

# SCAI 2006 program

## Wednesday, 25<sup>th</sup> of October, 2006

19:00 Registration & Welcome reception

## Thursday, 26<sup>th</sup> of October, 2006

9:00 Academician Teuvo Kohonen (Honorary Chair): Conference opening

Tapani Raiko (Organizing Committee Chair): Announcements

9:15 Session: Analysing Interdisciplinarity

9:15-9:35 Timo Honkela: Introduction

9:35-10:00 Henrik Bruun, Sampsa Laine:

Using the Self-Organizing Map for Measuring Interdisciplinary Research

10:00-10:25 Gordana Dodig-Crnkovic:

Professional Ethics in Computing and Intelligent Systems

10:25-10:50 Matti Pöllä, Timo Honkela, Henrik Bruun, Ann Russell:

Analysis of Interdisciplinary Text Corpora

10:50 Coffee break

11:10 Keynote: Ora Lassila (SCAI + STeP)

12:00 Lunch

13:00 Session: Genetic algorithms and computer vision

13:00-13:30 Jarmo Alander and Jorma Laaksonen: Introduction

13:30-13:55 Sampath Deegalla, Henrik Boström:

Reducing High-Dimensional Data by Principal Component Analysis vs. Random Projection for Nearest Neighbor Classification

13:55-14:20 Jorma Laaksonen, Ville Viitaniemi:

Emergence of ontological relations from visual data with Self-Organizing Maps

14:20-14:45 Perttu Hämäläinen, Timo Aila, Tapio Takala, Jarmo Alander:

Mutated Kd-tree Importance Sampling for Optimization

14:45-15:10 Janne Koljonen, Jarmo T. Alander:

Genetic algorithm for optimizing fuzzy image pattern matching

15:10-15:35 Janne Koljonen, Jarmo T. Alander:

Effects of population size and relative elitism on optimization speed and reliability of genetic algorithms

15:35 Coffee break

15:50 Session: Elastic systems

15:50-16:10 Heikki Hyötyniemi: Introduction

16:10 Session: Machine learning

16:10-16:40 Tapio Pahikkala, Jorma Boberg, Tapio Salakoski:  
Fast n-Fold Cross-Validation for Regularized Least-Squares

16:40-17:05 Richard Elling Moe:  
First order axiomatization of typed feature structures

17:05-17:30 Jaakko J. Väyrynen, Tiina Lindh-Knuutila:  
Emergence of multilingual representations by independent component  
analysis using parallel corpora

17:30-17:55 Oleg Okun, Helen Priisalu:  
Ensembles of nearest neighbour classifiers and serial analysis of  
gene expression

(Scandinavian AI-societies meeting)

19:00 Banquet at Radisson SAS Hotel Espoo (walking distance from the conference site)

## Friday, 27<sup>th</sup> of October, 2006

9:00 Announcements

9:10 Keynote: Tom Ziemke (SCAI + STeP)  
Integrating Cognition, Emotion & Autonomy

10:00 Coffee break

10:15 Session: Robotics and agents

10:15-10:40 Magnus Johnsson, Christian Balkenius:  
Haptic Perception with a Robotic Hand

10:40-11:05 Harri Valpola:  
Learning Anticipatory Behaviour Using a Simple Cerebellar Model

11:05-11:30 Kevin Westwood, Vicki Allan:  
Heuristics for Co-opetition in Agent Coalition Formation

11:30 Session: Poster spotlights

11:30-11:35 Timo Mantere:  
A Min-Max Genetic Algorithm with Alternating Multiple Sorting for Solving  
Constrained Problems

11:35-11:40 Dereje Teferi, Josef Bigun:  
Building Video Databases to Boost Performance Quantification  
-- The DXM2VTS Database

11:40-11:45 Alireza Derakhshan, Frodi Hammer, Henrik Hautop Lund, Yves Demazeau,  
Luigi Pagliarini:  
Adapting Playgrounds using Multi-Agent Systems

- 11:45-11:50 Janne Koljonen, Jarmo T. Alander:  
On fitness distance distributions and correlations, GA hardness, and population size with a family of square-root fitness functions
- 11:50-11:55 Sumon Shahriar, Ahammad Tofail, Hafiz Md. Hasan Babu:  
On the realization of asymmetric high radix signed digital adder using Neural Network
- 11:55-12:00 Tapani Raiko:  
Higher order statistics in play-out analysis
- 12:00-12:05 Thashmee Karunaratne, Henrik Boström:  
Learning from Structured Data by Finger Printing
- 12:05-12:10 Morten Lynge Jensen:  
Evolving poker players using NeuroEvolution of Augmenting Topologies
- 12:10-12:15 Heikki Hyötyniemi:  
Elastic Systems: Case of Hebbian Neurons
- 12:15-12:20 Weiqin Chen, Torbjørn Bøen:  
Fido - an RSS News Filtering Agent

12:20 Lunch and posters

14:00 Session: Digital games

- 14:00-14:20 Tomi A. Pasanen: Introduction
- 14:20-14:45 Arild Sandven, Bjørnar Tessem:  
A Case-Based Learner for Poker
- 14:45-15:10 Jouni Smed, Timo Knuutila, Harri Hakonen:  
Can We Prevent Collusion in Multiplayer Online Games?
- 15:10-15:35 Jarmo Kauko, Ville-Veikko Mattila:  
Mobile Games Pathfinding
- 15:35-16:00 Ismo Puustinen, Tomi A. Pasanen:  
Game Theoretic Methods for Action Games

16:00 Coffee break and posters

16:20 Session: Elastic systems

- 16:20-16:45 Heikki Hyötyniemi:  
Elastic Systems: Another View at Complexity
- 16:45-17:10 Olli Haavisto, Heikki Hyötyniemi:  
Neocybernetic Modeling of a Biological Cell
- 17:10-17:35 Kalle Halmevaara, Heikki Hyötyniemi:  
Application of Elastic Intuitions to Process Engineering
- 17:35-18:00 Michael Sailer, Heikki Hyötyniemi:  
Emergent Behavior in Sensor/Actor Networks in the Neocybernetic Framework of Elastic Systems

18:00 Tapani Raiko: Closing