Curriculum Vitae
October 2, 2017

Mohammad Sepehrifar
Department of Mathematics and Statistics
Mississippi State University, MS 39762, USA
Tel: (662) 325-7145 (work);
Email: msepehrifar@math.msstate.edu

Education

2003- 2006 Ph. D. University of Central Florida (in Statistics- Modeling & Simulation)
2001- 2003 M. Sc. The University of Central Florida (in Statistical Computing- Data Mining)
1999- 2001 M. Sc. Isfahan University of Technology (in Statistics)
1995- 1999 B. Sc. Isfahan University of Technology (in Statistics)

Research Interests: Reliability and Life-Testing, Survival Analysis, and Nonparametric
Dissertation Title: Modeling and characterizations of new notions in Life-Testing with statistical applications
Thesis Advisor: Professor Ibrahim A. Ahmad (iahmad@okstate.edu)

Professional Experience:

Academic:

2017- Present Associate Professor in Statistics, Mississippi State University
2014- Present Research Fellow, National Strategic Planning & Analysis Research Center (nSPARC)
2011- 2017 Assistant Professor in Statistics, Mississippi State University
2007- 2011 Assistant Professor in Statistics, University of Mississippi
2006 Visiting Assistant Professor, Montana State University (MSU)
2005 Instructor, University of Central Florida
2001 Research Associate, University of Central Florida
1999 Instructor, University of Payameh_Noor, Iran

Industrial:

2011- present Consulting Center (member), Dept. of Mathematics & Statistics, MSU
2001- 2005 Consulting Center (Graduate Research Associate), Dept. Statistics, UCF

Honors and Awards:

- Academic Affairs Years of Service Recognition, Mississippi State (2016)
- Faculty Research Fellows, University of Mississippi, (2010)
- Dissertation Fellowship Award, UCF (2006)
- Ranked one among M. Sc. Graduates in Statistics, University Award, IUT (2000)
- Rank number one, Department Award, IUT (1999)
- Outstanding Teacher Award, Ministry of Education, Iran (1998)

Grants:

- A Nonparametric Testing Procedure as a Decision Support for Studying Long-Term Behavior of Modern Power Systems, Co-PI (with Amin Kargarian, LSU and Shantia Yarahmadian, MSU), NSF $300,000 (2017-under review)

- Supplemental Nutrition Assistance Program (SNAP) Recipient Integrity Information Technology, Collaborative Research (with nSPARC), $1,939,583 (funded, 2015-2018)
- Fast and Portable Catfish Pathogen Identification from MVOC, Co-PI (with Department of Chemistry), $45,694 (not funded, 2014)
- Mechanisms of regulation of prolyl carboxypeptidase and mathematical modeling of its trafficking outside of its lysosome microenvironment, Co-PI (with the University of Mississippi, School of Pharmacy), $308,824 (not funded, 2012)
- New classes of life distributions with guaranteed survival, PI (University of Mississippi), $12,000 (funded, 2007- 2008)

Refereed Journal Publications:

1. **Sepehrifar, M.,** Yarahmadian, S., "Starshaped Equilibrium Remaining life distributions of a Three-States Random Evolution Process with Hypothesis Testing Applications." (submitted, 2017)

2. **Sepehrifar, M. K., Fanian, A., Sepehrifar, M. B.,** "An efficient shortest path algorithm on directed graphs with nonnegative edge weights" (submitted, 2017)

3. **Sepehrifar, M. K., Fanian, A., Sepehrifar, M. B.,** "Improving general point-to-point shortest path algorithm: An efficient preprocessing method" (submitted, 2017)

4. **Sepehrifar, M.**, Yarahmadian, S.," Testing Monotonic Equilibrium Residual Entropy of N-State Random Evolution." Communication in Statistics-Theory and Methods, accepted(2016)

5. **Khani,** H., Yarahmadina, S., **Sepehrifar, M. B.,** "An improvement on the prediction power of the 3D-QSAR CoMFA models using a hybrid of statistical and machine learning methods: a case study on γ-secretase modulators of Alzheimer's disease", Journal of Medicinal Chemistry Research (accepted, 2017)

6. **Sepehrifar, M.**, Yarahmadian, S.," Decreasing renewal dichotomous Markov noise shock model with hypothesis testing application." Statistical Papers, pp 1-10, (2016)

7. **Sepehrifar, M.**, Khorshidian, K., Jamshidian, A., "On renewal increasing mean residual life distributions: An age replacement model with hypothesis testing application." Statistics and Probability Letters, V. 96, pp 117–122, (2015)

8. Harandi, M. F., Yarahmadian, S., **Sepehrifar, M.**, Van Gelden, P. H., "The dichotomous Markov process with nonparametric test application; a decision support method in long-term river behavioral analysis: the Zayandeh Rud river; a case study from central Iran." Stochastic Environmental Research and Risk Assessment, V. 28, pp 1889-1896, (2014)

9. Matur, S., **Sepehrifar, M**., "A new signed rank test based on slopes of vectors for bivariate location problem," Statistical Methodology, V. 10, pp 72–84, (2012)

10. Ryu, K. S., **Sepehrifar, M.**, Kishk, A. A., "High accuracy peak location and amplitude spectral estimation via tuning APES method," Digital Signal Processing, V. 20, pp 552-560, (2010)

11. Ahmad, I., **Sepehrifar, M**., "On testing alternative classes of life distributions with guaranteed survival times," Computational Statistics & Data Analysis, V. 53, pp 53, 857-864, (2009)

Refereed Conference Proceedings:

1. Effects of Hydroclimate on In-ditch Water Quality: Case Study of Two Tailwater Recovery Ditches in Mississippi, Juan D. Pérez-Gutiérrez , Joel O. Paz , Mary Love Tagert , Ying Ouyang , and Mohammad Sepehrifar, 2016 ASABE Annual International Meeting Sponsored by ASABE Orlando, Florida July 17 – 20, 2016

2. Kargarian, A., Yarahmadian, S. **Sepehrifar, M.**, "Dichotomous Markov noise technique to model wind power Uncertainty in Microgrid Operation," Great Lakes Symposium on Smart Grid and the new Energy Economy, IEEE Conference Proceeding (2013).

3. Kaup, D. J., Malone, L., Lanham, S., Oleson II, R. R., **Sepehrifar, M**., Chen, P., "Dynamic military-civilian crowd simulations through allegiance grouping," 24th Army Science Conference Proceedings (2004).

In progress:

1. **Sepehrifar, M., "**Testing Monotonic Variance Equilibrium Remaining Life distributions**."** Communications in statistics-Theory and Methods **(**under review, 2016**)**

2. **Sepehrifar, M. B.,** "On uncertainty of the remaining life of random phenomena under shock models" Statistical Methodology (under review 2016)

3. Juan D. Pérez-Gutiérrez, Joel O. Paz, Mary Love M. Tagert, Mohammad Sepehrifar ANALIZING THE IMPACTS OF RAINFALL CHARACTERISTICS ON NO_3 – N REDUCTION BENEFITS OF TAILWATER RECOVERY DITCHES

Conferences/ Seminars:

- Testing monotonic renewal variance residual life under shock models, 2015 Lloyd Roeling UL Lafayette Mathematics Conference: Statistics, UL at Lafayette (2015)
- The dichotomous Markov process with nonparametric test application; a decision support method in long-term river behavioral analysis, International Conference on Education in Mathematics, Science & Technology (ICEMST), Kunya, Turkey (2014)
- 3D-QSAR CoMFA: analysis on γ-secretase modulators of Alzheimer's decease using hybrid genetic algorithm- principal component analysis- support vector regression (2014)
- Stochastic Orders in Reliability with hypothesis testing applications, Seminar, MSU (2015)
- Cumulative Damage models, seminar talk. MSU (2012)
- Application of Fourier series to demonstrate the energy absorption phenomenon in aluminum tubes under impact loading, 9th MSU - UAB Conference on Differential Equations and Computational Simulations, MSU (2012)

- Bivariate scale-invariant one-sample location test, International Conference on Design of Experiments (ICODOE), University of Memphis (2011)
- Empirical Approach to Life Testing with Guaranteed Survival Time, JSM (2008)
- Basic Concepts and Characteristics of Reliability Theory, Public Talk at Pi-Mu- Epsilon, UM (2008)
- New Approaches to the Life Testing with a Guaranteed Survival Time, Seminar in Statistics, UM (2007)
- Testing Exponentiality Against New Classes of Life Distributions, ASA Chapter Meeting, Montana State University (2006)
- New Classes in Life Testing, Seminar Department of Statistics and Actuarial Sciences, UCF (2005)
- Multivariate Exponential Distribution with Constant Failure Rate, Seminar in Statistics, IUT (2000)
- Tools Useful in Nonlinear Regression, Seminar Department of Mathematical Sciences, IUT (1998)

Services:

Service to the Community

- Editor for Journal of Biostatistics & Biometrics (2016-)
- Search Committee for Research Associate position at nSPARC (member) (2015, 2016)
- The undergraduate research symposium (judge), MSU (2016)
- MSU Representative to the Southern Regional Council on Statistics (SRCOS), MSU (2014- present)
- 10^{th} annual graduate research symposium (judge), MSU (Apr 2012)

Ph. D. Students Supervised

Ph. D. Advisor, Statistics, University of Mississippi, (Aug 2010- May 2011-Jamye Curry)
Ph. D. Advisor, Statistics, Mississippi State University, (Jan 2017- expected 2020 Tick Jelarat)

Master Students Supervised

M. S. Advisor, in Statistics/Mathematics, MSU (2017- Bandar Alreshidi)
M. S. Advisor, in Statistics, MSU (2016- Khalid Alshehri)
M. S. Advisor, in Statistics, MSU (2014- Kan Zhou)

Minor Advisor of Ph. D Students

Ph. D. in Agricultural and Biological Engineering, MSU (2015- Juan D. Perez- Gutierrez)
Minor Advisor, (minor degree in statistics), MSU (2014- Snehalatha Ballamoole)
Minor Advisor (minor degree in Statistics), Department of Chemistry, MSU (2015- Hadi Khani)
Minor Advisor (minor degree in Statistics), Department of Engineering, MSU (2016- Apurba Nandi)
Minor Advisor (minor degree in Statistics), Wildlife and Fishery (Food Sciences), MSU (May 2015- Yuging Tan)
Minor Advisor (minor degree in Statistics), Wildlife and Fishery (Food Sciences), MSU (May 2015- Shi Meng)

Ph. D. and M.S. Committee Member
Ph. D. in Industrial and system engineering, MSU (2015- Mahmud Rahman)
Ph. D. in Mathematical Sciences, Dept. of Math and Stat (2016- Yang Xu)
Ph. D. in Industrial and system engineering, MSU (2016- Apurba Nandi)
Ph. D. in Chemical Engineering, MSU (2016- Jeremy Walker)
Ph. D. In Curriculum, Instruction, and Special Education, NSPARC & MSU (2016- Christina S. Hillesheim)
M.S. in Statistics, MSU (2016- LeighEllen Barefield)
M.S. in Statistics, MSU (2016- Jian Jiang)
M. S. in Statistics, MSU (2016- Jie Zhu)

Departmental Committees:

Advisory Committee, (member, 2017- Present)
Graduate Coordinating Committee (member, 2017- Present)
Graduate Program and Recruitment Committee (**Chai**r, 2017- Present)
Computing and Technology Committee, (**Chair,** 2013- Present)
Evaluation of Classroom Teaching Committee (member, 2015- Present)
Search Committee in statistics (member, 2011- Present)
Departmental Assessment Committee (member, 2011- Present)
Statistics Committee (member, 2011- Present)
Graduate Teaching Workshop (member, 2011- 2017)
Undergraduate Student Recruitment (member, 2011- 2017)
Evaluation of TA's (member, 2011- 2017)
Course Development (member, 2011- 2017)
Webpage (member, 2011- 2017)
Assessment Committee, University of Mississippi (member, 2009-2010)
Consulting and Data Analysis, Institute of Statistics and Data mining UCF (2003- 2005)

Other Contributions:

Refereed for Journal
Communications in Statistics-Theory and Methods
Annals of Applied Statistics
Statistical Computation and Simulation
Statistics and Probability Letters
Expert Systems with Applications

Course Development
A Course in Reliability and Life Testing, MSU (2011)
A Course in recent developments in life-testing, MSU (2012)
Statistical Methods and Data Analysis; A distance learning course (2014)

Book Chapter
Sepehrifar, M. B., Practical Statistics for Textile Industry (2000)

Teaching Experience:

Undergraduate Level
Calculus I & II, and III
Calculus II (Honor section); Elementary Statistics
Statistical Methods
Applied Statistics
Trigonometry

Graduate Level
Recent development in Life Testing
Mathematical Statistics I & II
Theory of Reliability and Life-testing
Advanced Probability I &II
Applied Multiple Linear Regression
Analysis of Variance & Design of Experiments
Statistical Methods and Data Analysis
Nonparametric
Data Analysis I