Amin Shirazi

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CONTACT INFORMATION

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EDUCATION

Iowa State University (ISU), Ames, Iowa USA

Ph.D Students, Statistics, August 2017 - Present
   Advisor: Peng Liu

Shahid Beheshti University, Tehran, Iran
Department of Statistics, Faculty of Mathematical Science

M.S., Statistics, February 2014
   Research title: "Testing Statistical Hypothesis for Jump Models in Stochastic Differential Equations"
   Advisors: Hamideh D. Hamedani, AriReza Taheriyoun

Imam Khomeini International University of Qazvin, Qazvin, Iran
Department of Statistics, Faculty of Science

B.S., Statistics, September 2010
   Research title: "Simulation in Statistical Models"
   Advisor: Afshin Fallah

RESEARCH INTERESTS

- Statistical analysis of big data
- Applying integrated data analysis on -Omics data using a range of network based and Bayesian based methods
- Statistical Genomics
- Microbiome data analysis
- Statistical data analytics methods for high-dimensional data and pre-clinical studies
- Statistical Learning
- Computational Statistics
- Reproducible Research

PUBLICATIONS

1. **Amin Shirazi**, Hamideh D. Hamedani, "Model Selection for Stock Market Using Statistical Hypothesis Testing ", The First FINACT conference of Mathematical Finance and Actuary", Institute For Research in Fundamental Sciences (IPM), Oral presentation, (August 2014)

PREPRINTS

1. Mohammad Jafari, Fangwei Hou, **Amin Shirazi**, Mostafa Hassanalian, "Determination of Experimental/Numerical Errors on Identification of Flutter Derivatives for a NACA 0020 Airfoil", *AIAA SciTech Forum and Exposition* (in review)

ARTICLE IN PREPARATION	1. Mohammad Jafari, Fangwei Hou, **Amin Shirazi**, "Experimental Identification of Aeroelastic Wind Load Parameters with Uncertainty: Design of Experiment Method"
	2. Mohammad Jafari, Fangwei Hou, **Amin Shirazi**, "Sensitivity Analysis of Effective Parameters and Prediction of Across-wind Response of Tall Buildings in Time Domain"
	3. **Amin Shirazi**, Hamideh D. Hamedani, "Can Noise Pollution Be Modeled by Pure Jump Processes?"
	4. Ali Sharifi, Hamideh D. Hamedani, **Amin Shirazi**, "Statistical Hypothesis for Continuous-Time Processes".

RESEARCH EXPERIENCE

Iowa State University

Research and Teaching Assistant   **August 2017- present**

Statistical data analysis of big data and specifically applying integrated data analysis on -Omics data using heterogeneous network based and Bayesian based methods using data analytics approaches.

Working in a multidisciplinary research in the intersection of statistics and genetics, analytical clinical trials and in general statistical Genomics with a penchant for statistical learning and reproducibility

Shahid Beheshti University

Research Assistant   **March 2014- January 2017**

Research assistant in researches whose aims were model selection for stock market using statistical hypothesis testing, applying statistical hypothesis to continuous-time processes and modeling pure jump processes.

The leader of a research group of 6 graduate and undergraduate students to gather, clean and analyze stock market data. Model selection for stock market data using statistical hypothesis testing utilizing statistical methods to 100+ stock market data sets using R to evaluate model robustness and diagnosing the models insufficiency.

HONORS AND AWARDS

Shahid Beheshti University   2014
Ranked 5th among all graduate students of mathematical statistics in MS program, Department of Statistics, Faculty of Mathematical Science

Master's Entrance Exam, Iran   2011
Ranked 17th in national master entrance exam among more than 8000 applicants

Imam Khomeini International University of Qazvin, Qazvin, Iran   2010
Ranked 5th in the whole four-year bachelor study among 41 students in undergraduate program, Department of Statistics, Faculty of Science

Semi-finalist in the National Statistics Olympiads, Iran   2009

PACKAGE DEVELOPMENT

PetFindr

PetFindr (R package) provides an R interface for the Petfinder.com API (V2). Once a user obtains an API key and secret from Petfinder, this package allows the user to retrieve information about animals by type, breed, location, and other useful characteristics. (https://earl88.github.io/PetFindr/index.html)

Iowa State University, Ames, Iowa USA

Instructor   Fall 2019

Course instructor for STAT 305 (Engineering Statistics) (https://ashirazist.github.io/stat305.github.io/index.html). Statistics for engineering problem solving, covering principles of engineering data collection, descriptive statistics, elementary probability distributions, principles of experimentation, confidence intervals and significance tests, one- and two-sample studies, regression analysis, and statistical software. Approximately 70 students.

Co-Instructor   Summer 2019

Course co-instructor for STAT 305, online section (Engineering Statistics). Statistics for engineering problem solving, covering principles of engineering data collection, descriptive statistics, elementary probability distributions, principles of experimentation, confidence intervals and significance tests, one- and two-sample studies, regression analysis, and statistical software. Approximately 100 students.

Teaching Assistant   Spring 2019

Teaching assistant for STAT 588 (Statistical Theory for Research). Responsible for teaching some parts of the course, helping construct tests, grading assignments, maintaining weekly office hours to communicate in person with students as needed. Approximately 30 students.

Teaching Assistant   Fall 2018

Teaching assistant for STAT 330 (Probability and Statistics for Computer Science). Responsible for helping construct tests, grading assignments, maintaining weekly office hours to communicate in person with students as needed. Approximately 80 students.

Teaching Assistant   Spring 2017

Teaching assistant for STAT 305 (Engineering Statistics). Responsible for grading assignments, maintaining weekly office hours to communicate in person with students as needed. Approximately 90 students.

Grading Assistant   Fall 2017

Teaching assistant for STAT 305 (Engineering Statistics). Responsible for grading weekly quizzes and assignments. Approximately 70 students.

Grading Assistant   Fall 2017

Teaching assistant for STAT 226 (Introduction to Business Statistics). Responsible for grading assignments and exams with eight other graders to share the grading across all nine sections. Approximately 700 students in all sections.

Shahid Beheshti University, Tehran, Iran

Grading Assistant   Spring 2013

Mathematical analysis II. Responsible for grading assignments, scheduling review sessions for exams.

Teaching Assistant   Fall 2012

Stochastic processes. Responsible for teaching some parts of the course, designing and grading assignments.

Imam Khomeini International University of Qazvin, Qazvin, Iran

Teaching Assistant   Fall 2009

Mathematical Statistics II. Responsible for Giving and grading quizzes, grading homework, solving necessary or requested problems for students.

Mahestan Educational Institute, Tehran, Iran

Instructor   September 2011 - April 2012

Technical Instructor for national master entrance exam applicants. Responsible for statistical consultant and technical instructor, helping applicants with their questions and advising them to choose the most appropriate graduate program related to their interests.

Koosha Setareh Iranian International Co, Tehran, Iran

Data Analyst, R & D Department   July 2015- July 2017

Benefited statistical skills to interpret market data in corporation with sales and marketing department, fitted generalized linear model to data from market research, predicting demands for products and services, supervised and accurately predicted demands for products and services, sales analysis and predicting future trends using data analytical methods, generated creative business reports, tables, charts, and graphs for the logistic department and management board(http://kooshasetarehpasargad.com/koosha/en/)

Iranian Shaygan Pars, Tehran, Iran

Data Analyst, R & D Department   September 2014- June 2015

Interpreted sales data applying statistical models as a teamwork with sales department, presented results to senior managers and regulatory authorities, predicted demands for products and services, collected data to monitor levels of progress in sales and customer satisfaction

Info Tech International Company, Tehran, Iran

Data Analyst, R&D Department
R&D Consultant of PSP (Payment Service Provider) Department   May 2014- September 2014

Designed opinion polls to collect and analyze data using SAS, programmed software codes to identify trends and relationships within the data utilizing R, conducted tests for big data validation using statistical knowledge and analytical methods, design of experiment methods in optimization, call center consultant for designing, collecting and analysis of customer satisfaction survey (http://infotech-co.com/)

Mahestan Educational Institute, Tehran, Iran

Director Consultant and Technical Instructor   September 2011- April 2012
Educational board
Instructor of statistical core courses, approximately 100 undergraduate students, student consultant

Iowa State University

Statistics in the Community (StatCom) Executive Committee   August 2019- present
STATCOM at Iowa State offers statistical advice and expertise free of charge to governmental and nonprofit groups in the local community.

Currently working on a project with Ames Public Library to conduct and analyze a survey on their services to library members

Statistics faculty committee - student representative   August 2019- present

Communicate relevant information from the student association to the faculty members, provide students' feedback of the departmental decisions

STATers - social committee   August 2017 - present

social organization for graduate students

Iranian Students and Scholars' Association, treasurer   Fall 2018- Fall 2019

Event planner for 5 big events for the members of the association and non-Iranian people, organized the new year celebration event and hosted approximately 300 people, communicated with finance committee and senate of Iowa State University for funds to hold events

PROFESSIONAL AFFILIATIONS
American Statistical Association (ASA), Institute of Mathematical Statistics (IMS) Iranian Statistical Society(ISS)

COMPUTING
- Mathematical and Statistical Computing: R, SAS; some experience with HTML; Currently learning SQL, Spark and Scala.
- Reporting: LaTeX, Markdown, HTML, Shiny
- Content Management: Git