

Dr. Majid Beigi



Background

- 1991-1995: Amirkabir University of Technology, Tehran, Iran, B. Sc. in Electronic Engineering;
- 1995-1997: Iran University of Science and Technology (IUSCT), Tehran, Iran, M. Sc. in Biomedical Engineering
- 1996-2001: Research assistant at the Research Center for Science and Technology In Medicine (RCSTIM), Tehran University of Medicine (TUMS)
- Since May 2004 : Research assistant / PhD student at the Centre for Bioinformatics Tübingen (ZBIT) in the group of Prof. Dr. A. Zell

Research Interests

- Kernel Methods and signal processing for Biological data
- Bioinformatics
- Neurinformatics

Current Projects

- Classification and remote homology detection in protein families
- Biosonar objects classification
- Animal behavior classification using Forced Swim Test data in rats
- Signal processing of somatosensory Evoked potentials

Publications

Journal Articles

A kernel-based method for pattern extraction in random process signals
Majid M. Beigi and Andreas Zell
In *Journal of Neurocomputing*, 71: 1238-1247, 2008 .

Conference Papers (peer reviewed)

FIR-based Classifiers for Animal Behaviour Classification
Majid M. Beigi and Andreas Zell
In *The 2008 International Joint Conference on Neural Networks (IJCNN2008)* .

A Boosting Approach for Object Classification in Biosonar Based Robot Navigation
Majid M. Beigi and Andreas Zell
In *IEEE International Conference on Robotics and Automation (ICRA2008)* .

A novel kernel-based method for local pattern extraction in random process signals
Majid M. Beigi and Andreas Zell
In *Proc. 15th European Symposium on Artificial Neural Networks, Bruges, Belgium (ESANN 2007)*, pp. 265-270, April 2007 .

Object Detection in Biosonar Based Robot Navigation
Majid M. Beigi and Andreas Zell
In *Workshop on Planning, Perception and navigation for Intelligent Vehicles, IEEE International Conference on Robotics and Automation (ICRA2007)*.

Synthetic Protein Sequence Oversampling method for Classification and remote homology

detection in imbalanced protein data

Majid M. Beigi and Andreas Zell

In *1st International Conference on Bioinformatics Research and Development (BIRD 2007)*, Berlin, Germany .

Lecture Notes in Bioinformatics (LNBI) 4414, pp. 263-277, 2007, Springer

Time-Resolved Spectrum Kernel for Biosonar Target Classification

M. M. Beigi, M. Wang and A. Zell

In *The Fourth IASTED International Conference on Signal Processing, Pattern Recognition, and Applications (SPPRA 2007)*, pp. 126-131, 2007 .

A Novel Method for Classifying Subfamilies and Sub-subfamilies of G-Protein Coupled Receptors

Majid Beigi and Andreas Zell

In *International Symposium on Medical Data Analysis (ISBMDA)*, Thessaloniki, Greece .

Lecture Notes in Bioinformatics (LNBI) 4345, pp. 25-36, 2006, Springer

SPSO: Synthetic Protein Sequence Oversampling for Imbalanced Protein Data and Remote Homology Detection

Majid Beigi and Andreas Zell

In *International Symposium on Medical Data Analysis (ISBMDA)*, Thessaloniki, Greece .

Lecture Notes in Bioinformatics (LNBI) 4345, pp. 104-115, 2006, Springer

Multiresolution adaptive filter for estimating the brainstem auditory evoked potential

M. M. Beigi, M. Elkhani, and A. Erfanian

In *Proc. Int. Conf. IEEE/EMBS, Hong Kong, vol. 20, 1998* .

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