-12h30
Bayesian methods for protein structure determination
Michael Habeck, Max Planck Institute for Biological Cybernetics, DE

12h30-13h15
Determination of macromolecular structure using small-angle scattering and Bayesian methods
Steen L. Hansen, University of Copenhagen, DK

Lunch (13h15-14h15)

14h15-15h00
Procrustes meets Theseus:
Bayesian superpositioning and analysis of macromolecules
Douglas Theobald, Brandeis University, US

15h00-15h45
A generative, probabilistic model of protein structure
Wouter Boomsma, University of Copenhagen, DK

Coffee break (15h45-16h05)

16h05-16h50
Statistical prediction and molecular simulation
Scott C. Schmidler, Duke University, Durham, US

16h50-17h35
Learning about protein energetics by minimizing contrastive divergence
Alexei Podtelezhnikov, Michigan Technological University, US
