Curriculum Vitae
Gokarna R. Aryal, Ph.D.
Professor of Statistics

Contact Address

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Academic Qualifications

Ph.D.   Statistics, 2006, University of South Florida, Tampa Florida, U.S.A.
M. A.   Mathematics, 2003, University of South Florida, Tampa Florida, U.S.A.
ICTP Diploma, Mathematics, 2001, the Abdus Salam, International Centre for
            Theoretical Physics (ICTP), Trieste, Italy.
M. Sc. Mathematics, 1997, Tribhuvan University, Kirtipur, Kathmandu, Nepal.
B.Sc. Mathematics/ Statistics, 1995, Tribhuvan University, Kathmandu, Nepal.

Professional Experience:

Professor of Statistics, Purdue University Northwest, August 2019- Present
Associate Professor of Statistics, Purdue University Northwest, August 2012- August 2019
Assistant Professor of Statistics, Purdue University Calumet, August 2007- August 2012
Visiting Assistant Professor of Statistics, Purdue University Calumet, Aug. 2006- Aug. 2007
Graduate Teaching Assistant, University of South Florida, Tampa, FL, Aug. 2001-July 2006

Areas of Research Interests

Applied Statistics,   Distribution Theory,   Reliability Analysis,
Longitudinal Data Analysis, Survival Analysis,   RFID Data Analysis

Courses Taught at PNW

Statistics & Contemporary Life; Elementary Statistical Methods; Statistics; Biostatistics; Computational Statistics; Applied Statistics; Data Mining, Machine Learning & Statistical Analysis; Applied Regression Analysis.

Professional Affiliations:

Member of the American Statistical Association (ASA)
Member of the International Federation of Nonlinear Analysts (IFNA)
Member of the Association of Nepalese Mathematicians in America (ANMA)

Recent Honors/ Awards

Fall 2019   Purdue University Northwest Proposal Submission Grant (PI)
Fall 2019   ACUE Teaching Fellow
Fall 2018   Purdue Research Foundation (PRF) International Travel Grant
Spring 2018   Sabbatical Leave
Fall 2017   Purdue University Northwest Catalyst Grant (PI)
Spring 2017   Purdue University Northwest Proposal Submission Grant (PI)
Spring 2017   Purdue University Northwest Exploratory Grant (Co-PI)
Fall 2016   Purdue Research Foundation (PRF) International Travel Grant

Refereed Journal Publications

- **Aryal, G**., *On the Beta Exponential Pareto Distribution*, Statistics, Optimization & Information Computing, 7(2), 417-438, 2019.
- **Aryal, G.,** Pokhrel, K., Khanal, N. and Tsokos, C. P. *Reliability Models Using the Composite Generalizers of Weibull Distribution*, Annals of Data Science, **6** (4), 807–829, 2019.
- **Aryal, G.,** Chhetri, S., Long, H. and Akinsete, A., *On the Beta-G Poisson Family*, Annals of Data Science, **6**(3), 361-389, 2019.
- Yousof, H., Jahanshahi, S., Ramires, T., **Aryal, G**. and Hamedani, G. G., *A New distribution for Extreme Values: Regression Model, Characterizations and Applications*, Journal of Data Science, **16**(4), 677-706, 2018.
- Yousof, H., Afify, A., Nadarajah, S., Hamedani, G. and   **Aryal, G**., *The Marshall-Olkin generalized-G family of distributions with Applications*, STATISTICA, **78**(3), 273-295, 2018.
- Mansour, M., **Aryal, G**., Afify, A. and Ahmad, M., *The Kumarswamy exponentiated Fréchet distribution*, Pakistan Journal of Statistics, **34**(3), 177-193, 2018.
- **Aryal, G.** and Yousof, H., *The Exponentiated Generalized-G Poission Family of Distributions*, Stochastics and Quality Control, **32**(1), 7-23, 2017.
- **Aryal, G.,** Ortega, E., Hamedani, G. and Yousof, H., *The Topp-Leone Generated Weibull Distribution: Regression Model, Characterizations and Applications*, International Journal of Statistics and Probability, **6**(1), 126-141, 2017.
- Chhetri, S., Akinsete, A., **Aryal, G.** and Long, H., *The Kumaraswamy Transmuted Pareto Distribution*, Journal of Statistical Distributions and Applications, **4**:11, 2017.
- Chhetri, S., Long, H. and **Aryal, G.,** *The Beta Transmuted Pareto Distribution: Theory and Applications*, Journal of Statistics Applications & Probability, **6** (2), 243-258, 2017.
- Cordeiro, G., Afify A., Yousof, H., Pescim R. & **Aryal, G**.,*The Exponentiated Weibull-H Family of Distributions: Theory and Applications*, Mediterranean Journal of Mathematics, **14**: 155, 2017.

- Elbatal, I. and **Aryal, G.,** *A New Generalization of the Exponential Pareto Distribution,* Journal of Information & Optimization Sciences, **38**(5), 675-697, 2017.
- Yousof, H., Afify, A., Hamedani, G. and **Aryal, G.,** *The Burr X Generator of Distributions for Lifetime Data*, Journal of Statistical Theory and Applications, **16**(3), 288–305, 2017.
- **Aryal, G.** and Zhang, Q., *Characterizations of Kumaraswmy Laplace Distribution with Applications,* Economic Quality Control, **31**(2), 59-70, 2016.
- Afify, A., Yousof, H., Hamedani, G and **Aryal, G.,** *The Exponentiated Weibull-Pareto Distribution with Application*, Journal of Statistical Theory and Applications, **15**(4), 326-344, 2016.
- Afify, A., Alizadeh, M., Yousof, H., **Aryal, G.** and Ahmad, A., *The Transmuted Geometric-G family of distributions: Theory and Applications*, Pakistan Journal of Statistics, **32**(2), 139-160, 2016.
- **Aryal, G.** and Elbatal, I., *Kumaraswmy Modified Inverse Weibull Distribution: Theory and Application*, An International Journal of Applied Mathematics & Information Sciences, **9** (2), 651-660, 2015.
- **Aryal, G.** and Elbatal, I., *On the Exponentiated Generalized Modified Weibull Distribution*, Communications for Statistical Applications and Methods, **22**(4), 333–348, 2015.
- Elbatal, I. and **Aryal, G.,** *Transmuted Dagum Distribution with Applications*, Chilean Journal of Statistics, **6** (2), 31-45, 2015.
- **Aryal, G.,** *Transmuted Log-Logistic Distribution*, Journal of Statistics Applications & Probability, **2**(1), 11-20, 2013.
- Elbatal, I. and **Aryal, G.**, *On the Transmuted Additive Weibull Distribution*, Austrian Journal of Statistics, **42** (2), 117–132, 2013.
- **Aryal, G.** and Tsokos, C. P., *Transmuted Weibull Distribution: A Generalization Of the Weibull Probability Distribution*, European Journal of Pure and Applied Mathematics, **4**(2), 89-102, 2011.
- **Aryal, G.** and Tsokos, C. P., *Generalization methods of probability distributions in engineering applications*, International Journal-Problems of Nonlinear Analysis in Engineering Systems, **35** (1), 6-17, 2011.
- **Aryal, G.** and Tsokos, C. P., *Application of the Truncated Skew Laplace Probability Distribution in Maintenance System*, Journal of Modern Applied Statistical Methods, **8** (2), 409-422, 2009.
- **Aryal, G.**, Mapa, L. and Tsokos, C. P*., Read Rate Analysis of RFID Systems Using Mixed Models,* Neural, Parallel & Scientific Computations, **17**, 339- 350, 2009.
- **Aryal, G.** and Tsokos, C. P*., On the Transmuted Extreme value Distribution with Application,* Nonlinear Analysis: Theory, Methods & Applications, **71**(12), 1401-1407, 2009.

- **Aryal, G.** and Tsokos, C. P., *Airline Spill Analysis using Gumbel and Moyal Probability Distributions,* Neural, Parallel & Scientific Computations, **16**, 35-43, 2008.
- **Aryal, G.** and Tsokos, C. P., *Application of the skew Laplace distribution in Finance,* Journal of Statistical Theory and Applications, **6**, 45-60, 2007.
- **Aryal, G.** and Rao, A.N.V., *Reliability model using truncated skew-Laplace distribution,* Nonlinear Analysis: Theory, Methods & Applications, **63** , 639 - 646, 2005.
- **Aryal, G.** and Nadarajah, S., O*n the skew Laplace distribution* Journal of Information and Optimization Sciences, **26**(1), 205-217, 2005.
- **Aryal, G.** and Nadarajah, S., *Information matrix for beta distributions,* Serdica Mathematical Journal, **30**(4), 513-526, 2004.
- Nadarajah, S. and **Aryal, G.,** *On the skew uniform distribution,* Random Operators and Stochastic Equations, **12**(4), 319-330, 2004.

Refereed Conference Proceeding Articles

- Mapa, L. Goni, F., Alam, S. and **Aryal, G**., *Developing a Radio Frequency Identification (RFID) as a decision support system in horticulture industry*, Proceedings of the 2018 American Society for Engineering Education (ASEE) Annual Conference & Exposition Paper ID#21896, 2018.
- **Aryal, G.,** Chanda K. and Mapa, L., *Statistical Analysis of the Effect of Temperature on RFID Tag Readability,* Proceedings of the 12th Mechatronic Forum, *Biennial* International Conference, **2**, 274 -280, 2010.
- **Aryal G.,** Mapa, L. and Camsarapalli, S. K*., Effect of Variables and their Interactions on RFID Tag Readability on a Conveyor Belt – Factorial Analysis Approach,* Proceedings of IEEE International conference on Electro/Information Technology, 88-93, 2010.
- Mapa, L., **Aryal, G.** and Chanda, K., *Effect of Nanofluids on the Readability of RFID Tags*, Proceedings of IEEE International Conference on Electro/Information Technology, 174-179, 2010.
- **Aryal, G.** and Tsokos, C. P., *Theory and Applications of the Truncated Skew Laplace Distribution,* Proceedings of the Fifth International Conference on Dynamic Systems and Applications, **5**, 46-52, 2008.

Recent Talks/Presentations

- *Transmuted-G Poisson Family*, International Conference on Statistical Distributions and Applications (ICOSDA 2019), Grand Rapids, MI, October 10-12, 2019.
- *McDonald-G-Poisson Family of Distributions*, Second International Conference on Applications of Mathematics to Nonlinear Sciences, Pokhara, Nepal, June 27-30, 2019.
- *Developing Statistics Modules for Dynamic Processes to Enhance Effective Learning by Integrating Visualization*, Second International Conference on Applications of Mathematics to Nonlinear Sciences, Pokhara, Nepal, June 27-30, 2019.
- *Generalized Family of Distributions with Applications*, 2nd Annual Conference on the Frontier of Statistics, University of South Florida, May 11- 12, 2018.
- *On Some Generalized Family of Distributions with Applications*, Lecture Series at The University of Tampa, Tampa, FL, March 22, 2018.
- *Characterizations of the beta exponential Pareto distribution with Applications*, Joint Mathematics Meetings (JMM 2018), San Diego, CA, USA, Jan. 10-13, 2018.
- *On the Kumaraswamy Laplace Distribution and Its Applications*, Joint Statistical Meetings (JSM-2016), Chicago, IL, USA, July 30-August 4, 2016.
- *On Some Generalizations of Laplace Distribution*, International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2016), Kathmandu, Nepal, May 26-29, 2016.
- *Kumaraswamy Laplace Distribution and its Applications*, Seventh International Conference on Dynamic Systems and Applications & Fifth International Conference on Neural, Parallel, and Scientific Computations, Atlanta, GA, USA, May 27-30, 2015.
- *Skew Symmetric and Transmuted Probability Distribution*, International Federation of Nonlinear Analysts, World Congress 2012, Athens, Greece, June 25- July 1, 2012.

Editorial Board

- Board of Directors: The International Federation of Nonlinear Analysts (IFNA), http://www.ifnaworld.org/
- Editorial Member: Global Journal of Mathematical Sciences (GJMS), August 2012- Present, http://www.ifnaworld.org/ojs/index.php/GJMS/index
- Associate Editor: Journal of Probability and Statistical Science (JPSS), August 2010 (from 15th issues) – Present, http://www.i-tel.com.tw/jpss/
- Editorial Member: Proceedings of the Neural, Parallel and Scientific Computations, Volume 4, 2010.

Referee/Reviewer

- ❖ Applied Mathematics and Computation (AMC)
- ❖ Journal of Modern Applied Statistical Methods (JMASM)
- ❖ Communications in Statistics-Theory and Methods (CSTM)
- ❖ Journal of Data Science (JDS)
- ❖ Journal of Probability and Statistical Science (JPSS)
- ❖ Neural, Parallel & Scientific Computations (NPSC)
- ❖ Hacettepe Journal of Mathematics and Statistics (HJMS)
- ❖ Communications for Statistical Applications and Methods (CSAM
- ❖ Economic Quality Control (EQC)
- ❖ Journal of Statistics Applications & Probability (JSAP)
- ❖ Brazilian Journal of Probability and Statistics (BJPS)

Conferences/ Invited Sessions Organized

- ❖ Conference Organizer, Second International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019), June 27-30, 2019, Pokhara, Nepal. http://anmaweb.org/AMNS-2019/
- ❖ Conference Organizer, International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2016), May 26-29, 2016, Kathmandu, Nepal. http://anmaweb.org/AMNS-2016/
- ❖ Organizer of an invited session on "Probability and Statistics" during the International Federation of Nonlinear Analysts (IFNA) World Congress 2012, June 25- July 1, 2012, Athens, Greece. www.ifnaworld.org/ifna2012/
- ❖ Organizer of an invited session on "Theory and Applications of Probability Distributions" for the Fourth International Conference on Neural, Parallel and Scientific Computations, August 11-14, 2010, Atlanta, GA. http://atlas-conferences.com/cgi-bin/abstract/cazk-01

Student Mentoring & Research Awards

Year	Student	Project Title	Grant Type
2019	Hanna W. Damarjian	The Transmuted Exponential Pareto Distribution	Ronald E. McNair Summer Research Grant
2017	Ikechukwu I. Nnachi	Statistical Analysis of the Game of Soccer	Undergraduate Research Grant
2016	Anna Fenner	Statistical Analysis of SEP Data	Undergraduate Research Grant
2016	Matthew Hall	On Some Generalizations of Pareto Distribution	Undergraduate Research Grant
2015	Timothy Fox	The Eastern Bluebird at Taltree Arboretum	Ronald E. McNair Summer Research Grant
2015	Matthew Freeland	Generalizing the Gumbel Distribution	Undergraduate Research Grant
2014	Michael Tinich	NFL data Statistical Analysis Using R	Undergraduate Research Grant
2014	Timothy Fox	Generalization of the Weibull Distribution	Undergraduate Research Grant
2011	David Milanec	Analysis of Time Series Forecasting Models Using Weighted, Exponential and K-th Order Moving Average	LSAMP Research Grant
2011	Kay Arkfeld	Empirical Methods in Statistical Computations	LSAMP Research Grant
2010	Kay Arkfeld	Complex Sampling to Analyze the Economic Cost of Catastrophic Events	LSAMP Research Grant
2009	Timothy Ojo	Regression Model for Survival Time of Heart Attack Patients Using SAS	LSAMP Research Grant
2009	Jordan Campbell	Survival Analysis of Heart Attack Patients using Parametric and Nonparametric Approaches	LSAMP Research Grant