

Awards and activities

Prizes and scientific honours received by researchers of the unit

M.Sc. Antti Honkela:

- Master's Thesis Award on Mathematical and Computational Modeling, Center for Mathematical and Computational Modeling, University of Jyväskylä. 2002.

Dr. Samuel Kaski:

- IEEE Senior Member. 2002.

Dr. Jorma Laaksonen:

- IEEE Senior Member. 2002.

Professor Heikki Mannila:

- ACM SIGKDD Innovation Award, ACM SIGKDD. 2003.

Dr. Jorma Laaksonen, M.Sc. Markus Koskela, Professor Erkki Oja:

- Best Paper Award at the Workshop on Self-Organizing Maps, Japan. 2003.

M.Sc. Jaakko Peltonen:

- Master's Thesis Award, The Finnish Association of Graduate Engineers TEK. 2002.

Dr. Harri Valpola:

- Dissertation Award, The Finnish Pattern Recognition Society. 2002.

Important international positions of trust held by researchers of the unit

Academy Professor Erkki Oja:

- Editorial Board Member:
Neural Computation (USA)
Pattern Recognition Letters (The Netherlands) –2002
International Journal of Pattern Recognition and and Artificial Intelligence (Singapore)
International Journal of Computer Research (USA)
Journal of Natural Computing (The Netherlands).
- Editor, *Artificial Neural Networks and Neural Information Processing*, Lecture Notes in Computer Science 2714, Springer, Berlin, 2003.
- European Neural Network Society (ENNS), The Netherlands. President.
- Evaluator of EU projects, Belgium, 2003.
- International Neural Network Society, USA. Governing Board Member.
- IEEE - Neural Networks Chapter, Finland. Chairman.
- Evaluator in filling the academic chairs of professors:
computational neuroscience, Universität Osnabruck, Germany, 2002
computer science, University of Strathclyde, U.K., 2002
electrical and computer engineering, University of Houston, USA, 2002
electrical and computer engineering, University of Minnesota, USA, 2002
associate research scientist (professor), University of California San Diego, USA, 2003.
- Opponent at the doctoral dissertation of Marc Van Hulle, Danish Technical University, Denmark, 2002.
- Opponent at the doctoral dissertation of Martin Kermit, University of Oslo, Norway, 2003.
- Plenary talk "Independent Component Analysis: introduction." European meeting on ICA, Vietri sul Mare, Italy, Feb. 21- 23, 2002.
- Tutorial talk "The Self-Organizing Map: basic theory." Natural Computing Days, Newcastle upon Tyne, England, March 4-5, 2002.
- Tutorial talk "Independent Component Analysis: basic theory." Natural Computing Days, Newcastle upon Tyne, England, March 4-5, 2002.
- Plenary talk "Independent Component Analysis: recent advances." Int. Conf. on Cognitive and Neural Systems (ICCNS), Boston, USA, May 28-31, 2002.
- Plenary talk "Independent Component Analysis: fundamentals and recent advances." Euro-International Symposium on Computational Intelligence (E-ISCI), Kosice, Slovakia, June 17-19, 2002.
- Plenary talk "Independent Component Analysis: fundamentals and recent advances." 26th Annual Conf. of the Gesellschaft für Klassifikation, Mannheim, Germany, July 22-24, 2002.

- Plenary talk "Finding hidden factors using Independent Component Analysis." European Conference on Machine Learning (ECML), Helsinki, Finland, August 20-23, 2002.
- Plenary talk "Independent Component Analysis." Hybrid Intelligent Systems (HIS'03), Santiago de Chile, Chile, Dec. 1-4, 2002.
- Tutorial talk "Data and image mining with SOM." 4th Workshop on Self-Organizing Maps (WSOM), Hibikino, Japan, Sept. 11-14, 2003.
- Program Chairman, 2nd Euro-International Symposium on Computational Intelligence, Kosice, Slovakia, June 16-19, 2002.
- Program Chairman and Session Chairman:
13th Int. Conf. on Artificial Neural Networks, ICANN'03, Istanbul, Turkey, June 26-29, 2003
Workshop on Self-Organizing Maps, WSOM'03, Hibikino, Japan, Sept. 11-14, 2003.
- Session Chairman and Program Committee Member:
4th Int. Symposium on Independent Component Analysis and Blind Source Separation, Nara, Japan, April 1-4, 2003
Int. Joint Conf. on Neural Networks, Portland, USA, July 21-24, 2003.
- Session Chairman:
World Congress on Computational Intelligence, Honolulu, USA, May 11-17, 2002
Between Data Science and Everyday Web Practice, Mannheim, Germany, July 22-24, 2002
Workshop on New Directions for Signal Processing in the 21st Century, Lake Louise, Canada, October 5-10, 2003.
- Program Committee Member:
Int. Conf. on Artificial Neural Networks, Madrid, Spain, August 27-30, 2002
Int. Conf. on Neural Information Processing, Singapore, November 18-22, 2002.

Academician Teuvo Kohonen:

- Evaluator in filling the academic chair of Associate Professor, Drexel University, USA, 2002.
- Plenary talk "Self-organized maps of sensory events." Nobel Symposium, Stockholm, Sweden, August 25-27, 2002.
- Plenary talk "A computational model of visual attention." Int. Conf. on Artificial Neural Networks and Genetic Algorithms, ICANNGA'03, Roanne, France, April 23-25, 2003.
- Plenary talk "A computational model of visual attention." 13th Int. Conf. on Artificial Neural Networks, ICANN'03, Istanbul, Turkey, June 26-29, 2003.
- Invited talk "A computational model of visual attention." Int. Joint Conf. on Neural Networks, IJCNN'03, Portland, Oregon, USA, July 20-24, 2003.
- Tutorial talk "The SOM: How it was invented, what is its connection to the brain, and how can it be generalized." Workshop on Self-Organizing Maps, WSOM'03, Hibikino, Japan, Sept. 11-14, 2003.

Professor Juha Karhunen:

- Editorial Board Member:
Neurocomputing (The Netherlands)
Neural Processing Letters (The Netherlands)
- Invited poster presentation "Constructing graphical models for Bayesian ensemble learning from simple building blocks." Workshop on Learning, Snowbird, Utah, USA, April 2-5, 2002.
- Invited talk "An ensemble learning approach to nonlinear dynamic blind source separation using state-space models." The 2002 Int. Joint Conf. on Neural Networks (IJCNN2002), Honolulu, Hawaii, May 2002 (in special invited session on advances in independent component analysis, presented by A. Honkela).
- Invited talk "Advances in nonlinear blind source separation." The 4th Int. Workshop on Independent Component Analysis and Blind Source Separation (ICA2003), Nara, Japan, April 1-4, 2003 (in a special session on nonlinear independent component analysis and blind signal separation, presented by Prof. C. Jutten).
- Invited talk "Bayesian modeling of variance sources." European Summer School on ICA, Berlin, Germany, June 16-17, 2003 (presented by T. Raiko).
- Session Chairman and Program Committee Member:
4th Int. Symp. on Independent Component Analysis and Blind Signal Separation (ICA2003), Nara, Japan, April 1-3, 2003.
- Program Committee Member:
IEEE ISCAS2002, Phoenix, Arizona, USA, May, 26-29, 2002
IEEE IJCNN2002 (WCCI2002), Honolulu, Hawaii, USA, May, 12-17, 2002
ESANN2002, Bruges, Belgium, April 24-26, 2002
IEEE ISCAS2003, Bangkok, Thailand, May 26-29, 2003

Professor Olli Simula:

- European Neural Network Society (ENNS), Great Britain. Governing Board Member.
- IEEE - Computer Chapter (C-16), Finland. Chairman.
- Plenary talk "SOM based analysis of industrial processes and telecommunication systems." Workshop on Self-Organizing Maps (WSOM'03), Hibikino, Japan, Sept. 11-14, 2003.
- Session Chairman and Program Committee Member:
Int. Conf. on Artificial Neural Networks, ICANN 2002, Madrid, Spain, Aug. 28-30, 2002
Workshop on Self-Organizing Maps, WSOM'03, Hibikino, Japan, Sept. 11-14, 2003.
- Program Committee Member, 13th Int. Conf. on Artificial Neural Networks, ICANN'03, Istanbul, Turkey, June 26-29, 2003.

Professor Heikki Mannila:

- Editor-in-Chief, Data Mining and Knowledge Discovery (USA).

- Associate Editor, ACM Transactions on Internet Technology (USA).
- Action Editor, Journal of Machine Learning Research (USA).
- Area Editor, IEEE Transactions on Knowledge and Data Engineering (USA).
- Member of PKDD Steering Committee.
- Member of ACM SIGKDD Curriculum Committee 2003–.
- Member of Technical Advisory Board, Verity Inc.
- Plenary talk, "Global structure from sequences." IEEE Int. Conf. on Data Mining (ICDM 2003), Melbourne, Fl., USA, 2003.
- Co-Chairman:
 - Sixth European Symposium on Principles of Data Mining and Knowledge Discovery (PKDD 2002), Helsinki, Finland
 - Machine Learning: ECML 2002 - 12th European Conference on Machine Learning, Helsinki, Finland.
- Program Co-Chairman, Second SIAM Int. Conf. on Data Mining 2002, San Francisco, CA, USA.
- Program Committee Member:
 - IEEE Int. Conf. on Data Mining (ICDM 2002), Macbashi, Japan
 - 29th Int. Colloquium on Automata, Languages and Programming - ICALP 2002, Malaga, Spain
 - Discovery Science 2002, Lübeck, Germany
 - Eighth SIGKDD Conference on Data Mining and Knowledge Discovery (KDD'02), Edmonton, Canada
 - Int. Conf. on Database Theory (ICDT 2003), Siena, Italy
 - ACM Symposium on Management of Data (SIGMOD 2003), San Diego, CA, USA
 - IEEE Int. Conf. on Data Mining (ICDM 2003), Melbourne, Florida, USA
 - Int. Conf. on Machine Learning (ICML 2003), Washington, D.C., USA
 - 15th Int. Conf. on Scientific and Statistical Database Management (SSDBM 03), Cambridge, MA, USA.

Professor Jaakko Hollmén:

- Member of the Management Board in the Knowledge Discovery Network of Excellence (KNet) supported by EU Project No. IST-2001-33086.
- Member of the Management Board of the research project "Smart information system for waste treatment (iWaste)" in the STREAMS Technology project funded by TEKES.
- Invited talk "Data analysis of 0-1 data by combining frequent sets and mixture models." Teoriapäevad Pedasel (Theoretical computer science days), Pedase, Estonia, Oct. 3-5, 2003.
- Invited talk "Bioinformatics – something for the computer scientists?" Nordic University Computer Club Conference (NUCCC 2003), Espoo, Finland, March 28-30, 2003.

- Invited talk "Analysis of microarray data: current research and future challenges." Microarray data analysis developers' days. CSC – Scientific Computing, Espoo, Finland, May 26-27, 2003.
- Invited talk "Analysis of microarray data." Graduate school on microarrays, Helsinki Biomedical Graduate School, Helsinki, Finland, May 19-21, 2003.
- Invited talk "Beyond clustering: case studies and possibilities in gene expression data analysis." Microarray Bioinformatics Seminar, The Joint Bioinformatics Lab. of Turku Centre for Computer Science and Turku Centre for Biotechnology, Turku, Finland, May 6-7, 2003.
- Program Committee Member, Workshop on Self-Organizing Maps, WSOM'03, Hibikino, Japan, Sept. 11-14, 2003.

Professor Timo Honkela

- International Federation on Information Processing (IFIP), TC12 (Artificial Intelligence), Representative of Finland.
- Expert for Research Programme on Proactive Computing, Academy of Finland and French Ministry of Research, member of evaluation panel, 2002.
- Project Evaluator for the Sixth Framework Programme of EU Commission, 2003.
- Invited talk "Visual data and text mining for medical education, research and practice." Karolinska University, Stockholm, Sweden, 22nd of April, 2003.
- Invited talk "Emergence of implicit and explicit categories: cognitive models based on self-organizing maps and independent component analysis." Int. Conf. on Learning and Concept Formation, Lund University, Sweden, 14th of June, 2003.

Dr. Aapo Hyvärinen:

- Editor-in-Charge, International Journal of Neural Systems (Singapore).
- Plenary talk "Extensions of ICA as models of natural images and visual processing." Int. Symposium on Independent Component Analysis and Blind Source Separation, Nara, Japan, April 1-4, 2003.
- Invited talk "Activity bubbles and natural image sequences." Int. Conf. on Knowledge-Based Intelligent Information and Engineering Systems (KES2002), Crema, Italy, Sept. 16-18, 2002.
- Program Committee Member:
Int. Conf. on Neural Information Processing, Singapore, Nov. 18-22, 2002
European Conference on Machine Learning, Helsinki, Finland, Aug. 19-23, 2002
Int. Workshop on Generative-Model-Based Vision, Copenhagen, Denmark, June 2, 2002.

Dr. Jukka Iivarinen:

- Session Chairman and Program Committee Member, 10th Finnish Artificial Intelligence Conf., Oulu, Finland, Sept. 16-17, 2002.

- Session Chairman, 7th Int. Conf. on Control, Automation, Robotics and Vision. Singapore, Dec. 3-6, 2002
- Program Committee Member, 13th Scandinavian Conf. on Image Analysis, Göteborg, Sweden, June 29 - July 2, 2003.

Dr. Samuel Kaski:

- Editorial Board Member:
International Journal of Neural Systems (Singapore)
Intelligent Data Analysis (The Netherlands).
- Member of the Machine Learning for Signal Processing Technical Committee of the IEEE Signal Processing Society, USA (2003-).
- Invited talk "Discriminative clustering: vector quantization in learning metrics." 26th Annual Conf. of the Gesellschaft für Klassifikation (GfKl) July 22-24, 2002, Mannheim, Germany.
- Plenary talk "Learning metrics." 3rd Conf. of the International Society for Ecological Informatics (ISEI), Rome, Italy, Aug. 26-30, 2002.
- Invited talk "Learning metrics." New Trends in Intelligent Information Processing and Web Mining, Zakopane, Poland, June 2-5, 2003.
- Invited talk "Discriminative clustering." 54th Session of the International Statistical Institute (ISI), Berlin, Germany, Aug. 13-20, 2003.
- Plenary talk "Exploration of gene expression." Workshop on Self-Organizing Maps (WSOM'03), Kitakyushu, Japan, Sept. 11-14, 2003.
- Program Chairman and Session Chairman, 10th Finnish Artificial Intelligence Conf., Oulu, Finland, Sept. 16-17, 2002.
- Session Chairman and Program Committee Member:
9th Int. Conf. on Neural Information Processing (ICONIP'02), Singapore, Nov. 18-22, 2002
Workshop on Self-Organizing Maps, WSOM'03, Hibikino, Japan, Sept. 11-14, 2003.
- Program Committee Member:
Int. Symposium on Intelligent Data Engineering and Automated Learning (IDEAL'02), Manchester, U.K., Aug. 12-14, 2002
Int. Conf. on Data Warehousing and Knowledge Discovery (DaWaK'02), Aix-en-Provence, France, Sept. 4-6, 2002
IASTED Int. Symposium on Artificial Intelligence and Applications, Innsbruck, Austria, Feb. 18-21, 2002
6th European Conf. on Principles and Practice of Knowledge Discovery in Databases, Helsinki, Finland, Aug. 19-23, 2002
Fourth Int. Conf. on Intelligent Data Engineering and Automated Learning (IDEAL'03), March 21-23, 2003, Hong Kong
5th Int. Conf. on Data Warehousing and Knowledge Discovery, DaWaK 2003, Sept. 3-5, 2003, Prague, Czech Republic
7th European Conf. on Principles and Practice of Knowledge Discovery in Databases (PKDD), Dubrovnik, Croatia, Sept. 22-26, 2003

IIPWM'03, New Trends in Intelligent Information Processing and Web Mining, Zakopane, Poland, June 2-5, 2003

WI 2003, the 2003 IEEE/WIC Int. Conf. on Web Intelligence, Beijing, China, Oct. 13-17, 2003

2003 IEEE Int. Workshop on Neural Networks for Signal Processing, Toulouse, France, Sept. 17-19, 2003.

Dr. Miki Siroła:

- Technical Committee on Modelling and Simulation 2000–2003. Member.
- Technical Committee on Intelligent Systems and Control 2002–2005. Member.
- Session Chairman:
 - Int. Conf. on Knowledge-Based Intelligent Information & Engineering Systems (KES'2003), Oxford, U.K., Sept. 3-5, 2003
 - IEEE Int. Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS'2003), Lviv, Ukraine, Sept. 8-10, 2003.
- Program Committee Member:
 - Int. Conf. on Modelling, Identification and Control, Innsbruck, Austria, Feb. 18-21, 2002
 - Int. Conf. on Modelling and Simulation, Marina del Ray, Calif., USA, May 13-15, 2002
 - Int. Conf. on Applied Simulation and Modelling, Crete, Greece, June 25-28, 2002
 - Int. Conf. on Modelling, Identification and Control, Innsbruck, Austria, Feb. 10-13, 2003
 - Int. Conf. on Modelling and Simulation, Palm Springs, USA, Feb. 24-26, 2003
 - Int. Conf. on Intelligent Systems and Control, Salzburg, Austria, June 25-27, 2003
 - Int. Conf. on Applied Simulation and Modelling, Marbella, Spain, Sept. 3-5, 2003.

Important domestic positions of trust held by researchers of the unit

Academy Professor Erkki Oja:

- Finnish Academy of Science and Letters. Group of mathematics and computer science, vice chairman.
- Opponent at the doctoral dissertation of Ville Kyrki, Lappeenranta University of Technology, 2002
Topi Mäenpää, University of Oulu, 2003.
- Evaluator in filling the academic chairs of professors: computer science, University of Helsinki, 2002
biomedical engineering, University of Oulu, 2003.

Professor Olli Simula:

- Opponent at the doctoral dissertation of Lasse Lensu, Lappeenranta University of Technology, 2002
Olli Saarela, Tampere University of Technology, 2002
Heikki Jokinen, Tampere University of Technology, 2003.
- Evaluator in filling the academic chair of professor, metrology, Tampere University of Technology, 2002.

Academician Teuvo Kohonen:

- Invited talk "Neural networks." Annual meeting of the union of teachers of mathematical subjects (MAOL ry), Raahe, Finland, Feb. 1, 2002.

Professor Jaakko Hollmén:

- Opponent at the doctoral dissertation of Sampsa Hautaniemi, Tampere University of Technology, 2003.

Professor Timo Honkela:

- Editorial Board Member, journal *Puhe ja kieli* (Speech and Language).
- Member of IFIP Board, Finnish Information Processing Association.
- Opponent at the doctoral dissertation of Sam Sandqvist, HUT, 2002.
- Evaluator for docentship at Media Lab, University of Art and Design, Helsinki, 2003.

Dr. Jukka Iivarinen:

- Pattern Recognition Society of Finland. Chairman –2002, Vice Chairman 2003– .

Dr. Samuel Kaski:

- Finnish Artificial Intelligence Society. Vice Chairman. 2002.
- Opponent at the doctoral dissertation of Vesa Ollikainen, University of Helsinki, 2002
Jani Mäntyjärvi, University of Oulu, 2003.

Dr. Jorma Laaksonen:

- Finnish Artificial Intelligence Society. Chairman of the dictionary committee. 2003.

Dr. Krista Lagus:

- Member of the Board, Graduate School of Language Technology in Finland
- Member of the Board of FICLA, Finnish Cognitive Linguistics Association

M.Sc. Tapani Raiko:

- Finnish Artificial Intelligence Society. Member of the Governing Board. 2003.

Research visits abroad by researchers of the unit; 2 weeks or more

- Dr. Patrik Hoyer, New York University, USA, July 2002 (2 wks), Jan. – Dec. 2003.
- Dr. Aapo Hyvärinen, Stanford University, USA, July 2002 (2 wks).
- Dr. Aapo Hyvärinen, Max Planck Institute for Biological Cybernetics, Oct. 2002 (2 wks).
- Dr. Mikko Kurimo, University of Colorado, The Center of Spoken Language Research, Boulder, USA, Dec. 2002–Jan. 2003.
- M.Sc. Tapani Raiko, Albert-Ludwigs-Universität, Freiburg, Germany, Oct. 2001–Sept. 2002.
- Dr. Panu Somervuo, The International Computer Science Institute, Berkeley, USA, Feb. 2002–Jan. 2003.
- Dr. Ricardo Vigário, Fraunhofer Institute for Computer Architecture and Software Technology, Berlin, Germany, Feb.-April, 2002.
- M.Sc. Alexander Ilin, Institut National Polytechnique de Grenoble (INPG), France, May–June 2003.
- Dr. Timo Honkela, Lund University Cognitive Science, Sweden, May–June 2003 (5 wks).
- Dr. Harri Valpola, University of Zürich, Switzerland, Sept. 2003– .

Research visits by foreign researchers to the unit; 2 weeks or more

- Dr. Mark Plumbley, Queen Mary University of London, U.K., April–July 2002 (3 mths).
- Dr. Maria Funaro, University of Salerno, Italy, Oct. 2002 (2 wks).
- M.Sc. Emilio Di Meglio, University of Napoli, Italy, Feb.-June 2002.
- B.Sc. Leah Russell, Dalarna University, Borlänge, Sweden, June–Nov. 2002.
- M.Sc. Marco Bressan, Universitat Autònoma de Barcelona, Spain, July–Sept. 2002 (6 wks).
- M.Sc. Ana Gonzales, University of La Rioja, Spain, Oct. 2003 (2 wks).
- M.Sc. Patricia Rufino Oliveira, University of Sao Paulo, Brazil, March–Aug. 2003.
- Mr. Jan-Hendrik Schleimer, University of Tübingen, Germany, Aug. 2003– .
- M.Sc. Tanja Kämpfe, University of Bielefeld, Germany, Sept.–Nov. 2003.
- Dr. Ata Kaban, University of Birmingham, U.K., July–Aug. 2003 (6 wks).
- M.Sc. Nasser Mourad, South Valley University, Aswan, Egypt, Oct. 2003– .
- M.Sc. Jose-Miguel Leiva, Universidad Carlos III, Madrid, Spain, Oct.-Nov. 2003.

