

Rajan Lamichhane, PhD
Biostatistician | Assistant Professor
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John C Edwards School of Medicine
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Education

Ph.D., Old Dominion University, Norfolk, Virginia Major: Computational Applied Mathematics (Statistics)	08/2009 - 08/2013 GPA 4.0
M.S., Southern Methodist University, Dallas, Texas Major: Statistics	08/2005 - 06/2007

Academic Appointments

Assistant Professor/Biostatistician Department of Clinical and Translational Sciences John C Edwards School of Medicine Marshall University, Huntington, WV.	2020- Present
Assistant Professor/Biostatistician Healthcare Delivery Science School of Health Professions Eastern Virginia Medical School Norfolk, Virginia.	2017-2019
Assistant Professor Department of Mathematics Texas A&M University-Kingsville Kingsville, Texas.	2013-2016
Teaching Assistant Old Dominion University, Norfolk, VA.	2009- 2010
Adjunct Lecturer, Mathematics Morton College, Cicero, IL.	Aug. 2008- Aug. 2009
Adjunct Lecturer, Mathematics Elgin Community College, Elgin, IL.	Jan. 2009- May 2009

Adjunct Lecturer (Statistics) Summer, 2007
Southern Methodist University, Dallas, TX.

Teaching Assistant (Statistical Science) 2005-2007
Southern Methodist University, Dallas, TX.

Teaching Interests

Health Analytics, Biostatistics, Time series, Multivariate Data Analysis, Survey Sampling, Design of experiments, Probability Theory, Categorical Data Analysis, Survival Analysis, Statistical Software SAS and R, Data Mining and Machine Learning-Neural Network.

Professional Memberships and Activities

Association of Nepalese Mathematicians in America (ANMA), Member 2014-Present
American Statistical Association (ASA), Member 2005-Present
Sleep Research Society (SRS), member 2018-2020

Honors and Awards

Kutner Travel Award 2017
Southern Regional Council on Statistics (SRCOS)

Pipelines into Biostatistics: Visiting Faculty Workshop Award,
T.H. Chan School of Public Health, Department of Biostatistics, Harvard University 2016

Young Faculty or Isolated Statistician Travel Grant 2016
Southern Regional Council on Statistics (SRCOS)

South Texas Expansion Program for Hispanic Graduate Students (STEP-HG)
Project Faculty Research Award 2015

University Research Award, Texas A&M University-Kingsville 2015

Summer Support Award, Texas A&M University-Kingsville 2015

Summer Support Award Texas A&M University-Kingsville 2014

Instructional Technology Award, Part of US Department of Education
(PPOHA-STEP-HG) Grant 2014

Professional Development Award, Part of US Department of Education
(PPOHA-STEP-HG) Grant 2014

Best Student Paper Award, Virginia Academy of Science 2013

Boyd Harshbarger Student Travel Award
Southern Regional Council on Statistics

2012

Research Positions

Research Assistant
Old Dominion University, Norfolk, VA

Aug. 2010-2013

Visiting Scholar
The Johns Hopkins University

Summer 2010

Research Interests:

Computational and applied statistics, Bio-statistics, health analytics, Sparse time series data, Sampling Longitudinal and multivariate models, Categorical data analysis, MCMC and Bayesian inference, Functional data analysis, Big data Analytics and Machine learning.

Student Research Guidance

MS Graduate Research Project Advisor

Sushma S Golla and Kalyan R. Vadlamudi, MS(2016), Texas A&M University-Kingsville (TAMUK), Kingsville, Texas.

Michael Johnson, MA (2014), Texas A&M University-Kingsville, Kingsville, Texas.

Ph.D. Dissertation Committee Member

Maria Gonzales, Ph. D., Teaching and Bilingual Ed., 2016, Texas A&M University-Kingsville, Kingsville, Texas.

Xochitl Rocha, Ph.D., Teaching and Bilingual Ed., 2016, Texas A&M University-Kingsville, Kingsville, Texas.

Technical Skills

- Certification: Supervised Machine Learning (Univ. Washington, Seattle).
- Certification: Unsupervised Machine Learning (Univ. Washington, Seattle).
- Certified SAS programmer (SAS Institute).
- Excellent programming skills in R and S-plus.
- Very good knowledge of STATA and StatXACT.
- Excellent computer software skills. Proficiency in Microsoft Office
- Good knowledge of SQL, PL/SQL.
- Experience in LaTeX, document markup language.
- Experienced in using and managing Blackboard and WebCT in the academic platform.

Peer Reviewed Publications

Zhang, Q., **Lamichhane, R.**, Wright, M., McLaughlin P. W., and Stacy, B., “Trends in Breastfeeding Disparities in U.S. Infants by WIC Eligibility and Participation: Evidence from NHANES 1999-2014”, *Journal of Nutrition Education and Behavior, Elsevier*. 2019 Feb;51(2):182-189.

Brush JE, Siraj, E.S., Kemp, C.D., Liverman, D.P., McMichael, B.Y., **Lamichhane, R.**, and Sheehan, B.E. Effect of diabetes mellitus on complication rates of coronary artery bypass grafting. *The American journal of cardiology*. 124 (9), 1389-1396

Elias SE, Nelson A., Brush JE, Ullal, J., **Lamichhane, R.**, and Sheehan, BE. Outcomes Before and After Implementation of a Comprehensive Multidisciplinary Cardiovascular Diabetes Program among Patients with Diabetes Undergoing Coronary Artery Bypass Grafting (CABG). *Diabetes*, June 2019, 68, 1310-P; DOI: 10.2337/db19-1310-P.

Morris, D., Sheehan, B., **Lamichhane, R.**, Zimbardo, K., Morgan, M. K., and Bhardwaj, P., “Validation of an automated mortality index using the electronic medical record system in a network of acute care hospitals”, *Journal of Hospital Administration*, 2019, Vol 8(3), DOI 10.5430/jha.v8n3p8.

Lamichhane, R., and Szklo-Coxe M., “Sleep Duration Time Trends and Averages Among Adults In the US Population: 2005-2014”, 2018, *Sleep 41*, A94-A95.

Zhang, Q., **Lamichhane, R.**, and Diggs, L., “Disparities in Emergency Department Visits in American Children with Asthma: 2006-2010”, *J Asthma*. 2016; 1-8 (ISSN: 1532-4303).

Lamichhane, R., Singh, S., and Diawara, N., “Improved estimation of population mean using the known median of auxiliary variable”, *Communications in Statistics-Simulation and Computation*, DOI:10.1080/03610918.2015.1062102, 2015.

Vorona, R. D., Szklo-Cox, M., **Lamichhane, R.**, Ware, J. C., McNallen, A., and Leszczyszyn, D., “Adolescent Crash Rates and School Start Times in Two Central Virginia Counties, 2009-2011: A Follow-up Study to a Southeastern Virginia Study, 2007-2008,” *Journal of Clinical Sleep Med.*, 2014 Nov 15;10 (11):1169-77. doi: 10.5664/jcsm.4192. PMID: 25325600.

Lamichhane, R. and Singh, S., “Estimation of mode using two-phase sampling,” *Communications in Statistics-Simulation and Computation*, DOI: 10.1080/03610918.2014.909936, 2014.

Lamichhane, R., Diawara, N., and Jones, C. M., "Forecasting of time series data using multiple break points and mixture distributions," in *New Frontiers of Multidisciplinary Research in STEAM-H (Science, Technology, Engineering, Agriculture, Mathematics and Health)*, Springer International Publishing, pp. 241-278, 2014.

Zhang, Q., **Lamichhane, R.**, and Wang, Y., “Does child-parent resemblance in body weight status vary by socio-demographic factors in the United States?” *Journal of Epidemiology & Community Health*, Published Online First: [July 14, 2014] doi: 10.1136/jech-2013-203476, PMID: 25059731.

Zhang, Q., **Lamichhane, R.**, and Wang, Y., “Association between US Adult Obesity and State and County Economic Conditions in the Recession,” *Journal of Clinical Medicine*, vol 3, no. 1, pp. 153-166, 2014.

Zhang, Q. and **Lamichhane, R.**, "Labor market conditions and food security status of emergency food assistance program clients in recession," *NA J Clin Med.*, vol. 7, no. 2, pp. 57-62, 2014.

Sen, S., **Lamichhane, R.**, and Diawara, N., “A bivariate distribution with conditional gamma and its multivariate form”, *Journal of Modern Applied Statistical Methods*. 2014, Vol. 13, No. 2, 169-184.

Leszczyszyn DJ, Vorona RD, Szklo-Coxe M, **Lamichhane R**, McNallen A. (2013), The Virginia Jurisdiction with an Earlier Public High School Start Time Again Demonstrates Greater Teen Crash Rates. *Sleep* 2013, 36 (Pediatrics #1083): A370.

Szklo, M.C., **Lamichhane, R.**, Vorona, R.D., and Ware, J.C. (2012), “Trend in Sleep Duration over Time in the United States Population 2005-2010,” *SLEEP*, 35 (Health Care Services, Research, and Education, #1329): A449.

Grants and Contract Awards

PI, Professional Enrichment and Growth Grant (PEG), \$3,600, Eastern Virginia Medical School, Norfolk, VA. 2017
PI, “Curing Math Anxiety through Tutoring”, \$9,800, Service Learning Grant, Texas A&M University-Kingsville, Texas. 2015

Other Grants Submitted

Co-I and Biostatistician. Targeting cell survival pathways for chemoprevention of head and neck cancer. PI: ARM Ruhul Amin, NIH R15, 2020.

Co-I and Biostatistician. Mechanisms of apoptosis resistance to targeted therapy in head and neck cancer. PI: ARM Ruhul Amin, NIH R15, 2020.

Co-I and Biostatistician. Regulation of intestinal bile acid absorption in obesity. PI: Subha Arthur, NIH R01, 2020.

Co-I and Biostatistician. Mechanisms of linear growth acceleration in childhood obesity. PI: Maria Serrat, NIH R01, 2020.

Co-I and Biostatistician. Unique regulation of L-type amino acid transporter 1 (LAT1) in breast cancer in obesity. PI: Travis Salisbury, NIH R01, 2020.

Co-I and Biostatistician, Implementation of MAPP and MAPP-App Opioid Misuse and Abuse Prevention Programs in Rural and Urban Hampton Roads Communities PI: Dr. Beverly Roberts-Atwater, AHRQ-R18, 2018.

Biostatistician, Co-I, Feature Combinations of Acute Myocardial Infarction in Women and Men: Impact of Gender-Specific Feature Clustering on Diagnostic Reasoning, **PI:** Dr. John Brush, 2018, submitted to NIH (R21).

Biostatistician, Co-I, Mediators of 4He-Induced Immediate and Long-Term Changes in Sociability and Mood: Pharmacotherapeutic Targets to Improve CNS Performance during Deep Space Missions, **PI:** Dr. Stephen I Deutsch, \$1,350,000, 2017, submitted to NASA.

PI, Diversity in Data Sciences through Research Experiences and Multidisciplinary Curricular Innovations (DDSREMCI), Other PIs-Simona Hodis, Ashraf Yaseen, \$924,720, NIH (R25), 2015, Not funded.

Co-I, “Novel Oral Pediatric Nanof ormulation of Tacrolimus”, National Institute of Health (NIH)-R21, 2015, PI: Srinath Palakurthi, Not funded.

PI, “Local Economic Conditions, Diabetes, and Kidney Disease”, 2014, submitted to National Institute of Health (NIH-NIDDK)-R21, Not funded.

Co-PI, “An overseas induction experience for school personnel and university students from Texas”, 2014, Submitted to the United States Department of Education, PI-Roberto Torres, Not funded.

Manuscript Reviewer

Marshall Journal of Medicine	2020-Present
Communication in Statistics	2020-Present
Mitochondria	2019-Present
American Journal of Public Health (AJPH)	2019-Present
Journal of Probability and Statistical Science (JPSS)	2017-Present
PLOS-One	2015-Present
Model Assisted Statistics and Applications (MASA)	2014-Present

Grant Reviewer

- COBRE/ACCORD Pilot funding, Marshall University, 2020.
- Internal grant from Healthcare Analytics and Delivery Science Institute (HADSI), EVMS, 2017-2018.

Editorial Board Member

Journal of Reproductive Medicine and Women's Healthcare, Jayden Publishers

2019-Present

<https://jaydenpublishers.com/Journal-of-Reproductive-Medicine-and-Womens-Healthcare/editorial-board.php>

List of Courses Taught and Developed

Year	Course	Level	Role	Medium	No. of Students	Type of Activities	Outcome
2020 Marshall*	Epidemiology and biostatistics used in medical research.	Grad	Course Development and Instruction	In class	3	Teaching	Education
2019 EVMS**	Data Management with SAS (Summer)	Grad	Course Development and Instruction	Hybrid	18	Teaching	Education
	Data Mining and Machine Learning (Summer)	Grad	Course Development and Instruction	Online	10	Teaching	Education
	Leveraging Data for Evidence-Based Decision Making (Spring)	DHSC (Doctoral)	Course Development and Instruction	Online	32	Teaching	Education
2016 TAMUK***	Probability for Analytics	Grad	Course Development and Instruction	In class	6	Teaching	Education
	Time series Analysis	Grad	Course Development and Instruction	In class	7	Teaching	Education
	Biostatistics	Grad	Course Development and Instruction	Online	20	Teaching	Education
	Biostatistics	Und. Grad	Instruction	In class	60	Teaching	Education
	Statistical Methods	Und. Grad	Instruction	In class	34	Teaching	Education
	Statistical Methods	Und. Grad	Course Development and Instruction	Online	7	Teaching	Education
	Inferential Analytics	Grad	Course Development and Instruction	In class	6	Teaching	Education
	Advanced Engineering Mathematics	Grad (PhD)	Course Development and Instruction	In class	8	Teaching	Education
	Thesis	Grad	Course Development and Instruction	independent	1	Research	Thesis
Project	Grad	Course Development and Instruction	independent	2	Research	Project	
2015 TAMUK	Biostatistics	Grad	Course Development and Instruction	Online/Hybrid	22	Teaching	Education
	Elementary Statistics	Und. Grad	Instruction	In class	22	Teaching	Education
	Biostatistics	Und. Grad	Instruction	In class	68	Teaching	Education
	Statistical Methods	Und. Grad	Instruction	In class	65	Teaching	Education

	Predictive Analytics	Grad	Course Development and Instruction	In class	1	Teaching	Education
	Advanced Engineering Mathematics	Grad (PhD)	Course Development and Instruction	In class	3	Teaching	Education
2014 TAMUK	Biostatistics	Grad	Course Development and Instruction	Hybrid	9	Teaching and Research	Education & Project
	Biostatistics	Und. Grad	Instruction	In class	110	Teaching	Education
	Elementary Statistics	Und. Grad	Instruction	In class	15	Teaching	Education
	Trigonometry	Und. Grad	Instruction	In class	20	Teaching	Education
	Statistical Methods	Und. Grad	Instruction	In class	19	Teaching	Education
2013 TAMUK	College Algebra	Und. Grad	Instruction	In class	40	Teaching	Education
	Business Mathematics	Und. Grad	Instruction	In class	32	Teaching	Education
	Elementary Statistics	Und. Grad	Instruction	In class	18	Teaching	Education

*Marshall- Marshall University

**EVMS – Eastern Virginia Medical School

***TAMUK- Texas A&M University- Kingsville

Abstracts and Presentations

National/International Meetings

1. 32nd Annual Meeting of the Associated Professional Sleep Societies, Sleep Conference, Baltimore, MD (2018)
2. Southern Regional Council on Statistics, (2017).
3. Southern Regional Council on Statistics, (2016).
4. Southern Regional Council on Statistics, (2015).
5. Fourth International Conference on Health, Wellness, and Society, Vancouver, CA, 2014, Economic Recession and Food Security Status Among Low-Income Americans.
6. Joint Statistical Meetings, 2012. Temporal Prediction Models from Marginal and Small Data Signal: the Otolith Data Example.
7. Society of Industrial and Applied Mathematics (SIAM), 2012, Bootstrap Smoothing With Application To Parameter Estimation In Non-linear Time Series Models.

Local/Regional Meetings

1. Fourth Annual Statistics Day, Texas A&M University-Kingsville, 2015
Dealing with Food Insecurity and Obesity Paradox Using Structural Equation Modeling (SEM).
2. Third Annual Statistics Day, Texas A&M University-Kingsville, 2014.
Analysis of Locally Changing Time Series Data Using Mixture Distribution.

Posters

Sleep Duration Time Trends and Averages Among Adults In The U.S. Population: 2005 – 2014, Joint meeting of AASM and SRS, 2018.

Artificial Neural Networks (ANN) in Predicting US Adult Obesity, Southern Regional Council on Statistics (SRCOS), 2017.

Impact of Local Economic Conditions in Sleep Habits: Linking Local Economic Conditions to Food Insecurity and Sleep Habits, Southern Regional Council on Statistics (SRCOS), 2016.

Understanding the Pathways between Food Insecurity and Sleep Habits, Southern Regional Council on Statistics (SRCOS), 2015.

Forecasting under structural changes in non-linear time series models, Southern Regional Council on Statistics (SRCOS), 2012.