

Nasser Sadeghkhan

Department of Statistics, Ohio State University, Ohio, USA.

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[Google Scholar Home Page](#)

Education

- B.Sc. in Statistics, Bahonar University, Kerman, Iran (2004)
- M.Sc. in Mathematical Statistics, Ferdowsi University, Mashhad, Iran (2006)
- Ph.D. in Mathematics (Statistics), Université de Sherbrooke, Quebec, Canada (2017)

Current position

- Assistant Professor of Teaching-Practice Ohio State University, Ohio, USA. Aug 2022–

Previous positions

- Visiting Assistant Professor, Department of Statistics, Ohio State University, Ohio, USA. Jan 2022-Aug 2022
- Research Associate: Bayesian Statistician. George & Fay Yee Centre for Healthcare Innovation. University of Manitoba, Winnipeg, Canada. 2021
- Assistant Professor. Instituto Tecnológico Autónomo de México (ITAM). Department of Statistics. Mexico City, Mexico. Aug 2019–2021.
- Postdoctoral Fellow in the Department of Mathematics and Statistics at Brock University, Canada, Aug 2018-July 2019.
- Sports data analyst at Stathletes, Canada, Aug 2018–July 2019.
- Adjunct assistant professor at Queen's University, Math and Stats department, Canada, Aug 2017–Aug 2018.
- Postdoctoral fellow at Queen's University, Math and Stats department, Canada, Aug 2017–Aug 2018.
- Adjunct instructor at Université de Sherbrooke. Canada, Jan 2017–June 2017.
- Teaching Instructor at University of Tafresh, Iran. Jan 2008–Aug 2012.

Ph.D. thesis:

Predictive density estimation with additional information. Supervisor: Éric Marchand. PDF

Research Area

- Bayesian Statistics and Decision Theory
- Multivariate Statistics
- Predictive inference
- Sports data analysis
- Biostatistics

Honors and Awards

- ISM scholarships. Amount: 4,000\$ (2014)
- ISM scholarships. Amount: 4,000\$ (2015)
- Hydro-Quebec scholarship. Amount: 5,000\$ (2015)
- ISM Travel Award. Amount: 500\$ (2015)
- ISM Travel Award. Amount: 500\$ (2016)
- Coleman Postdoctoral Fellowship, Queen's university

Grants

- Mexican National System of Researchers (SNI) Grant (2021)

Editorial Board

- Editorial board member of American Journal of Theoretical and Applied Statistics.
- Computer Simulation in Application

Publications and talks

Journal articles

1. Abdolnasser Sadeghkhan, Indranil Ghosh, A new generalized Balakrishnan type Skewed-Normal distribution: properties and associated inference. Communications in Statistics–Theory and Methods 2017 PDF.

2. Éric Marchand, Abdolnasser Sadeghkhani, On predictive density estimation with additional information, *Electronic Journal of Statistics*, 2018 PDF
3. Abdolnasser Sadeghkhani, Yingwei Peng, and Devon Lin. A Parametric Bayesian Approach in Density Ratio Estimation. *Stats* 2019. PDF
4. Abdolnasser Sadeghkhani , S. Ejaz Ahmed. Bayesian Predictive Densities as an Interpretation of a Class of Skew–Student t Distributions with Application to Medical Data. In: Xu J., Ahmed S., Cooke F., Duca G. (eds) *Proceedings of the Thirteenth International Conference on Management Science and Engineering Management. ICMSEM 2019. Advances in Intelligent Systems and Computing*, vol 1001. Springer, Cham.
5. Abdolnasser Sadeghkhani, S. Ejaz Ahmed. A Bayesian Approach to Predict the Number of Goals in Hockey. *Stats* 2019. PDF
6. Abdolnasser Sadeghkhani, S. Ejaz Ahmed. The Application of Predictive Distribution Estimation in Multiple–Inflated Poisson Models to Ice Hockey Data. *Model Assisted Statistics and Applications* 2020.
7. Abdolnasser Sadeghkhani, S. Ejaz Ahmed, On predictive density estimation of K-inflated Poisson models with and without additional information. *Revista Colombiana de Estadística* 2020.
8. Abdolnasser Sadeghkhani, S. Ejaz Ahmed. Predicting the scoring time in hockey. *Journal of Statistical Theory and Practice* 2021.
9. Abdolnasser Sadeghkhani, K_1K_2 -Inflated Conway–Maxwell–Poisson Model Bayesian Predictive Modeling with an Application in Soccer Matches. *American Journal of Mathematical and Management Sciences*, 2021.
10. Abdolnasser Sadeghkhani, On Improving the Posterior Predictive Distribution of the Difference Between two Independent Poisson Distribution. *Sankhya B*, 2022.
11. Abdolnasser Sadeghkhani, Ali Sadeghkhani. Closed-form Bayesian estimation and prediction in a new bivariate Rayleigh model using Jeffreys’ prior (Submitted).
12. Abdolnasser Sadeghkhani, Mohammad Arashi. On matrix variate density estimation problem. (Submitted)
13. Abdolnasser Sadeghkhani, Closed-form predictive density estimation for Bivariate Gamma distribution. (Submitted)
14. Abdolnasser Sadeghkhani, Kibble’s bivariate gamma distribution: Revisiting the Bayesian Approach. (Submitted)
15. Abdolnasser Sadeghkhani, Bayesian estimation and prediction in gamma mixture model under ordered constraints. (Submitted)

Talk

1. Abdolnasser Sadeghkhani, Éric Marchand, Predictive Density Estimation with additional information. SSC meeting, Halifax, Canada (2015)
2. Abdolnasser Sadeghkhani, Éric Marchand, Bayesian Predictive Density Estimation with Additional Information and Related Distribution. ODRS, Hamilton, Canada (2016)
3. Math and Stats Department Colloquium. Queen's university, ON, Canada (2017).
4. Math and Stats Department . University of Ottawa, ON, Canada (2017).
5. Abdolnasser Sadeghkhani, Paul Peng, Devon Lin, Predictive Density Estimation in the Exponential Families with Ancillary Information. SSC meeting, Montreal, Canada (2018).
6. Abdolnasser Sadeghkhani, A Parametric Bayesian Approach in Density Estimation, OMC meeting, Ottawa, Canada (2018).
7. Evaluating the overall abilities of players in Hockey. Statheletes, St. Catharines, Canada (2018).
8. (Invited talk) Density Estimation Using Ancillary Information and its Application in Sports Analytics, Departamento Académico de Estadística, ITAM, Mexico city, Mexico (2018).
9. Application of Bayesian Statistics in Hockey. 15th Latin American Congress on Probability and Mathematical Statistics, Mérida, Yucatán, México 2019.
10. Compressed regression. Statistical and Applied Mathematical Sciences Institute (SAMSI) workshop on Dimension Reduction in Time Series, USA (2020)
11. (online) A Bayesian model averaging method, Statistical and Applied Mathematical Sciences Institute (SAMSI), USA (2020)
12. (Online) Bayesian compressed regression in Statistical and Applied Mathematical Sciences Institute (SAMSI), USA (2021)
13. (Online) Matrix variate density estimation, Statistical and Applied Mathematical Sciences Institute (SAMSI), USA (2021)
14. (Online) On likelihood functions for interval-valued random variables, Statistical and Applied Mathematical Sciences Institute (SAMSI), USA (2021)
15. (Invited talk–Online) Matrix-variate density estimation with additional information. Chonnam National University. BK21 FOUR: International Workshop, Gwangju, South Korea (2021).
16. (Invited talk–Online) Application Posterior predictive distribution estimators under the presence of additional information in Hockey. S-TRAINING meeting, Belgium (2021).

17. (Invited talk–Online) On improving the density estimation using the ancillary information. Stevens Institute of Technology, USA (2022)
18. (Invited talk) Predictive distribution estimation: Applications in Sports data. Ohio State University. USA (2022)
19. (Invited talk) Bayesian prediction with applications. Western Illinois University. USA (2022)
20. (Invited talk) Bayesian density estimation under parameter constraints. Southern Illinois University. USA (2022)

Teaching

- Introduction to Probability and Statistics for Engineers (STAT 3470)-Three groups (size: 200 each)
- Statistical Modeling for Discovery II (STAT 3302)-Two groups, OSU (size: 60 each)
- Intermediate Data Analysis I (STAT 5301), OSU Two groups-(size: 55)
- Mathematical Statistics 2019-2021 (ITAM)-six groups (size: 35 each)
- Statistics II 2020 (ITAM) (size: 28)
- Multivariate Statistics 2020 (ITAM) (size: 30 each)
- 1-Mathematical Statistics (size: 30), 2-Foundation of Statistics 2019 (ITAM) (size: 30 each)
- Computational data analysis (STAT 462/862) (size: 70), Bayesian Inference and Decision Theory (STAT 499/962) (size: 10) 2017– (Queen’s University)
- Statistiques en ingénierie (GCB140), 1 Semester (Université de Sherbrooke) (size: 45)/ In French
- Statistics for Engineers, Statistical Inference (More than 10 times), Statistics for Mathematicians (Twice) , Probability Theory (More than 10 times), Time Series, Mathematical Statistics (Four times), Calculus (3 times), Statistical Methods (4 times), Bio-statistics (once), Multivariate Statistics (once), Statistics for Social Science (once), Statistics for Economist (4 times). Statistics in Management (twice)

Previous Professional Experience

- Assistant Professor of Statistics at ITAM, Mexico, 2019-2021.
- Undergraduate course coordinator, ITAM, Mexico 2021.
- Postdoctoral Fellow at Brock University. Canada. 2018–2019.
- Adjunct Assistant Professor, Queen’s University, Canada. 2017 –2018.

- Postdoctoral Fellow, Queen’s University, Canada. 2017 –2018.
- Teaching Instructor, Université de Sherbrooke, Canada. 2017.
- Teaching Instructor University of Tafresh, Iran. 2008–2012.
- Head of Surveillance and Evaluation Office, University of Tafresh, Iran. 2010–2012.
- Adjunct Instructor, PN University of Tehran, Iran. 2007–2009.
- Adjunct Instructor, Shahid Bahonar University, Iran. 2006–2007.
- Adjunct Instructor, PN University of Kerman, Iran. 2006–2007.
- Adjunct Instructor, Azad University of Kerman, Kerman, Iran. 2006–2007.
- Practical Scientific Institute, Mashhad, Iran. 2004–2006.

Memberships

- Member of the Statistical Society of Canada (SSC) since 2014.
- Member of Canadian Statistical Science Institute (CANSSI) since 2015
- Member of Complex Data Modeling Research Network (MiDaS) since 2020.

Supervision:

- Pablo Lopez (2021)–Aplicación de métodos de regresión lineal regularizada para evaluar el valor de mercado de jugadores y predecir resultados en la NBA. ITAM, Mexico.

Thesis examination committees

- Emiel Platjouw (2020)–Score Modelling of NBA and EuroLeague Games Using Compound Poisson Simulation. Ghent University. Belgium

Skills

- Bayesian Statistics, Classification, Clustering, (Generalized) linear models, LDA, QDA, Regression, Censoring, Approximation techniques, MCMC method, Spatial statistics, predictive models, Sufficient dimension reduction techniques.
- Online teaching
- Computer skills including the usage of R, Mathematica, SPSS, Minitab, L^AT_EX.

Accomplished applied projects as a Sports Statistician

- Bayesian analysis of NHL data.
- Construct predictive modeling.
- Predicting the NHL game outcomes. My model predicts 69% correctly the winner as well as results.
- Evaluate the performance of players in NHL using machine learning

Evaluation of articles for scientific journals & proceedings

- Statistics
- Sequential Analysis
- Mathematics
- symmetry
- Journal of statistical research
- Statistical Papers
- International journal of environmental research and public health. section: Public Health Statistics and Risk Assessment , section: Sport and Health.

Languages

- English – Fluent
- French – Fluent
- Spanish – Good
- Persian – Native