Itır Önal

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Education

PH.D. | PRESENT | MIDDLE EAST TECHNICAL UNIVERSITY

Department of Computer Engineering, CGPA = 4.00 **Advisor:** Prof. Dr. Fatoş T. YARMAN VURAL

M.SC. | 2013 | MIDDLE EAST TECHNICAL UNIVERSITY

Department of Computer Engineering, CGPA = 4.00

Thesis: An Information theoretic representation of brain connectivity for cognitive state classification using functional magnetic resonance imaging. **Advisor:** Prof. Dr. Fatoş T. YARMAN VURAL

B.SC. | 2011 | MIDDLE EAST TECHNICAL UNIVERSITY

· Department of Computer Engineering, CGPA = 3.83 (High Honour student, 3rd place)

EXCHANGE STUDENT | 2010 | CZECH TECHNICAL UNIVERSITY

· Department of Electrical Engineering

Work Experience

RESEARCH ASSISTANT | DEPARTMENT OF COMPUTER ENGINEERING, METU | SEPT 2011 – PRESENT

· Currently making research on brain decoding using fMRI data. Also teaching assistant of many Computer Engineering Department courses.

INTERN | SOFTWARE RESEARCH AND DEVELOPMENT CENTER (SRDC) | JUNE 2009 – JULY 2009

· A member of a project team that worked on e-invoice process of Turkey

STUDENT TEACHING ASSISTANT | DEPARTMENT OF COMPUTER ENGINEERING, METU | SEPT 2008 – MAY 2011

· Student teaching assistant of CENG 230 (Introduction to C Programming) course

Project Experience

YEREL VOKSEL AĞLARI İLE BEYİN SİNYALLERI KULLANILARAK BİLİŞSEL SÜREÇLERİN MODELLENMESİ VE OTOMATİK OLARAK SINIFLANDIRILMASI | JAN 2013 – DEC 2014

· A member of a project team that works on modeling the information in the brain and classification of cognitive states using fMRI data.

HAVELSAN VIDEO ANALYSIS SYSTEM (HVAS) | SEPT 2011 – SEPT 2013

· A member of a project team that works on event detection from surveillance videos.

SMART SHOPPING | SEPT 2010 – JUNE 2011

· Final Design Project at METU sponsored by ASELSAN. It's an augmented reality project, with image processing (object detection and tracking), aimed to make shopping easier.

Academic Areas of Interest

· Pattern Recognition & Machine Learning

· Biomedical Signal Processing

· Image Processing

Awards & Certificates

· High Honor Student since enrollment, METU, TURKEY

· Best Paper Award in 12th IEEE International Conference on Cognitive Informatics and Cognitive Computing (ICCI*CC) 2013

· Outstanding Achievement Award by Computer Engineering Department, METU, TURKEY

· Certificate of Attendance, Microsoft Summer School 2010, Ankara, TURKEY

Personal

· **Birthdate:** 11/01/1989 Ankara/ TURKEY

· **Languages:** Turkish (Native), English(Advanced, TOEFL Score 96), German (Elementary Certificate)

· **Interests:** Playing the violin (given concerts with an orchestra), travelling around the world, ice-skating

Publications

· **I. Onal,** M. Ozay, F. T. Yarman Vural, "Functional Mesh Model with Temporal Measurements for Brain Decoding", 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2015

· **I. Onal,** M. Ozay, F. T. Yarman Vural, "Modeling Voxel Connectivity for Brain Decoding", International Workshop on Pattern Recognition in Neuroimaging (PRNI) 2015.

· **I. Onal,** A. Temizel, F. T. Yarman Vural, "Spatial and Temporal Feature Extraction for Brain Decoding using CUDA", GPU Technology Conference (GTC) 2015.

· **I. Onal,** E. Aksan, B. Velioglu, O. Firat, M. Ozay, I. Oztekin, F. T. Yarman Vural, "A Brain Network for Cognitive State Analysis " IEEE 23rd Conference on Signal Processing and Communications Applications (SIU), 2015. (in Turkish)

· O. Firat, M. Ozay, **I. Onal**, I. Oztekin, F. T. Yarman Vural, "Enhancing Local Linear Models Using Functional Connectivity for Brain State Decoding", International Journal of Cognitive Informatics and Natural Intelligence (IJCINI), 2014.

· **I. Onal**, E. Aksan, B. Velioglu, O. Firat, M. Ozay, I. Oztekin, F. T. Yarman Vural, "Modeling the Brain Connectivity for Pattern Analysis", 22nd International Conference on Pattern Recognition (ICPR), 2014

· O. Firat, **I. Onal**, E. Aksan, B. Velioglu, I. Oztekin, F. T. Yarman Vural, "Large Scale Functional Connectivity For Brain Decoding", 11th IASTED International Conference on Biomedical Engineering (BioMed), 2014.

· B. Velioglu, E. Aksan, **I. Onal**, O. Firat, M. Ozay, F. T. Yarman Vural, "Functional Networks of Anatomic Brain Regions", 13th IEEE International Conference on Cognitive Informatics and Cognitive Computing (ICCI*CC), 2014.

· **I. Onal,** A. M. Ertugrul, R. Cakici, "Effect of Using Regression on Class Confidence Scores in Sentiment Analysis of Twitter Data", 5th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis, 2014.

· A. M. Ertugrul, **I. Onal,** "RemindMe: An Enhanced Mobile Location-Based Reminder Application", International Conference on Future Internet of Things and Cloud (FiCloud), 2014.

· **I. Onal**, E. Aksan, B. Velioglu, O. Firat, M. Ozay, I. Oztekin, F. T. Yarman Vural, "Estimating Brain Connectivity for Pattern Analysis", 22nd IEEE Conference on Signal Processing and Communications Applications (SIU), 2014. (in Turkish)

· **I. Onal**, A. M. Ertugrul, "Effect of Using Regression in Sentiment Analysis", 22nd IEEE Conference on Signal Processing and Communications Applications (SIU), 2014. (in Turkish)

· A. M. Ertugrul, **I. Onal,** "Çeşitli Konum Etiketleme Opsiyonlarıyla Zenginleştirilmiş Yeni Bir Konum Bazlı Hatırlatma Uygulaması", 8. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS), 2014. (in Turkish)

· **I. Onal**, M. Ozay, O. Firat, I. Oztekin, F. T. Yarman Vural, "An Information Theoretic Approach to Classify Cognitive States Using fMRI", 13th IEEE International Conference on BioInformatics and BioEngineering (BIBE), 2013.

· **I. Onal**, M. Ozay, O. Firat, I. Oztekin, F. T. Yarman Vural, "Analyzing the Information Distribution in the fMRI measurements by estimating the degree of locality",35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2013

· O. Firat, M. Ozay, **I. Onal**, I. Oztekin, F. T. Yarman Vural, "Functional Mesh Learning for Pattern Analysis of Cognitive Processes", 12th IEEE International Conference on Cognitive Informatics and Cognitive Computing (ICCI*CC), 2013. (**Best Paper Award**)

· O. Firat, M. Ozay, **I. Onal**, I. Oztekin, F. T. Yarman Vural, "Representation of Cognitive Processes Using the Minimum Spanning Tree of Local Meshes", 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2013

- **I. Önal**, K. Kardas, Y. Rezaeitabar, U. Bayram, M. Bal, I. Ulusoy, N. Kesim Çiçekli, "A framework for Detecting Complex Events in Surveillance Videos", 3rd IEEE International Workshop on Advances in Automated Multimedia Surveillance for Public Safety (AAMS-PS 2013)
- **I. Onal**, M. Ozay, O. Firat, I. Oztekin, F. T. Yarman Vural, "Information Distribution Analysis in the fMRI measurements with Degree of Locality Estimation", IEEE 21th Conference on Signal Processing and Communications Applications (SIU), 2013 (in Turkish)
- O. Firat, M. Ozay, **I. Onal**, I. Oztekin, F. T. Yarman Vural, "Cognitive Processes Representation Using Minimum Spanning Tree of Local Meshes",IEEE 21th Conference on Signal Processing and Communications Applications (SIU), 2013. (in Turkish)
- O. Firat, M. Ozay, **I. Onal**, I. Oztekin, F. T. Yarman Vural, "A Mesh Learning Approach for Brain Data Modeling",IEEE 20th Conference on Signal Processing and Communications Applications (SIU), 2012. (in Turkish)