SERGÜL AYDÖRE
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Bogazici University
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Objective: Pursuing for PhD degree in a well-established institution where I will be able utilize and improve my both theoretical and experimental skills.

Awards and Honors:
- OSA Foundation Grant to attend Biomedical Optics, March 14-21 St. Petersburg, FL, USA. (2008)
- Graduate scholarship from TÜBİTAK (The Scientific and Technological Council of Turkey) (2007-current)
- Undergraduate scholarship from Eskişehir ETİ Company (2002-2007)
- Graduated with "Honors Certificate" from Bogazici University, Department of Electrical and Electronics Engineering (2007)
- Ranked in the top 0.01% in the nationwide university entrance exam, Turkey (2002)
- Graduated with rank 1st Eskisehir Gelisim Private High School (2002)

Education:
M.S. : Bogazici University Electrical Engineering (2007-Current), (Current GPA: 3.80/4.00)
B.S. : Bogazici University Electrical Engineering (2002-2007), (GPA: 3.06/4.0)

Working Experience and Professional Activities:
Teaching Assistant at Bogazici University, Department of Mathematics and Electrical Engineering for the following courses:
- Linear Algebra (Fall 2007)**,** Spectral Estimation (Spring 2007), Information Theory (Fall 2008), Probability for Electrical Engineers (Fall 2008).

Research Assistant at Bogazici University, Signal and Image Processing Laboratory (BUSIM) (2006-2008 Spring) and Lung Acoustics Laboratory (BULAL) (2008 Fall-current)
Reviewer for the journal "Signal Processing: Image Communication" (2008 Fall-current)

Research Interest: Biomedical Signal Processing and Image Watermarking

Related Courses:
Undergraduate: Digital Signal Processing, Digital Communication, Speech Processing, Spectral Estimation, Artificial Neural Networks
Graduate: Mathematical Methods for Signal Processing, Calculus of Variations, Statistical Signal Analysis, Stochastic Process and Applications, Pattern Recognition, Information Theory, Detection and Estimation Theory, Adaptive Filter Theory

Projects: I have been working on three different projects since the last semester of my BS degree.
1. Respiratory wheeze detection (2008 Fall-current): Respiratory sounds with and without wheezes are characterized according to complexity and time frequency properties.
2. Image Watermarking in modified NMF Domain (2008 Spring-2009 Fall): A modified Non-Negative Matrix Factorization (NMF) method is proposed for image watermarking in order to achieve robustness and security against geometric attacks.
3. Analysis of fNIRS Signals from both healthy and schizophrenic people (2007 Spring-2008 Fall): Functional connectivity of human brain during cognitive tasks from fNIRS signals is estimated. Correlation between connectivity and cognitive load is observed. Also, significant differences between healthy and schizophrenic subjects are detected.

Publications:

Journal papers

S. Aydore, M.K. Mihcak, A. Akin, R. K. Ciftci, " On Temporal Connectivity of PFC via Gauss-Markov Modeling of fNIRS Signals", submitted to *IEEE Transactions on Biomedical Engineering,* September 2008.
(available form: http://www.busim.ee.boun.edu.tr/~sergul/ieee_biomed_paper.pdf)

S. Aydore, S. Kozat, M.K. Mihcak, "Semi-Blind Watermarking using Non-Negative Matrix factorization Algorithm", in preparation for submission to *IEEE Multimedia Signal Processing*.

Conference Papers.

S.Aydore, M. K. Mihcak, A. Akin, *"*System Identification of Prefrontal Cortex in the Presence of Coginitive Tasks*"*, *Biomedical Optics Topical Meeting (BIOMED)* St. Petersburg, Florida, USA, March 2008.
(available form: http://www.busim.ee.boun.edu.tr/~sergul/conf_paper.pdf)

S. Aydore, I. Sen, M. K. Mihcak, Y. P. Kahya, "Classification of Wheeze in Respiratory Sounds by Linear Discriminant Method",submitted to *IEEE 17th Signal and Image Communications Applications*, Antalya, Turkey, April 9-11, 2009.
(available form: http://www.busim.ee.boun.edu.tr/~sergul/SIUsubmission.pdf)

Computer and Language Skills :
Programming Languages and Skills: C / C++ , MATLAB, Latex
Languages: Turkish (native), English (fluent), German (intermediate)

References: Available upon request