

Ali Katanforoush

Curriculum Vitae

Biography and Contact Info

First Name: ALI
Last Name: KATANFOROUSH
Rank: Assistant Professor
Affiliation: University of Shahid Beheshti,
Faculty of Mathematical Sciences - Department of Computer Science,
AND Institute for Brain and Cognitive Science.
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Educational Background

1. Ph.D in Bioinformatics (2009) - Tehran University - Institute of Biochemistry and Biophysics
2. M. Sc in Applied Mathematics (1999) - Sharif University of Technology
3. B. Sc in Applied Mathematics (1997) - Sharif University of Technology

Specialization

1. Machine Learning and Artificial Intelligence
2. Bioinformatics and Computational Biology
3. Optimization and Scientific Computing
4. Algorithmics and Programming
5. Computer Aided Geometric Design

Awards & Honors

1. Awarded the scholarship of Iran Ministry of Research, Science and Technology.

Course Taught

1. Artificial intelligence
2. Topics in cognitive and brain modeling
3. Numerical methods for nonlinear optimization
4. Machine learning
5. Bioinformatics algorithms
6. Automata and formal languages
7. Algorithm design and analysis
8. Data structures
9. Object-oriented programming
10. Fundamentals of computer and programming
11. Mathematics laboratory

Research Interests

1. Machine Learning (HMM, Graphical Model, Statistical Relation Learning)
2. Cognitive Modeling (ACT-R)
3. Bioinformatics and Computational Biology
4. Scientific Computing
5. Computer Aided Geometric Design

Teaching Experience

1. Shahid Beheshti University – Inst. Brain & Cog. Sci. (2013 – present)
2. Allameh Tabataba'i University – Dept. Computer Science (2013)
3. Shahid Beheshti University – Math. Sci. Faculty (2000 – present)
4. Tehran University – Dept. Biotechnology (2007)
5. Sharif University of Technology – Dept. Math. Sci. (2000 – 2009)

Research Experience

1. Bioinformatic Research Group - Institute for Research in Fundamental Sciences (2007-2009)
2. Scientific Computing Center - Institute for Research in Fundamental Sciences (2000-2005)
3. Research Institute of Petroleum Industry (2002-2004)

Professional Experiences

1. High Performance Computing Cluster – *Algoritmi* – Faculty of Mathematical Sciences – Shahid Beheshti University. (2010)
2. Scientific Computing Center (Manager) - Department of Mathematics - Institute for Research in Fundamental Sciences. (2001-2006)
3. High Performance Computing Cluster (Head of Development Team)- Department of Chemistry - Isfahan University. (2006)
4. High Performance Computing Cluster (Head of Development Team)- Department of Mathematics - Institute for Research in Fundamental Sciences. (2003)

Hobbies

1. Programming
2. Social networks
3. Photography

Publications

1. Katanforoush, A., Mahdavi, E.
MiRNA Target Recognition using Features of Suboptimal Alignments.
Int. J. Data Mining and Bioinformatics (to be appeared in).
2. Paylakhi, SH., Fan, JB., Mehrabian, M., Sadeghizadeh, M., Yazdani, S., Katanforoush, A., Kanavi, MR., Ronaghi, M., Elahi, E.
Effect of PITX2 knockdown on transcriptome of primary human trabecular meshwork cell cultures.
(2011) Molecular Vision, 17, pp. 1209-1221.
3. Eslahchi, Ch., Katanforoush, A., Pezeshk, H., Afzaly, N.
Haplotype block partitioning and tagSNP selection under the perfect phylogeny model.
(2011) Iranian Journal of Biotechnology, 9 (4), pp. 281-289.
4. Katanforoush, A., Sadeghi, M., Pezeshk, H., Elahi, E.
Global haplotype partitioning for maximal associated SNP pairs.
(2009) BMC Bioinformatics, 10, art. no. 1471, p. 269.
5. Sheari, A., Kargar, M., Katanforoush, A., Arab, S., Sadeghi, M., Pezeshk, H., Eslahchi, C., Marashi, S.A.
A tale of two symmetrical tails: Structural and functional characteristics of palindromes in proteins.
(2008) BMC Bioinformatics, 9, art. no. 274
6. Marashi, S.-A., Kargar, M., Katanforoush, A., Abolhassani, H., Sadeghi, M.
Evolution of 'ligand-diffusion chreodes' on protein-surface models: A genetic-algorithm study.
(2007) Chemistry and Biodiversity, 4 (12), pp. 2766-2771.
7. Goodarzi, H., Katanforoush, A., Torabi, N., Najafabadi, H.S.
Solvent accessibility, residue charge and residue volume, the three ingredients of a robust amino acid substitution matrix.
(2007) Journal of Theoretical Biology, 245 (4), pp. 715-725.
8. Katanforoush, A., Shahshahani, M.
Distributing Points on the Sphere, I
(2003) Experimental Mathematics, 12 (2), pp. 199-209.

Conferences

1. *Classification of Gene Expression Data using Multiple Ranker Evaluators and Neural Network.* Roozbahani, Z., Katanforoush, A. In proc. CICIS 2012, IASBS, Zanzan, Iran, 2012, pp 44-48.
2. *Haplotype block partitioning and tagSNP selection under the perfect phylogeny model.* Eslahchi, Ch., Pezeshk, H., Sadeghi, M., Afzaly, N., Katanforoush, A. In proc. TCWMC 2010, TMU, Tehran, Iran, 2010, pp 26-30.
3. *A Genetic Algorithm for Haplotype Inference.* Katanforoush, A. Sadeghi, M., Eslahchi, Ch., Pezeshk, H. 10th Iranian Conference on Fuzzy System. (In Persian).