

Melih Kandemir

melih.kandemir@aalto.fi
<http://users.ics.tkk.fi/melihk>

Date of Birth November 23rd, 1983
Citizenship Republic of Turkey
Address Konemiehentie 2
Room A320
Espoo, Finland
Phone +358-40-6803880

Research Interests

Machine Learning	Bayesian latent variable models Transfer learning Gaussian processes Bayesian nonparametrics	Biosignal Analysis	Neuroinformatics Eye movement analysis Affective computing
-------------------------	---	---------------------------	--

Education

2008–Present	DSc. Student at Aalto University School of Science, Information and Computer Science, Espoo, Finland. Dissertation: Learning Mental States from Biosignals (Under Review) Supervisor: Samuel Kaski, Instructor: Arto Klami
2006–2008	MSc. at Bilkent University, Computer Engineering, Ankara, Turkey. Thesis: Segmentation of Colon Glands by Object Graphs Supervisor: Çiğdem Gündüz Demir CGPA: 3.84/4.00
2001–2005	BSc. at Hacettepe University, Computer Engineering, Ankara, Turkey. CGPA: 3.48/4.00 (4th highest in 60 graduates)

Languages

Turkish: Mother tongue **English:** Fluent **French:** Good

Work Experience

2008–Present	Researcher at Aalto University School of Science, Espoo, Finland Statistical Machine Learning and Bioinformatics Group http://research.ics.tkk.fi/mi Built machine learning models for inferring user interests from biosignals. The models were tailored for proactive human-computer interaction. The research has been funded by several projects with collaborators from disciplines such as neuroscience and media technology, and industry partners such as Nokia Research Center.
2006–2008	Senior Software Engineer at Meteksan Sistem Inc., Ankara, Turkey Designed and developed military simulators. Practised 3D graphics programming, process modelling and simulation.

2005–2006	Software Engineer at Teknoloji Yazılımevi Ltd., Ankara, Turkey Designed and developed management information systems for Turkish Ministry of Education using ASP .NET and Oracle DBMS.
2004–2004	Software Specialist at Z-Sistem Ltd., Ankara, Turkey Developed a packet traffic monitoring tool for a network security equipment.

Teaching

2011	Research Project in Computer and Information Science, Supervised Student: Francesco Trovò, Title: Discriminative Gaussian Process Latent Variable Models
2010	Research Project in Computer and Information Science, Supervised Student: Alejandro López Vidal, Title: Visual Saliency Modeling using Probabilistic Canonic Correlation Analysis

Skills

Matlab, R, C, C++, C# (Advanced), Python, PHP, Java, OpenGL (Good)

References

Samuel Kaski	Professor at Aalto University School of Science Department of Information and Computer Science Espoo, Finland samuel.kaski@aalto.fi
Çiğdem Gündüz Demir	Assistant Professor at Bilkent University Department of Computer Engineering Espoo, Finland gunduz@cs.bilkent.edu.tr
Arto Klami	Postdoctoral Researcher at Aalto University School of Science Department of Information and Computer Science Espoo, Finland arto.klami@aalto.fi
Akos Vetek	Principal Research Scientist Nokia Research Center Helsinki, Finland akos.vetek@nokia.com

Publications

- 2012 **Multi-task and multi-view learning of user state**
M. Kandemir, A. Vetek, A. Klami, M. Gönen, S. Kaski,
Under review.
- 2012 **Learning relevance from natural eye movements in pervasive interfaces**
M. Kandemir, S. Kaski,
International Conference on Multimodal Interaction (ICMI).
- 2012 **Unsupervised inference of auditory attention from biosensors**
M. Kandemir, A. Klami, A. Vetek, S. Kaski,
European Conference on Machine Learning (ECML-PKDD).
- 2011 **Multitask learning using regularized multiple kernel learning**
M. Gönen, M. Kandemir, S. Kaski,
International Conference on Neural Information Processing (ICONIP)
Lecture Notes in Computer Science, pp. 500–509.
- 2011 **An augmented reality interface to contextual information**
A. Ajanki, M. Billinghurst, H. Gamper, T. Järvenpää,
M. Kandemir, S. Kaski, M. Koskela, M. Kurimo,
J. Laaksonen, K. Puolamäki, T. Ruokolainen, T. Tossavainen,
Virtual Reality, 15(2-3):161–173.
- 2010 **Automatic Segmentation of Colon Glands using Object-Graphs**
Gündüz-Demir, M. Kandemir, A.B. Tosun, C. Sökmensüer,
Medical Image Analysis, 14(1):1–12.
- 2010 **Inferring object relevance from gaze in dynamic scenes**
M. Kandemir, V.M. Saarinen, S. Kaski,
Eye Tracking Research & Applications (ETRA), 105–108.
- 2010 **Contextual information access with augmented reality**
A. Ajanki, M. Billinghurst, H. Gamper, T. Järvenpää,
M. Kandemir, S. Kaski, M. Koskela, M. Kurimo,
J. Laaksonen, K. Puolamäki, T. Ruokolainen, T. Tossavainen,
International Workshop on Machine Learning for Signal Processing (MLSP), pp.95–100.
- 2010 **Ubiquitous contextual information access with proactive retrieval and augmentation**
A. Ajanki, M. Billinghurst, H. Gamper, T. Järvenpää,
M. Kandemir, S. Kaski, M. Koskela, M. Kurimo,
J. Laaksonen, K. Puolamäki, T. Ruokolainen, T. Tossavainen,
International Workshop on Ubiquitous Virtual Reality (IWUVR).
- 2009 **Object-oriented texture analysis for the unsupervised segmentation of biopsy images for cancer detection**
A.B. Tosun, M. Kandemir, C. Sökmensüer, Gündüz-Demir,
Pattern Recognition, 42(6):1104–1112.
- 2007 **A Framework for Real-Time Animation of Liquid-Rigid Body Interaction**
M. Kandemir, T. Çapın, B. Özgüç,
Computer Graphics International (CGI).