



Mahdi Vasighi

Assistant Professor

IASBS, Department of Computer Science and IT

Publications

Journals

- Nedyalkova, Miroslava and Vasighi, Mahdi and Azmoon, Amirreza and Naneva, Ludmila and Simeonov, Vasil, "Sequence-Based Prediction of Plant Allergenic Proteins: Machine Learning Classification Approach", ACS Omega, 2023
- Soleymani, Fazlollah and Vasighi, Mahdi, "Efficient portfolio construction by means of CVaR and k-means++ clustering analysis: Evidence from the NYSE", International Journal of Finance & Economics, Vol. 27, NO. 3, 2022
- Vasighi, Mahdi and Romanova, Julia and Nedyalkova, Miroslava, "A multilevel approach for screening natural compounds as an antiviral agent for COVID-19", Computational Biology and Chemistry, Vol. 98, NO. 12, 2022
- Vakarelska, Ekaterina and Nedyalkova, Miroslava and Vasighi, Mahdi and Simeonov, Vasil, "Persistent organic pollutants (POPs)-QSPR classification models by means of Machine learning strategies", Chemosphere, Vol. 287, NO. 2, 2022
- Nedyalkova, Miroslava and Vasighi, Mahdi and Sappati, Subrahmanyam and Kumar, Anmol and Madurga, Sergio and Simeonov, Vasil, "Inhibition Ability of Natural Compounds on Receptor-Binding Domain of SARS-CoV2: An In Silico Approach", Pharmaceuticals, Vol. 14, NO. 12, 2021



- Caracciolo, Giulio and Safavi-Sohi, Reihaneh and Malekzadeh, Reza and Poustchi, Hossein and Vasighi, Mahdi and Chiozzi, Riccardo Zenezini and Capriotti, Anna Laura and Lagan{\`a}, Aldo and Hajipour, Mohammad and Di Domenico, Marina and others, "Correction: Disease-specific protein corona sensor arrays may have disease detection capacity", *Nanoscale Horizons*, Vol. 5, NO. 2, 2020
- Berahmand, Kamal and Bouyer, Asgarali and Vasighi, Mahdi, "Community detection in complex networks by detecting and expanding core nodes through extended local similarity of nodes", *IEEE Transactions on Computational Social Systems*, Vol. 5, NO. 4, 2018
- Vasighi, Mahdi and Amini, Homa, "A directed batch growing approach to enhance the topology preservation of self-organizing map", *Applied Soft Computing*, Vol. 55, NO. 2, 2017
- Shahbazy, Mohammad and Kompany-Zareh, Mohsen and Vasighi, Mahdi and Ballabio, Davide, "Exploratory analysis of excitation-emission fluorescence data from colorectal cancer using self-organizing maps", *International Symposium on Artificial Intelligence and Signal Processing (AISP) 2017*, Vol. 55, NO. 2, 2017
- Shahbazy, Mohammad and Vasighi, Mahdi and Ballabio, Davide and Kompany-Zareh, Mohsen, "Multi-class prostate cancer classification and gene discrimination applying supervised self-organizing map on microarray gene expression data", *International Symposium on Artificial Intelligence and Signal Processing (AISP) 2017*, Vol. 55, NO. 2, 2017
- Kavianpour, Hamidreza and Vasighi, Mahdi, "Structural classification of proteins using texture descriptors extracted from the cellular automata image", *Amino Acids*, Vol. 49, NO. 2, 2017
- Shahbazy, Mohammad and Vasighi, Mahdi and Kompany-Zareh, Mohsen and Ballabio, Davide, "Oblique rotation of factors: a



novel pattern recognition strategy to classify fluorescence excitation--emission matrices of human blood plasma for early diagnosis of colorectal cancer", *Molecular BioSystems*, Vol. 12, NO. 6, 2016

- Vasighi, Mahdi and Kompany-Zareh, Mohsen, "Classification Ability of Self Organizing Maps in Comparison with Other Classification Methods", *MATCH Communications in Mathematical and in Computer Chemistry*, Vol. 70, NO. 10, 2013
- Vasighi, Mahdi and Zahraei, Ali and Bagheri, Saeed and Vafaeimanesh, Jamshid, "Diagnosis of coronary heart disease based on ¹H NMR spectra of human blood plasma using genetic algorithm-based feature selection", *Journal of Chemometrics*, Vol. 27, NO. 10, 2013
- Ballabio, Davide and Vasighi, Mahdi and Filzmoser, Peter, "Effects of supervised Self Organising Maps parameters on classification performance", *Analytica chimica acta*, Vol. 765, NO. 1, 2013
- Ballabio, Davide and Vasighi, Mahdi, "A MATLAB toolbox for Self Organizing Maps and supervised neural network learning strategies", *Chemometrics and intelligent laboratory systems*, Vol. 118, NO. 4, 2012
- Ballabio, Davide and Vasighi, Mahdi and Consonni, Viviana and Kompany-Zareh, Mohsen, "Genetic algorithms for architecture optimisation of counter-propagation artificial neural networks", *Chemometrics and intelligent laboratory systems*, Vol. 105, NO. 1, 2011
- Kompany-Zareh, Mohsen and Vasighi, Mahdi, "Analysis of solvents mixtures employing rank annihilation factor analysis on near infrared spectral data from sequential addition of analyte", *Fuel processing technology*, Vol. 91, NO. 1, 2010
- Arjmand, Mohammad and Kompany-Zareh, Mohsen and



Vasighi, Mahdi and Parvizzadeh, Nastran and Zamani, Zahra and Nazgooei, Fereshteh, "Nuclear magnetic resonance-based screening of thalassemia and quantification of some hematological parameters using chemometric methods", *Talanta*, Vol. 81, NO. 4, 2010

- Kompany-Zareh, Mohsen and Vasighi, Mahdi, "Resolution of near-infrared spectral data from distillation of binary mixtures and calculation of band boundaries of feasible solutions for species profiles", *Fuel processing technology*, Vol. 89, NO. 2, 2008

Conferences

- Vasighi, Mahdi and Talebi, Mahboubeh and Ballabio, Davide, "A Dynamic MOLMAP Approach for Pattern Classification in Three-Way Data", The 6th Iranian joint congress on Fuzzy and Intelligent Systems (CFIS2018), 2018
- Vasighi, Mahdi and Abbasi, Samira, "Multiple growing self-organizing map for data classification", International Symposium on Artificial Intelligence and Signal Processing (AISP) 2017, 2017
- Kavianpour, Hamidreza and Vasighi, Mahdi, "STRUCTURAL CLASSIFICATION OF PROTEINS USING FUZZY CLUSTERING AND CELLULAR AUTOMATA", International Conference on Mathematics of Fuzziness, IASBS, Zanjan, Iran., 2016