

Tuğçe Ballı

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Education

- October 2006 – September 2010** Doctor of Philosophy (PhD) in Computer Science
University of Essex (UK)
Thesis Title: Nonlinear Analysis Methods for Modelling of EEG and ECG Signals
Supervisor: Dr. Ramaswamy Palaniappan
- October 2005 – September 2006** Master of Science (MSc) in Computer Science: with distinction
University of Essex (UK)
Thesis Title: On the Suitability of Linear Modeling of Mental Activity EEG Segments for BCI
Supervisor: Dr. Ramaswamy Palaniappan
- October 2001 – June 2005** Bachelor of Science (BSc) in Computer Engineering: with high honors
Eastern Mediterranean University (Cyprus)

Work Experience

- April 2011 - Present** Assistant Professor, Department of Computer Engineering, School of Engineering and Architecture, Istanbul Kemerburgaz University.
- October 2006 - April 2010** Research & Teaching Assistant (Introduction to Machine Learning and Data Mining, Mathematical Research Techniques Using MATLAB, Problem Solving and Essential Skills for Computer Systems Engineering, Biological Signal Processing)
University of Essex, School of Computer Science & Electronic Engineering
- June 2004 - September 2004** Software Developer Intern
Cyprus Turkish Cooperative Central Bank
- June 2003 - September 2003** Software Test Engineer Intern
North Cyprus Telecommunications Authority

Publications

1. T. Balli, R. Palaniappan and D.P. Mandic. On the Linearity/Non-linearity of Mental Activity EEG for Brain Computer Interface Design. *Proceedings of Kuala Lumpur International Conference on Biomedical Engineering*. Kuala Lumpur, Malaysia, 11-14 December, 2006, pp.451-454.
2. T. Balli and R. Palaniappan. On the Complexity and Energy Analyses in EEG between Alcoholic and Control Subjects During Delayed Matching to Sample Paradigm. *International Journal of Computational Intelligence and Applications*, 7(3):301-315, September 2008.
3. T. Balli and R. Palaniappan. *Nonlinear Approach to Brain Signal Modelling*. M. Khosrow-Pour (ed.): Encyclopedia of Information Science and Technology, Second Edition, Volume VI, IGI Global, Hershey, PA, USA, 2009, pp.2834-2839.
4. T. Balli and R. Palaniappan. EEG Time Series Analysis with Exponential Autoregressive Modelling. *Proceedings of Canadian Conference on Electrical and Computer Engineering (CCECE 2008)*, Canada, 4-7 May, 2008, pp.485-488.
5. M. Dyson, T. Balli, J.Q. Gan, F. Sepulveda and R. Palaniappan. Approximate Entropy for EEG Based Movement Detection. *Proceedings of the 4th International Workshop on Brain-Computer Interfaces*, Graz, Austria, 2008, pp.110-115.
6. B. Awwad Shiekh Hasan, M. Dyson, T. Balli, and J.Q. Gan. A study via feature selection on the separability of approximate entropy for brain-computer interfaces. *Proceedings of the UK Workshop on Computational Intelligence (UKCI2008)*, De Montfort, UK, 2008, pp.189-194.
7. T. Balli, R. Palaniappan and J. Bhattacharya. Minimising Prediction Error for Optimal Nonlinear Modelling of EEG Signals Using Genetic Algorithm. *Proceedings of the 4th International IEEE EMBS Conference on Neural Engineering*, Antalya, Turkey, 29 April - 2 May, 2009, pp.363-366.
8. T. Balli and R. Palaniappan. A Combined Linear & Nonlinear Approach for Classification of Epileptic EEG Signals. *Proceedings of the 4th International IEEE EMBS Conference on Neural Engineering*, Antalya, Turkey, 29 April - 2 May, 2009, pp. 714-717.
9. T. Balli and R. Palaniappan. Classification of Biological Signals using Linear and Nonlinear Features. *Physiological Measurement*, 31(7): 903-920, July 2010

Research Interests

Digital signal processing, Machine learning, Brain-Computer Interfaces, Biological signal analysis, Neuromarketing.