Curriculum Vitae of

Mousa Golalizadeh Lahi

Address: Department of Statistics   Nationality: Iranian
          Faculty of Mathematical Sciences Date of Birth: 23/09/1972
          Tarbiat Modares University   Place of Birth: Iran
          Iran   Marital Status: Married
          P.O.Box   14115-111   Children: 2
Phone: +98 (0) 21   82884705
Fax   : +98 (0) 21   82883493
Email: golalizadeh@modares.ac.ir

Education

Sept. 2002- Dec. 2006   **Doctor of Philosophy (Ph.D.)**
                             Statistics
                             School of Mathematical Sciences, Nottingham University
                             Nottingham, UK

Thesis Title   Statistical Modelling and Inference for Shape Diffusions

Supervisor   Prof. I. L. Dryden

Co-Supervisor   Prof. F. G. Ball

Sept. 1994- Feb. 1997   **Master of Science (M.Sc.)**
                             Statistics
                             School of Mathematics, Shahid Beheshti University
                             Theran, Iran

Thesis Title   Statistical Tolerance Limit and its Application in
                             Semiconductor Industry

Supervisor   Dr. S. Noorbaloochi

Sept. 1990-June. 1994   **Bachelor of Science (B.Sc.)**
                             Statistics
                             School of Mathematics, Shahid Chamran University
                             Ahvaz, Iran

Honours and Awards

1- Travel award given by IMS for presenting paper in ISNPS3.

2- Ranked 5th Nation-Wide in Iran University Entrance Exam for Master of Statistics.

3- Ranked 3rd at the National Exam for Obtaining Scholarship to Study Abroad.
     (Ministry of Sciences, Research and Technology of Iran Scholarship)

Research Interests

- Shape Analysis
- Statistical Inference
- Multilevel Modelling
- High Dimensional Analysis
- Computer Intensive Programming
- Statistical Learning

Research Experience

2006-2008

    Research Assistant
    Division of Statistics, University of Nottingham, Nottingham, UK
2002-2005

    Teaching Assistant
     Division of Statistics, University of Nottingham, Nottingham, UK
1995-1997

     Research Assistant
    Centre for Research in Semiconductor Industries, Tehran, Iran
2011- Now

     Non-resident Researcher
     IPM, Tehran, Iran

Work Experience

2016- Now   Associate Professor
                    Faculty of Mathematical Sciences, Tarbiat Modares University, Tehran, Iran

2019- Now   Board of Directors of the Iranian Statistics Society

2010-2021   Head of Department of Statistics
                   Department of Statistics, Tarbiat Modares University, Iran

2008- 2015   Assistant Professor
                    Faculty of Mathematical Sciences, Tarbiat Modares University, Tehran, Iran

2006-2008   Research Assistant
                    Division of Statistics, University of Nottingham, Nottingham, UK

2010- 2021   Deputy of the Iranian Statistics Society
                    Department of Statistics, Tarbiat Modares University, Iran
1997-2005

                   Temporary Lecturer
                   Division of Mathematics, University of Mazandaran, Iran

1997-1998   Deputy of the Iranian Statistics Society
                   Division of Mathematics, University of Mazandaran, Iran

1995-1997   Statistical Consultant for the Centre for Research in Semiconductor
                     Industries
                     Tehran, Iran

Supervisions Experience

2008-Now

        Supervision more than 27 M.Sc. students in Statistics
        Faculty of Mathematical Sciences, Tarbiat Modares University, Iran

2008-Now

        Advisor of three Ph.D. and five M.Sc. theses in Statistics
        Faculty of Mathematical Sciences, Tarbiat Modares University, Iran

Ph.D. Supervisions

Mahnaz Nabil (2015)	Functional Principal Geodesic in Shape Analysis
Meisam Moghim Beygi (2016)	Regression Modelling of Shape Data
Omid Akhgari (2017)	Analysis of Multilevel Models with Endogenous Variables
Anahita Nodehi (2020)	Dimension Reduction of Random Angles with Nonlinear Statistics
Alireza Daneshvar (2022)	Penalized Quantile Mixed Regression for High Dimensional Data
Maryam Ahangari (2023)	Generalized Linear Mixed Models with Covariates Subject to Measurement Error
Sajedeh Moradnia (2024)	Supervised Clustering of High Dimensional Data Using Combination of Regularization and Dimension Reduction Methods

Technical Experience

Programming language	C
Statistical Packages	Python, S-Plus, R, MLwiN
Mathematical Packages	Maple
Typesetting	Latex, XePersian

Teaching Experience

Spring Terms (since 2012)

        Multivariate Statistical (II)
        Faculty of Mathematical Sciences, Tarbiat Modares University, Iran

Fall Terms (since 2011)

        Multivariate Statistical (I)
        Faculty of Mathematical Sciences, Tarbiat Modares University, Iran

Fall Terms (since 2019)

        Foundation of Data Science
        Faculty of Interdisciplinary Science and Technology, TMU, Iran

Spring Terms (since 2019)

        Modeling & Visualization of Data
        Faculty of Interdisciplinary Science and Technology, TMU, Iran

Fall Terms (since 2019)

        Multivariate Statistical (I)
        Faculty of Mathematical Sciences, Tarbiat Modares University, Iran

Fall 2009, 2010

        Statistical Inference (I)
        Faculty of Mathematical Sciences, Tarbiat Modares University, Iran

Spring Terms (since 2009)

      Statistical Inference (II)

      Faculty of Mathematical Sciences, Tarbiat Modares University, Iran

Fall 2011, Fall 2012

      Advanced Statistics in Biological Sciences

      Faculty of Biological Sciences, Tarbiat Modares University, Iran

Fall 2010

      Mathematical Algorithms for Biological Sciences

      Faculty of Biological Sciences, Tarbiat Modares University, Iran

Spring Terms (from 2003 to 2005)

      Teaching Assistant for Statistics (G1ASTA)

      School of Mathematics, University of Nottingham, UK

      Duties: Lab Instructor and Demonstrator

Fall Terms (from 2003 to 2005)

      Teaching Assistant for Probability (G1APRB)

      School of Mathematics, University of Nottingham, UK

      Duties: Demonstrator

Spring Term 2005

      Teaching Assistant for Stochastic Processes (G1BMAC)

      School of Mathematics, University of Nottingham, UK

      Duties: Demonstrator

October 1997-June 2002

      Temporary Lecturer

      Division of Mathematics, University of Mazandaran, Iran

October 1997-June 2002

      Part-time Lecturer

      Division of Statistics, University of Payame_Noor, Behshar, Iran

Books

Browne, W. J., **Golalizadeh, M.,** Parker, R. M. A (2009)
A Guide to Sample Size Calculations for Random Effect Models via Simulation and the MLPowSim Software Package. University of Bristol

Research Report

Ball, F.G., Dryden, I.L. and **Golalizadeh. M.** (2004).
Brownian Motion and Ornstein-Uhlenbeck Processes in Planar Shape Space.
Technical Report 04-11, Division of Statistics, University of Nottingham, UK

Golalizadeh. M. (2011).
On Study of Shape Statistics on Manifold.
Technical Report, School of Mathematics, IPM, Iran

Golalizadeh. M. (2012).
Functional Analysing of Shape Data.
Technical Report, School of Mathematics, IPM, Iran

Golalizadeh. M. (2014).
Study on Dihedral Variation Using Non-linear Statistics.
Technical Report, School of Biosciences, IPM, Iran

Golalizadeh. M. (2016).
Clustering Second Structure of Proteins Using Dihedral Angles.
Technical Report, School of Biosciences, IPM, Iran

Conference Poster

Brownian Motion and Ornstein-Uhlenbeck Processes in Planar Shape Space . 24th LASR Workshop (2005), Leeds, UK.
(Appeared in Conference Proceedings p.133)
joint work with F.G. Ball and I.L. Dryden

On Theoretical Aspect of Shape Analysis
40th Annual Iranian Mathematics Conference
Sharif University of Technology, Tehran, Iran

Multilevel Factor Analysis of the PIRLS Test for the Iranian Pupils.
29th International Workshop on Statistical Modelling (2014), Gottingen, Germany

Journal Papers

Moradnia, S. and **Golalizadeh, M**. (2024)
Supervised Clustering of Persian Handwritten Images Using Regularization and Dimension Reduction Methods
Transactions on Knowledge Discovery, **18**, 118.

Moghimbeygi, M. and **Golalizadeh, M**. (2024)
New Class of Spherical Pearson-type Family Distributions
Journal of the Iranian Statistical Society, Accepted.

Moghimbeygi, M. and **Golalizadeh, M**. (2023)
Nonparametric Longitudinal Regression Model to Analyze Shape Data Using the Procrustes Rotation
Journal of Korean Statistical Society, **53**, 169-188

Ahangari, M., **Golalizadeh, M.,** Rezaei Ghahrood, Z. (2024)
Validation Data-Located Modification for the Multilevel Analysis of Miscategorized Nominal Response with Covariates Subject to Measurement Error
Mathematical Methods of Statistics, **32**, 223-240

Daneshvar, A., **Golalizadeh, M.** (2023)
Quantile Regression Shrinkage and Selection via the Lqsso
Journal of Biopharmaceutical Statistics, **0**, 1-26

Daneshvar, A., **Golalizadeh, M.** (2023)
Regression Shrinkage and Selection via Least Quantile Shrinkage and Selection Operator
PLOS ONE, **18(2)**, e0266267

Fatemighomi, H. S., **Golalizadeh, M.,** and Amani, M. (2022)
Object-based Hyperspectral Image Classification Using a New Latent Block
Model Based on Hidden Markov Random Fields
Pattern Analysis and Applications, **25,** 467–481

Asili, S., Mohammadpour, A., Naghshineh Arjmand, O., and **Golalizadeh, M**. (2021)
A Comparative Study of Some Clustering Algorithms on Shape Data
Journal of the Iranian Statistical Society, **20,** 29-42

Moghimbeygi, M. and **Golalizadeh, M**. (2021)
A new extension of von Mises-Fisher distribution
Hacettepe Journal of Mathematics & Statistics, **50,** 1838-1854

Akhgari, O. and **Golalizadeh, M**. (2021)
On Seemingly Unrelated Regression Model with Skew Error
Journal of Statistical Theory and Applications, **20,** 97-110

Nodehi, A, **Golalizadeh, M.,** Maadooliat, M and Agostinelli, C (2021)
Estimation of Parameters in Multivariate Wrapped Normal Models for Data on p-torus
Computational Statistics, **39**, 193-215

Moghimbeygi, M. and **Golalizadeh, M**. (2020)
New Directional Residuals to Treat Shape Changes Using Spherical Regression Models
Iranian Journal of Science and Technology A: Science, **44**, 1721-1730

Jafari, H. and **Golalizadeh, M**. (2020)
Comparing Model-based Versus K-means Clustering for the Planar Shapes
Iranian Journal of Mathematical Sciences and Informatics, **15**, 99-109

Moghimbeygi, M. and **Golalizadeh, M**. (2020)
Spherical Logistic Distribution
Communications in Mathematics and Statistics, **8,** 151-166

Akhgari, O. and **Golalizadeh, M**. (2020)
On Bayesian Analysis of Seemingly Unrelated Regression Model with Skew Error
Revstat: Statistical Journal, **18,**531-551

Ahangari, M., **Golalizadeh, M**. and Rezaei Ghahroodi, Z. (2019)
Likelihood Inference in the Random Effects Logistic Regression Model with
Response Misclassification and Covariate Subject to Measurement Error
Journal of Statistical Research of Iran, **16** (1), 255-286

Moghimbeygi, M. and **Golalizadeh, M**. (2018)
A Longitudinal Model for Shapes through Triangulation
AStA Advances in Statistical Analysis, **103**, pp. 99-121

Mohammadpour, R, A., **Golalizadeh, M**. and Moharrami L. (2018)
A bias-variance trade-off in the prediction error estimation behaviour in bootstrap
methods for microarray leukemia classification
Journal of Biostatistics and Epidemiology, **4**(3), pp. 49-54

Akhgari, O. and **Golalizadeh, M**. (2017)
Bayesian Analysis of Regression Models Using Instrumental Variables: A Case
Study (Iranian Rural Households Income and Expenditure Data)
Journal of Statistical Research of Iran, **14** (1), pp.53-75

Esfandyarifar, H., Nasiri, P. and **Golalizadeh, M**. (2016)
Bayesian and Expected Bayesian interval estimation for difference of binomial
Proportions
Journal of Applied Probability and Statistics, **11***,* 107-123

Moghimbeygi, M. and **Golalizadeh, M**. (2016)
Longitudinal shape analysis by using the spherical coordinates,
Journal of Applied Statistics, **44***,* 1282-1295

Nabil, M. and **Golalizadeh, M**. (2016) On Clustering Shape Data,
Journal of Statistical Computation and Simulation, **36***,* 3995-4008

Karam, A., Shayan, S., Maghsoudi, M., **Golalizadeh, M**. and Norbakhsh, S.F. (2016)
Complexity Theory and Collagist Approach in Geomorphic Systems,
Arid Regions Geography Studies, **6**, 18-33

Nodehi, A., **Golalizadeh, M**. and Heydari, A. (2015),
Dihedral Angles Principal Geodesic Analysis Using Nonlinear Statistics,
Journal of Applied Statistics, **42**, 1962-1972

Najibi, S. M, Faghihi, M., **Golalizadeh, M**. and Arab, S. S. (2015),
Bayesian Alignment of Proteins via Delaunay Tetrahedralization,
Journal of Applied Statistics, **42**, 1064-1079.

Mahmoud nejad, H. and **Golalizadeh, M**. (2015),
A recursive algorithm on estimating the parameters in multilevel models
subject to the measurement errors on the covariates.
Journal of Statistical Computation and Simulation, **2**, 252-261.

Fotouhi, H.R., and **Golalizadeh, M.** (2014),
Highly Resistance Gradient Descent Algorithm for Computing Intrinsic
Mean on Similarity Shape Space,
Statistical Papers, 1-20.

Fotouhi, H.R., and **Golalizadeh, M.** (2012).
Exploring the Variability of DNA Moleculars via Principal Geodesic
Analysis on the Shape Space.
Journal of Applied Statistics, **39** (10), 2199-2207

Abolfazli, R., Hosseini, M., Ghanizadeh, A., Ghaleiha, A., Tabrizi, M.,
Raznahan, M., **Golalizadeh, M**. and Akhondzadeh, S. (2011)
Double Blind Randomized Parallel Group Clinical Trial of Efficacy of the
Combination Fluoxetine plus Modafinil versus fluoxetine plus Placebo in the
Treatment of Major Depression.
Depression and Anxiety, **28**, 297-302

Golalizadeh, M. (2010).
A Useful Family of Stochastic Processes for Modeling Shape Diffusions.
Journal of Statistical Research of Iran, **7** (1), 21-36

Browne, W.J., **Golalizadeh, M.,** Green, M.J. and Steel, F. (2009)
The use of simple reparameterizations to improve the efficiency of
Markov chain Monte Carlo estimation for multilevel models with
applications to discrete time survival models.
Journal of the Royal Statistical Society. Series A, Vol. 172, Part 3. pp. 579-598

Ball, F.G., Dryden, I.L., and **Golalizadeh, M.** (2008).
Brownian Motion and Ornstein-Uhlenbeck Processes in Planar Shape Space.
Methodology and Computing in Applied Probability, Vol. 10, pp. 1-22

Ball, F.G., Dryden, I.L., and **Golalizadeh, M.** (2006).
Discussion to the paper by Beskos et al. (2006)
Journal of the Royal Statistical Society. Series B, Vol. 68, Part 3. pp. 367-368

Training Course Attended

June-July 2003   Modelling Extremes and Other Topics in Environmental Statistics
Sheffield, UK

September 2004   Graduate Training Programme in Mathematical
Statistics and Applied Probability
Nottingham, UK
Modules: Coupling, Bayesian Statistics

Workshop Holden

Introductory Multilevel Data Analysis
SRTC Training Workshop, October 2009, Tehran, Iran

Essential of Multilevel Data Analysis for Medicine
Tehran University of Medical Sciences, February 2010, Tehran, Iran

Shape analysis and Classification models
Ilam University of Medical Sciences, May 2011, Ilam, Iran

Multilevel Data Analysis and Its Application
SRTC Training Workshop, February 2013, Tehran, Iran

Introduction to Shape analysis
SRTC Training Workshop, February 2013, Tehran, Iran

Introduction to Multilevel Data
SRTC Training Workshop, September 2014, Tehran, Iran

Programming with R
SRTC Training Workshop, February 2015, Tehran, Iran

Familiarity, Analysis and Programming with R

Iranian Survival Organization, September 2016, Tehran, Iran

Familiarity, Analysis and Programming with R
SRTC Training Workshop, May 2016, Tehran, Iran

Advanced Programming with R
SRTC Training Workshop, February 2020, Tehran, Iran

Workshop Attended

Stochastic Geometry, Biological Structure and Images
22nd LASR Workshop, July 2003, Leeds, UK

Workshop on Uncertainty, Complexity and Predictive Reliability of
Environmental/ Biological Models
April 14-16, 2004. University of Nottingham, UK

Quantitative Biology, Shape Analysis, and Wavelets
24th LASR Workshop, July 2005, Leeds, UK

Conference Presentations

April 2004   Stochastic Processes on the Sphere and Triangle Shape Space,
                    The 27th Annual Conference of Research Students in Probability
                    and Statistics, Sheffield, UK.   (Appeared in Proceedings p.49)

July 2004   Some Results of the Brownian Motion in the Shape Space,
                    The 12nd Iranian Research Conference in Europe, Manchester, UK

April 2005   Shape Diffusions
                    The 28th Annual Conference of Research Students in Probability
                    and Statistics, Cambridge, UK. (Appeared in Proceedings p.32)

June 2005   Shape densities, shape diffusion and some old friends
                    RSS General Applications and Statistical Computing Sections, London.
                    joint work with Frank Ball and Ian Dryden*

July 2005   Diffusion of Planar Shapes
                    The 13th Iranian Research Conference in Europe, Leeds, UK

July 2006   Sample size calculations in multilevel modelling
                    The ESRC Research Methods Festival, Oxford, UK.
                    joint work with William Browne* and L. Leese

July 2006   Ornstein-Uhlenbeck shape processes, simulation and inference
                    IMS Annual Meeting, Rio de Janeiro, Brazil
                    joint work with Frank Ball and Ian Dryden*

August   2006   MCMC algorithms for shape diffusions

The 8th Iranian Statistical Conference (ISC), Shiraz, Iran

April   2007   Sample size calculations in multilevel modelling
                      The Sixth International Amsterdam Conference on Multilevel Analysis
                      joint work with W.J. Browne

April   2007   Using SMCMC for normal response multilevel models
                      The Sixth International Amsterdam Conference on Multilevel Analysis
                      joint work with William Browne*

December 2007   Use of centred parameterisation and MCMC estimation to fit discrete
                      Time survival models
                      RSS Recent Advances in Multilevel Modelling and Methodology and
                      Applications, London
                      Joint work with William Browne*, Fiona Steele and Martin Green

July 2008   Sample size calculations for multilevel models
                      The ESRC Research Methods Festival, Oxford, UK.
                      joint work with William Browne*

September 2008   Simple method to improve MCMC efficiency in random effects models
                      RSS Conference, Nottingham, UK.
                      joint work with William Browne*

October   2008
                      Shape analysis; introduction and other considerations
                      Department of Statistics, Tarbiat Modares University, Iran

December 2008
                      Familiarity with shape analysis
                      Department of Statistics, Tarbiat Modares University, Iran

May 2009
                      On simulation of shape diffusions
                      The 2nd International Conference of Iranian Operations Research
                      Society, University of Mazandaran, Iran

August 2009
                      A useful family of stochastic processes in shape analysis
                      7th Seminar on Probability and Stochastic Processes
                      Isfahan University of Technology, Isfahan, Iran

October 2009
                      On Matching in Structural Bioinformatics via Statistical Shape Analysis
                      The 3rd Workshop on Mathematical Chemistry, Tehran, Iran

November 2009
                      Shape analysis: what is it and how does it work?
                      Department of Statistics, University of Mazandaran, Iran

August 2010
                      Statistical Analysis of Power in Cross Classified Models via Simulation
                      The 10th Iranian Statistical Conference (ISC), Tabriz, Iran

September 2011
                      Principal Geodesic Analysis on Shape Space
                      Applied Statistics 2011, Ljubljana, Slovenia.

July 2012
                      A Monte Carlo Study on Bayesian SSD in Multilevel Models
                      8th CPS, Istanbul, Turkey

September 2012
Some New Challenges in the Statistical Shape Analysis
The 11th Iranian Statistical Conference (ISC), Tabriz, Iran

July 2013
Computing Intrinsic Mean Shape on Similarity Shape Spaces using a Highly Resistant Algorithm
29th European Meeting of Statisticians, Budapest, Hungary

July 2015
Dimension Reduction of Dihedral Angles Data Using Principal Geodesic Analysis
The 7th International Conference on Probability and Statistics, Smolenice, Slovakia

June 2016
Nonparametric Regression to Model Shape Variability Using Spherical Coordinates
Third Conference of International Society of Non-Parametric Statistics (ISNPS), Avignon, France

August 2016
Statistical Shape Analysis of Landform Data in Ardestan
The 13th Iranian Statistical Conference (ISC), Kerman, Iran

July 2017
An Study on Comparing Distance-based and Probability-based Discrimination Methods for Planar Shape Data
61st ISI World Statistics Congress, Marrakech, Morocco

August 2017
Standard Brownian Motion Induced by Dihedral Angles Perturbation
The 11th Seminar on Probability and Stochastic Processes, Qazvin, Iran

August 2018
Simple Methods to Cluster Planar Shapes
The 14th Iranian Statistical Conference, Sharood, Iran

August 2019
Clustering Planar Shapes Combined with Multidimensional Scaling
62nd ISI World Statistics Congress, Kualalumpur, Malaysia

* presenter

Professional Affiliation

September 1997 - Present	Member of the Iranian Statistics Society
February 2003 - February 2005	Student Member of the RSS
January 2018 – Present	Member of ISI
January 2018 – Present	Member of IMS

Professional Services

September 2012-2019   Editorial Board of Andishe-ye Amari
(Persian Journal of the Iranian Statistical Society)

March 2019-Present	Editorial Board of Journal of Statistical Sciences (Persian Journal of the Iranian Statistical Society)
September 2019-Present	Board of Directors of the Iranian Statistics Society

Last Updated: 2 April 2024