

بسمه تعالی

مدیریت آموزش های تخصصی آزاد و مهارت افزایی



دانشگاه علامه طباطبائی

Dr. Vahid Rezaei Tabar

Name: **Vahid Rezaei Tabar**

Date of Birth: June 22th 1984

Postal Address: Department of Statistics, AllamehTabataba'i University,
Tehran, Iran.
School of Biological Sciences, Institute for Research in
Fundamental Sciences (IPM), Tehran, Iran.

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EDUCATIONAL BACKGROUND

1. July. 2018-Sep. 2018 Visiting Scholar
**Center of New Technology,
University of Warsaw, Poland**
Research Title: Mont Carlo Markov Chain and its
application in Chromatin structure and gene expression
1. June. 2017-Sep. 2017 Visiting Scholar
**Center of New Technology,
University of Warsaw, Poland**
Research Title: Autoregressive Hidden Markov Models
(ARHMM) and Mixture ARHMM and their application in
Bioinformatics
2. Aug. 2011-March. 2012 Sabbatical leave
**Department of Statistics & Actuarial Science
University of Waterloo, Waterloo, Ontario, Canada,
N2L3G1**
Research Title: Spatial Statistics and Graphical Models and
their application in Bioinformatics,
3. Sept. 2008-July. 2012 PhD
**Department of Statistics
Tarbiat Modares University, Tehran, Iran**
GPA: 17.50 out of 20
Thesis Title: Prediction of Protein Secondary Structure
Using Spatial Statistics (Under supervision of Prof. Hamid
Pezeshk)
4. Sept. 2006-Sept. 2008 Master of Science
**Department of Statistics
Tarbiat Modares University, Tehran, Iran**
GPA: 17.57 out of 20
Thesis Title: Spatial Logistic and Probit Regression
Models

5. Sept. 2002-Sept. 2006

Bachelor of Science
Department of Statistics
Shahid Beheshti University, Tehran, Iran
Thesis Title: Analysis of Discrete Data with SAS

OBJECTIVE AND MAJOR INTERESTS

Pursuing research in the field of Statistics by putting a strong emphasis on the following areas:

- 1. Mont Carlo Markov Chain (MCMC) and its application in Graphical Models**
- 2. Chromatin structure and gene expression**
- 3. Hidden Markov Model (HMM) and Autoregressive HMM (ARHMM)**
- 4. Data Mining and Graphical Models**
- 5. Bayesian Network (BN)**
- 6. Virtual Screening (VS) and Drug Discovery**

HONORS AND ACHIEVEMENTS

- Ranked first in the Ph.D. entrance exam, Apr. 2008.
- Ranked 12th in the M.S entrance exam, Apr. 2006.
- Championship in the soccer tournament of University of Waterloo, Nov. 2011.
- Championship in the soccer tournament of Iran's Universities, Aug. 2003.

PROFESSIONAL EXPERIENCE AND MEMBERSHIP

- **Instructor at** AllamehTabataba'i University (Faculty member), Sep 2014-present
- **Instructor at** Sharif University, Sep 2016-present
- **Instructor at** Kharazmi University, Sep, 2013-Sep 2014
- **Instructor at** K.N.Toosi University of Technology (K.N.Toosi), Sep. 2012- Dec. 2013.
- **Instructor at** Shahid Beheshti University, Sep. 2012- Dec. 2012.
- **Instructor at** International University of Qazvin, Mar. 2008- Mar. 2009.
- **Instructor at** Iran Medical University, Jun. 2007- Sept. 2008.
- **Instructor of** Sampling Methods at Nosaziye Sanaye Company, Mar. 2008- Mar. 2009
- **Statistical Manager** at the Oil Company of the Central Regions of Iran, Apr. 2009- Nov. 2009.
- **Project Manager** at Orthopedic Association and the Analyst of their State in Iran, summer 2009.
- **Manager** at the Statistics and Information Section of the Research Center of Farhikhtegan Center, Nov. 2010- Sept. 2012.
- **Member** of the Institute for Research in Fundamental Sciences, Institute for Studies in Theoretical Physics and Mathematics (IPM).
- **Member** of the Iranian Association of Statistics.
- **Member** of the Iranian Association of Mathematics.

PUBLICATIONS AND WORKING PAPERS

1. **Rezaeitabar**, V., Eskandari, F., Salimi, S., & Zareifard, H. (2018), Finding a set of candidate parents using dependency criterion for the K2 algorithm, *Pattern Recognition Letters*, 111, 23-29.
2. Aghdam R., **Rezaeitabar**, V., Pezeshk, H., (2018), *Computational Intelligence*; 1–17. <https://doi.org/10.1111/coin.12182>
3. **Rezaeitabar**, V., and Elahi F., (2018), A Novel Method for Aggregation of Bayesian Networks without Considering an Ancestral Ordering, *Applied Artificial Intelligence* 32.2: 214-227.
4. **Rezaeitabar** V., Plewczynski D., Fathipor H. (2018) Generalized Baum-Welch and Viterbi Algorithms Based on the Direct Dependency among Observations, *Journal of the Iranian Statistical Society*, 17 (2):1-14. DOI: 10.29252/jirss.17.2.10
5. **Rezaeitabar** V., Fathipor H., Pérez-Sánchez H., Eskandari F., and Plewczynski D., (2018), Mixture of Forward-Directed and Backward-Directed Autoregressive Hidden Markov Models for Time series Modeling, *Journal of the Iranian Statistical Society*, Accepted.
6. **Rezaeitabar** V., Pezeshk, H., (2017), The generalization of Profile Hidden Markov Models Based on the Dependency between Sequences, *Progress in Biological Science*, 6(2):117-127.
7. Pérez-Sánchez, H., **Rezaeitabar**, V., Mezhuyev, V., Man, D., Peña-García, J., den-Haan, H., & Gesing, S. (2016), Developing science gateways for drug discovery in a grid environment, *SpringerPlus*, 5(1), 1300-1308.
8. **Rezaeitabar** V., Mahdavi M, Heidari S, Naghizadeh S. (2016), Learning Bayesian Network Structure Using Genetic Algorithm with Consideration of the Node Ordering via Principal Component Analysis. *Journal of the Iranian Statistical Society*. 15 (2) :45-61
9. **Rezaeitabar** V., Elahi, F. , (2016), The Application of Principal Component Analysis to the Bayesian Network Structure, *Bioinformatics and Biocomputational Research Journal*, 2(1), 14-22.
10. **Rezaeitabar** V., Pezeshk, H., Prez-Sánchez, H., (2013), Generalized Baum-Welch Algorithm Based on The Similarity Between Sequences, *PLoS ONE* 8(12): e80565.
11. **Rezaeitabar** V., Pezeshk, H., Sadeghi, M., Mohammadzadeh, M., Eslahchi, Ch., (2013), “Assignment of Protein Sequence to Protein Family Using Spatial Statistics”, *Communications in Mathematical and in computer chemistry*, 69(1), 7-24.
12. **Rezaeitabar** V., Pezeshk, H., (2012), “Comparing Bidirectional Baum-Welch algorithm and Baum-Welch algorithm on regular lattice”, *Progress in Biological Science*, 2(2), 4-22.
13. Naghizadeh, S., **Rezaeitabar**, V., Pezeshk, H., Matthews, D. (2012), A Modified Hidden Markov Model and Its Application in Protein Secondary Structure Prediction. *Journal of Proteomics and Bioinformatics*, 5,24-30.
14. **Rezaeitabar** V., and Mohammadzadeh, M., (2011), Spatial Logistic and Probit Regression Models for Analysis of Frosting Data, *Advances in Mathematical Modeling*, 1(2), 1-18.

Conference Papers

1. **Rezaeitabar**. V. (2017), A Simple Node Ordering Method for K2 Algorithm Using Factor Analysis, *ICPRAM Conference, The 6th International Conference on Pattern Recognition Applications and Methods*, 24-26 February, Porto, Portugal.

2. **Rezaeitabar. V.** (2014), Protein-ligand binding sing spatial statistics and data mining techniques, *19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine 9-11 October*, Metropolitan Hotel, Athens, Greece,
3. **Rezaeitabar. V.,** Pezeshk, H., (2012), The Efficiency of Spatial model in Assigning Protein Sequences to Protein Families, *TBC 2012, South Korea*.
4. **Rezaeitabar., V.,** Mohammadzadeh, M., Pezeshk, H., (2012), The Comparison between Spatial Statistics Model and Bidirectional Hidden Markov Model for Assignment of Protein Sequences, *Proceeding in Eleventh of Iranian Statistical Conference*, 513-519.
5. **Rezaeitabar, V.** (2009), Hidden Markov Model and Protein Secondary Structure, Oral presentation, *10th Iranian statistical Conference*, University of Tabriz, Iran.
6. **Rezaeitabar, V.** (2009), Spatial Statistics in Hidden Markov Model”, *5th workshop of stochastic processes*, University of Tehran, Iran, 2009.

Submitted Papers:

- 1- **Rezaeitabar V.,** Salimi, S., Zareifard, H. and Plewczynski D., (2018), An Empirical Bayes approach for learning Directed Acyclic Graph using MCMC algorithm, *Statistical Analysis and Data Mining*, Revised.
2. **Rezaeitabar V.,** Salimi, S., Zareifard, H. and Plewczynski D., (2018), Learning Bayesian Network Structure using Gibbs Sampler for Discrete Data, *Statistical Analysis and Data Mining*, Submitted.
3. Urban P., **Rezaeitabar V.,** Bokota, G., Denkiewicz M., Basu S., and Plewczynski D., (2018), Dendritic Spines Taxonomy: the functional and structural classification. Time-dependent probabilistic model of neuronal activation, *Journal of Computational Biology*, submitted.
4. **Rezaeitabar V.,** Salimi, S., Zareifard, H. and Plewczynski D., (2018), Learning Directed Acyclic Graphs by Determination of Candidate Causes for Discrete Variables, *Journal of Statistical Computation and Simulation*, submitted.

COMPUTER SKILLS

Programming Languages

R, MATLAB