

MOHAMMAD ARSHAD RAHMAN

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EDUCATION

Ph.D., Economics, University of California, Irvine, USA (2008 – 2013)
Dissertation Title: *Explorations in Simulation Based Techniques*
Advisors: [Ivan Jeliazkov](#) (Chair), [Dale J. Poirier](#), [David Brownstone](#), [Fabio Milani](#)
Master of Science, Statistics, University of California, Irvine, USA (2009 – 2011)
Master of Arts, Economics, University of California, Irvine, USA (2008 – 2009)
Master of Arts, Economics, Delhi School of Economics, University of Delhi, India (2004 – 2006)
Bachelor of Science, Economics, St. Xavier's College, University of Calcutta, India (2001 – 2004)
W.B.H.S.E, Class XII, St. Xavier's College, University of Calcutta, India (1999 – 2001)

EMPLOYMENT

Associate Professor, Economic Sciences, IIT Kanpur, India (Dec, 2019 – present)
Associate Professor, College of Business, Zayed University, UAE (Dec, 2020 – Dec, 2022)
– (while on leave from IIT Kanpur)
Assistant Professor, Economic Sciences, IIT Kanpur, India (May, 2017 – Dec, 2019)
Assistant Professor of Economics, HSS, IIT Kanpur, India (Jul, 2013 – May, 2017)
Business Analyst, Hewlett-Packard DSAS, India (Feb, 2007 – Aug, 2008)
Economic Analyst, Roulac Global Places LLC, India (Jun, 2006 – Jan, 2007)
Summer Intern, National Council of Applied Economic Research, India (Apr, 2005 – Jun, 2005)

VISITING POSITIONS

Visiting Scientist, Indian Statistical Institute Delhi, India (Oct, 2023 – Nov, 2023)
Lecturer, Department of Economics, University of California, Irvine, USA (Jun, 2014 – Jul, 2014)

RESEARCH

Theoretical Bayesian econometrics, quantile regression, discrete choice models, Markov chain Monte Carlo (MCMC) methods, measurement error, machine learning, and program and policy evaluations.
Applied Applications in the social sciences, agriculture, energy and environmental economics, finance, housing, labor economics, political science, transportation, and engineering.

TEACHING

Indian Institute of Technology Kanpur (IIT Kanpur), India
Graduate Econometrics (2), Bayesian Econometrics (1).
Undergraduate Bayesian Data Analysis (4), Bayesian Econometrics (6), Econometrics I (10), Econometrics II (2), International Economics and Finance (1), Panel Data Procedures and Analysis (1).

Zayed University, Abu Dhabi, United Arab Emirates

Undergraduate Financial Markets (2), Financial Planning and Forecasting (1), Introduction to Finance (3).

University of California, Irvine, California, United States

Undergraduate Probability & Statistics (1).

Note: Number within parenthesis indicates the number of times I have taught the course.

ADVISING

Ph.D. Students Prashant Jha (2017–2019).

M.S. Students Arjun Gupta (2019–2020), Mayank Garg (2018–2019), Amritesh Kumar (2018–2019), Om Prakash Bankolia (2018–2019), Prasoon Bajpai (2018–2019), Rahul Sharma (2017–2018), Shubham Karnawat (2016–2017), Sanket Jantre (2016–2017), Abhishek Srivastava (2016–2017), Mohit Batham (2015–2016), Pranay Jain (2015–2016), Alisha Sarkar (2015–2016).

Undergraduate Students Mohd Siraj (SURGE, 2023), Pulkit Dhamija (2023), Ritika Ajmera (2020), Apoorva Sheera (2019–2020), Arjun Gupta (2018–2019), Anshul Goel (2018), Aayushi Pandey (2018), Debasmita Das (SURGE, 2017), Sanjana Shukla (2017), Rahul Sharma (2016–2017), Shrenik Bohra (2015–2016), Isha Gupta (SURGE, 2015), Mohit Batham (2014–2015), Nafisa Lohawala (2014–2015).

PUBLICATIONS

- (1) “Bayesian Analysis of Multivariate Sample Selection Models Using Gaussian Copulas,” with Phillip Li, *Advances in Econometrics*, 27, 269–288, 2011.
- (2) “Binary and Ordinal Data Analysis in Economics: Modeling and Estimation,” with Ivan Jeliazkov, *Mathematical Modeling with Multidisciplinary Applications*, edited by X.S. Yang, 123–150, 2012. John Wiley & Sons Inc, Hoboken, New Jersey.
- (3) “Quantile Regression using Metaheuristic Algorithms,” *International Journal of Computational Economics and Econometrics*, 3(3/4), 205–233, 2013.
- (4) “Bayesian Quantile Regression for Ordinal Models,” *Bayesian Analysis*, 11(1), 1–24, 2016. Associated R-package: `bqror`.
- (5) “To Drill or Not to Drill? An Econometric Analysis of US Public Opinion,” with Deep Mukherjee, *Energy Policy*, 91, 341–351, 2016. *Media Coverage: Journalist’s Resource*
- (6) “Are Strategies for Success Different in Test Cricket and One-day Internationals? Evidence from England-Australia Rivalry,” with Nafisa Lohawala[†], *Journal of Sports Analytics*, 4(3), 175–191, 2018.
- (7) “Estimation and Applications of Quantile Regression for Binary Longitudinal Data,” with Angela Vossmeier, *Advances in Econometrics*, 40B, 157–191, 2019. Associated R-package: `qbld`.
- (8) “Flexible Bayesian Quantile Regression in Ordinal Models,” with Shubham Karnawat[†], *Advances in Econometrics*, 40B, 211–251, 2019.

- (9) “Bayesian Updating of Structural Model with a Conditionally Heteroscedastic Error Distribution,” with Gideon Arthur Lyngdoh[†] and Sudib Kumar Mishra, *Journal of Engineering Mechanics–ASCE*, 145(12), 1-18, 2019 (Article No. 04019091).
- (10) “Bayesian Panel Quantile Regression for Binary Outcomes with Correlated Random Effects: An Application on Crime Recidivism in Canada,” with Georges Bresson and Guy Lacroix, *Empirical Economics*, 60(1), 127-159, 2021. (The article was published in a special issue honoring Professor Badi Baltagi’s contribution to the field of econometrics.)
- (11) “Seemingly Unrelated Regression with Measurement Error: Estimation via Markov chain Monte Carlo and Mean Field Variational Bayes Approximation,” with Georges Bresson, Anoop Chaturvedi, and Shalabh, *International Journal of Biostatistics*, 17(1), 75-97, 2021.
- (12) “Do Online Courses Provide an Equal Educational Value Compared to In-Person Classroom Teaching? Evidence from U.S. Survey Data using Quantile Regression,” with Manini Ojha, *Education Policy Analysis Archives*, 29(85), 1-25, 2021.
- (13) “Heterogeneity in Food Expenditure amongst US families: Evidence from Longitudinal Quantile Regression,” with Arjun Gupta[†] and Soudeh Mirghasemi, *Indian Economic Review*, 56(1), 25-48, 2021.
- (14) “bqrr: An R package for Bayesian Quantile Regression in Ordinal Models,” with Prajwal Maheshwari[†], *The R Journal*, 15(2), 39-55, 2023.
- (15) “Binary and Ordinal Probit Regression: Applications to Public Opinion on Marijuana Legalization in the United States,” with Mohit Batham[†], Manini Ojha and Soudeh Mirghasemi, *Applied Econometric Analysis using Cross Section and Panel Data*, edited by Deep Mukherjee, Springer Singapore, Singapore (forthcoming).

[†] denotes that the co-author is my student.

WORKING PAPERS

“Flexible Bayesian Quantile Analysis of Residential Rental Rates,” with Ivan Jeliazkov, Shubham Karnawat[†], and Angela Vossmeier.

“Bayesian Quantile Analysis of Semiparametric Additive Models for Sequential Data,” with Ivan Jeliazkov.

WORK IN PROGRESS

“Towards a New BRICS Currency: Bayesian Analysis of Weight Allocation, Risk Attributes, and Spillover Dynamics,” with Sourish Das.

“Bayesian Variable Selection: Different Methods and Applications”.

“What is the Impact of Zinc Use on Paddy Production? Evidence from Quantile Analysis using data from Andhra Pradesh, India,” with Deep Mukherjee.

SEMINARS & CONFERENCE PRESENTATIONS

2024 Asian Meeting of the Econometric Society, Indian Institute of Technology Delhi, India. (Jan; scheduled).

2023 Indian Institute of Technology Delhi, India (Aug); Department of Economics, Delhi School of Economics, India (Aug); Chennai Mathematical Institute, India (Sep); Economics and Planning Unit, Indian Statistical Institute Delhi, India₃ (Nov).

- 2022 Statistical Methods in Finance, Chennai Mathematical Institute, India (Jun-Jul).
- 2021 Finance Research Seminar Series, College of Business, Zayed University, Abu Dhabi, UAE (Oct).
- 2020 International Virtual Conference on Statistics, University of Al-Qadisiyah, Iraq (May).
- 2019 Department of Economics, Ashoka University, India (Apr); Society for Economic Research in India (SERI) conference at the Indian Institute of Technology Kanpur, India (Jul); Winter School, Center for Development Economics, Delhi School of Economics, India (Dec), International Conference on Operations Research and Decision Sciences (ICORDS), Indian Institute of Management Visakhapatnam, India (Dec).
- 2018 Advances in Econometrics Conference, University of California, Irvine, USA (Jun); ASA Joint Statistical Meeting, Vancouver, Canada (Jul-Aug).
- 2017 Applied Statistics Division, Indian Statistical Institute Kolkata, India (Feb); Asian Meeting of the Econometric Society, Chinese University of Hong Kong, Hong Kong (Jun); Winter School, Center for Development Economics, Delhi School of Economics, India (Dec).
- 2016 Mini-symposium on Computation and Optimization, Department of Computer Science and Engineering, IIT Kanpur, India (Feb); Winter School, Center for Development Economics, Delhi School of Economics, India (Dec).
- 2015 Econometrics Seminar, Indian Institute of Management Indore, India (Apr); Econometrics Seminar, Department of Economics, University of California, Irvine, USA (Dec).
- 2013 Winter School, Center for Development Economics, Delhi School of Economics, India (Dec); Econometrics Seminar, Department of Economics, University of California, Irvine, USA (May).
- 2012 Econometrics Seminar, Department of Economics, University of California, Irvine, USA (Oct).

WORKSHOPS ORGANIZED

“Statistical Techniques and R Software (STARS),” co-organized with [Shalabh](#) on four occasions. (September, 2016; December, 2017; September, 2018; February, 2020)

GRANTS, HONORS, & AWARDS

Teaching Awards

Letter of Appreciation from the Director, IIT Kanpur, for excellence in teaching (Summer, 2023)

Research: Grants and Fellowship

Start-Up Grant Award, Zayed University, UAE (2021 – 2022)

MATRICES, Science and Engineering Board, India (*Declined*, moved to UAE) (2020)

Institute Fellowship, IIT Kanpur, India (2013 – 2016)

Social Science Merit Fellowship, University of California (UC), Irvine, USA (2008 – 2013)

Summer Research Fellowship, Department of Economics, UC Irvine, USA (2009 – 2012)

Summer Stipend/Research Travel Grant, Dept. of Economics, UC Irvine, USA (2009, 2010)

All India Post-Graduate Scholarship, University of Delhi, India (2004 – 2006)

Corporate Awards

Analyst Accolade Award for work on Cluster Analysis, Hewlett Packard (Apr, 2008)

e-Awards for annual contribution to USCB, Hewlett Packard (2007)

e-Awards for contribution to consumer GTMU engagement, Hewlett Packard (Nov, 2007)

Analyst Accolade Award, Sales-lift prediction analysis, Hewlett Packard (Aug, 2007)

INSTITUTE/UNIVERSITY SERVICE

Indian Institute of Technology Kanpur (IIT Kanpur), India

Institute Service	2023-24: Student Undergraduate Committee (SUGC) nominee to the Senate Curriculum Development and Monitoring Committee (SCDMC). 2019–present: Center for Continuing Education (CCE) Advisory Board Member. 2018–present: Institute International Relations Committee (IIRC) Representative. 2014–16: Global Strategy Ranking Committee Member.
Departmental Service	2023–2024: Departmental Undergraduate Committee (Convener), Student Recruitment Committee (Member). 2022–2023: Departmental Undergraduate Committee (Member). 2020–2021: Student Placement Office (Departmental In-charge), Departmental Finance Committee (Member), Department Library Committee (Member). 2019–2020: Departmental Undergraduate Committee (Member), Departmental Finance Committee (Convener), Web & Promotional Committee (Convener). 2018–19: Departmental Undergraduate Committee (Convener), Web & Promotional Committee (Convener). 2017–2018: Space Committee (Convener), Web & Promotional Committee (Convener). 2016–2017: Computer and Web Committee (In-charge), Department Faculty Recruitment Committee. 2015–2016: Economics Lab In-charge. 2014–2015: Research & Seminar Committee. 2013–2014: Space Committee.
JEE Duty	Institute Representative: Kanpur (2019), Indore (2017, 2018, 2023), Bhopal (2016), Gwalior (2015), Bhopal (2014)
GATE Duty	Institute Representative: Aligarh (2018, 2017), City coordinator and center-head: Aligarh (2016), Center-head: Aligarh (2015).

Zayed University, Abu Dhabi, United Arab Emirates

Departmental Service	2022–2023: Teaching and Learning Committee (Member), Faculty Affairs Committee (Member). 2021–2022: Teaching and Learning Committee (Member), Faculty Affairs Committee (Member). 2020–2021: Assessment of Learning Committee (Member).
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SERVICE TO PROFESSION

Referee Service for Books

Introduction to Financial Management, Cengage Learning (EMEA).

Referee Service for Journals

Advances in Econometrics (3), Advances in Statistical Analysis (1), Agribusiness (1), Agricultural Economics (1), Annals of Applied Statistics (2), Applied Economics Letters (1), Bayesian Analysis (3), Canadian Journal of Statistics (1), Communication in Statistics - Theory and Methods (2), Communication in Statistics - Simulation and Computation (6), Computational Economics (3), Computational Statistics (4), Computational Statistics and Data Analysis (2), Education Policy Analysis Archives (1), Environmental Impact Assessment Review (1), Frontiers in Public Health (1), IEEE Intelligent Sys-

tems (1), Indian Economic Review (1), International Journal of Mathematical Modelling and Numerical Optimization (1), International Journal of Public Opinion Research (1), Journal of Drug Issues (1), Journal of Econometrics (2), Journal of Economic Asymmetries (1), Journal of Probability and Statistics (1), Journal of Quantitative Economics (1), Journal of Research on Educational Effectiveness (1), Journal of Sports Sciences (1), Journal of Statistical Theory and Practice (1), Sankhya B (2), Scandinavian Journal of Economics (1), Statistical Modelling (1), Statistical Papers (1), US National Science Foundation (1).

American Statistical Association (ASA) & Statistics Education

CAUSE Undergraduate Statistics Project Competition (USPROC) Judge on two occasions.
(Fall 2022; Spring 2023)

Association for Mentoring & Inclusion in Economics (AMIE)

Mentor, AMIE (2023-24)

SOFTWARE SKILLS

Statistical Office	Advance Knowledge of Matlab, R and SAS (Base, Stat, ETS, IML, GRAPH). WINDOWS, MS-OFFICE and Visual Basics. Received “Certificate of Excellence” from St. Xavier’s College Computer Center (SXCCC).
Mark-up	LaTeX & Beamer (document preparation system for the TeX typesetting program).

AFFILIATIONS

American Economic Association, American Statistical Association, International Indian Statistical Association (IISA, Life Member), International Society for Bayesian Analysis (ISBA), The Econometric Society, The Indian Econometric Society (TIES, Life Member).

REFERENCES

Ivan Jeliazkov Associate Professor Dept. of Economics, UCI E-mail: ivan@uci.edu Phone: +1(949) 824-2182 website: Ivan Jeliazkov	Mausumi Das Professor Delhi School of Economics E-mail: mausumi@econodse.org Phone: +91 9811474523 website: Mausumi Das	Angela Vossmeier Associate Professor Claremont McKenna College E-mail: angela.vossmeier@cmc.edu Phone: +1 (909) 607-0722 website: Angela Vossmeier
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