

Tahir Ekin

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Education

Ph.D., Decision Sciences, The George Washington University School of Business, 2012
Title: Essays in Simulation-based Stochastic Programming
Committee: Refik Soyer (chair), Nick Polson, Miguel Lejeune, Srinivas Prasad, Thomas Mazzuchi.

B.S., Industrial Engineering, Bilkent University, Turkey, 2007

Visiting Student, Industrial and Information Management, Tampere University of Technology, Finland, 2005-2006

Academic Positions

Associate Professor of Quantitative Methods
Texas State University, McCoy College of Business, September 2018- Present

Brandon Dee Roberts Endowed Professor of Excellence
Texas State University, January 2016 - Present

Assistant Professor of Quantitative Methods
Texas State University, McCoy College of Business, August 2012- August 2018

Facilitator Instructor & Adjunct Professor
The George Washington University, School of Business, August 2009 - July 2012

Teaching & Research Assistant
The George Washington University, School of Business, September 2007 - July 2012

Professional Positions

Statistician, Integrity Management Services, Alexandria, VA. December 2011 - July 2012

Consultant, International Finance Corporation-World Bank, Washington, DC. May-July 2010

Project Consultant, Carlsberg Turkey, Izmir, Turkey. October 2006 - May 2007

Intern, Procter & Gamble, Istanbul, Turkey. June-September 2006

Intern, Valeo, Bursa, Turkey. July - August 2005

Areas of Expertise

Bayesian Modeling, Simulation-based Stochastic Optimization, Statistical Medical Fraud Assessment.

Honors and Awards

- 2015-2018 Brandon Dee Roberts Excellence Professorship (course release, salary and research stipend). Texas State University.

- 2018 Presidential Distinction Award for Excellence in Scholarly/Creative Activity. Texas State University.
- 2017 Garry Woods Research Award. Texas State University McCoy College of Business (given to the best faculty in college based on the last 3 year research record)
- 2016 y-BIS Best Paper Award. “An Unsupervised Bayesian Hierarchical Method for Medical Fraud Assessment”. ISBIS, American Statistical Association & US National Institute of Statistical Sciences.
- 2016 SAMSI Travel Award. SAMSI & NSF.
- 2015 Alpha Chi Favorite Professor Award. Alpha Chi Society.
- 2013 Program Excellence in Teaching and Learning Travel Award. Texas State University.
- 2007-2012 Full Merit Scholarship (full tuition waiver and stipend). The George Washington University School of Business.
- 2003-2007 Full Merit Scholarship (full tuition waiver and stipend). Bilkent University.
- 2005-2006 Erasmus Study Abroad Scholarship (full tuition waiver and stipend). European Union
- 2003 Golden Youth Award. Turkiye Is Bankasi.
- 2003 Ranked 40th among 1.5 million students who took National University Placement Exam of Turkey

Awards of Supervised Students for Joint Work

- 2018 Texas State University Undergraduate Research Conference Best Poster Prize (Supervised Brittney Lopanec, Luis Maldonado, Kattlyn Batterton). “What Makes You Happy: Using Statistical Analysis To Measure Significance Of Happiness Scores”. San Marcos, TX.
- 2017 Texas State University Undergraduate Research Conference Best Poster Prize (Supervised Mario Hernandez). “Learning Analytics and Player Fluency in Open-World, Non-competitive Video Games”. San Marcos, TX.
- 2017 Texas State University Undergraduate Research Conference Best Poster Prize in Special Category of the Year: Research on Music and War (Supervised Aaron Talley, Ali Mechaik, Cody Skiles). “War, Music, and Data: An Analysis of Shifting Lyrics During the Vietnam War”. San Marcos, TX.

RESEARCH

Books

- Ekin, T. (in production) *Statistics and Health Care Fraud: How to Save Billions*. ASA-CRC Press Series on Statistical Reasoning in Science and Society.

Refereed Journal Articles

1. Lopez Perez, F., Ekin, T., Mendez, F., Jimenez, J. (Accepted) Risk Balanced Territory Design for a Micro Finance Institution. *Journal of Industrial and Management Optimization*.
2. Musal, R., Ekin, T. Information Theoretic Multi-Stage Sampling Framework for Medical Audits. (In-press) *Applied Stochastic Models in Business and Industry*. OnlineFirst. doi:10.1002/asmb.2338
3. Ekin, T., Ieva, F., Ruggeri, F., Soyer, R. (In-press) Statistical Medical Fraud Assessment: Exposition to an Emerging Field. *International Statistical Review*. OnlineFirst. doi:10.1111/insr.12269

4. Ekin, T. (2018) Integrated Maintenance and Production Planning with Endogenous Uncertain Yield. *Reliability Engineering and System Safety*. 179 (November 2018) 52-61.
5. Ekin, T., Polson, N. G., Soyer, R. (2017) Augmented Nested Sampling for Stochastic Programs with Recourse and Endogenous Uncertainty. *Naval Research Logistics*. 64 (8), 613–627.
6. Ekin, T., Ieva, F., Ruggeri, F., Soyer, R. (2017). On the Use of the Concentration Function in Medical Fraud Assessment. *The American Statistician*. 71 (3), 236–241.
7. Bastian, N., Ekin, T., Kang, H., Grannan, B., Griffin, P., Fulton, L. (2017). Stochastic Multi-Objective Auto-Optimization for Resource Allocation Decision-Making in Fixed-Input Health Systems. *Health Care Management Science*, 20(2), 246–264.
8. Musal, R., Ekin, T. (2017). Medical Overpayment Estimation: A Bayesian Approach. *Statistical Modelling*, 17(3), 196–222.
9. White, G., Ekin, T., Visinescu, L. (2017). Analysis of Protective Behavior and Security Incidents for Home Computers. *Journal of Computer Information Systems*, 57(4), 353-363.
10. Aktekin, T., Ekin, T. (2016). Stochastic Call Center Staffing with Uncertain Arrival, Service and Abandonment Rates: A Bayesian Perspective. *Naval Research Logistics*, 63(6), 460–478.
11. Ekin, T., Kocadagli, O., Fulton, L., Bastian, N., Griffin, P. (2016). Fuzzy Decision Making in Health Systems: A Resource Allocation Model. *EURO Journal on Decision Processes*, 4(3), 245–267.
12. Lopez, F., Ekin, T., Mendez, F., Jimenez, J. (2015). Hybrid heuristic for dynamic location-allocation on micro-credit territory design. *Computacion y Sistemas*, 19(4), 783-804.
13. Ekin, T., Musal, R., Fulton, L. (2015). Overpayment Models for Medical Audits: Multiple Scenarios. *Journal of Applied Statistics*, 42(11), 2391-2405.
14. Ekin, T., Polson, N., Soyer, R. (2014). Augmented MCMC Simulation for Two-Stage Stochastic Programs with Recourse. *Decision Analysis*, 11(4), 250-264.
15. Bastian, N., Fulton, L., Shah, V., Ekin, T. (2014). Resource allocation decision making in the military health system. *IIE Transactions on Healthcare Systems Engineering*, 4(2), 80-87.
16. Ekin, T., Ieva, F., Ruggeri, F., Soyer, R. (2013). Application of Bayesian Methods in Detection of Healthcare Fraud. *Chemical Engineering Transactions*, 33, 151-156.

Papers Under Review

1. An Unsupervised Bayesian Hierarchical Method for Medical Fraud Assessment.(with Lakomski, G., Musal, R)
2. Topic Modelling for Medical Prescription Fraud and Abuse Detection (with B.Zafari)
3. Predicting Intentions to Purchase Luxury Brands Among Hispanic Consumers. (with Bhardwaj, V.)
4. An Exploratory Analysis of Student Parents in Community Colleges: Challenges and Opportunities (with M. Schaetz, L. Feng, J.Beck)

Supervised Theses

- In Progress. Member of Ph.D. Thesis Committee of Fei Sun. “Minimizing Levelized Cost for Variable Energy System with Utility-Scale Storage: A Machine Learning Approach”. Ph.D. in Material Science, Engineering Commercialization (MSEC). Texas State University.
- 2017. Co-chair of Master’s Thesis Committee of Dominic Ramos. “Analysis of at-bat Data for Classification of Baseball Players”. MBA, McCoy College of Business, Texas State University.
- 2017. Member of Master’s Thesis Committee of Greg Lakomski. “Non-Gaussian Models for Context Aware Anomaly Detection”. MS in Computer Science, College of Science and Engineering, Texas State University.
- 2016. Chair of Master’s Thesis Committee of Maureen Schaetz. “Engagement of Student Parents in Community Colleges: Challenges and Opportunities”. MBA, McCoy College of Business, Texas State University.

Funded Grants

1. \$8,000. Principal Investigator. Texas State University Research Enhancement Program. “Structural Topic Model based Prescription Fraud and Abuse Detection”. May 2018 - May 2019.
2. \$2,185. Principal Investigator. Texas State University McCoy College of Business. “McCoy Faculty Development Fund”. December 2016 - September 2017.
3. \$8,000. Principal Investigator. Texas State University Research Enhancement Program. “Stochastic Call Center Staffing with Uncertain Arrival, Service and Abandonment Rates”. May 2016 - May 2017.
4. \$499,896. Senior Personnel. *National Science Foundation*. “Enabling and Improving Data-Driven Research at Texas State University”. October 2014-September 2017.
5. \$2,500. Principal Investigator. Texas State University McCoy College of Business. “Understanding Hispanic Purchase Behavior toward Luxury and Counterfeit Branded Merchandise”. April 2015 - April 2016.
6. \$2,500. Principal Investigator. Texas State University McCoy College of Business. “Overpayment Models for Medical Audits: Multiple Scenarios”. September 2014 - May 2015.
7. \$8,000. Principal Investigator. Texas State University Research Enhancement Program. “Bayesian co-clustering: A New Approach for Healthcare Fraud Detection”. May 2013 - May 2014.
8. \$10,000. Principal Investigator. Texas State University McCoy College of Business. “Summer Faculty Support”. June 2013 - August 2013.
9. \$700. Principal Investigator. Texas State University Library. “New Faculty Startup Fund”. Texas State University. October 2012.

Conference Proceedings & Technical Reports

1. Ekin, T. (forthcoming, 2019). An Integrated Decision-making Framework for Medical Audit Sampling. *Proceedings of the 52nd Hawaii International Conference on System Sciences (HICSS52)*
2. Zafari, B. Ekin, T. (2018). Topic Modelling for Medical Prescription Fraud and Abuse Detection. *Proceedings of 13th INFORMS Workshop on Data Mining and Health Informatics*.
3. Lopez, F., Ekin, T., Mendez, F., Jimenez, J. (2015). Territory Design with Risk for a Micro Finance Institution. *Texas State University Center for High Performance Systems*.

4. Ekin, T., Ieva, F., Ruggeri, F., Soyer, R. (2013) Bayesian Co-Clustering Methods for Assessment of Healthcare Fraud. *The George Washington University The Institute for Integrating Statistics in Decision Sciences*.
5. Ekin, T., Ieva, F., Ruggeri, F., Soyer, R. (2013). Statistical Issues in Medical Fraud Assessment. *MOX, Dipartimento di Matematica, Politecnico di Milano*.
6. Ekin, T., Ieva, F., Ruggeri, F., Soyer, R. (2013). Application of Bayesian Methods in Healthcare Fraud. *The George Washington University The Institute for Integrating Statistics in Decision Sciences*.
7. Ekin, T., Caglar, T., Soyer, R. (2012). Bayesian Co-Clustering Methods in Healthcare Fraud Detection. *Proceedings of 7th INFORMS Workshop on Data Mining and Health Informatics*.
8. Ekin, T., Polson, N., Soyer, R. (2012). Simulation-Based Two-Stage Stochastic Programming with Recourse. *The George Washington University The Institute for Integrating Statistics in Decision Sciences*.

Working Papers

1. Bayesian Poisson Co-Clustering Methods for Medical Fraud Detection (with F.Ieva, R. Soyer and F. Ruggeri) target: *Journal of Royal Statistical Society: Series A*.
2. Augmented Probability Simulation Methods for Non-cooperative Games (with D. Rios Insua) target: *Annals of Operations Research*.
3. Call Center Staffing Optimization with Dependent Uncertainty in Arrival, Service and Abandonment Rates (with T. Aktekin) target: *European Journal of Operational Research*.
4. Effects of Risk Consideration for an Integrated Micro Finance Network Design. (with F. Lopez-Perez, F. Mendez and J. Jimenez). target: *Operations Research Letters*.
5. Augmented Probability Simulation Methods for Multi-stage Stochastic Programs (with R. Soyer)
6. An Integrated Outlier Detection Framework for Turkish Medical System (with E. Sirin)
7. Statistical Analysis of Engagement of Student Parents at Community Colleges (with M. Schaez, and L. Feng)
8. Factors in determining Counterfeit Purchase Behavior: A Bayesian Framework (with V. Bhardwaj and R. Musal)

Conference and Seminar Presentations

1. 2019 (Scheduled) "Topic Modelling for Medical Prescription Fraud and Abuse Detection". ISI World Statistics Congress. Kuala Lumpur, Malaysia.
2. 2018 (Scheduled) "Resource Allocation For Medical Fraud Assessment". INFORMS Annual Meeting. Phoenix, AZ.
3. 2018 (Scheduled) "Call Center Staffing With Uncertain Dependent Arrival, Service And Abandonment Rates". INFORMS Annual Meeting. Phoenix, AZ.
4. 2018 (Scheduled) "Statistical Methods for Health Care Fraud Assessment". University of Pireaus Department of Statistics and Insurance Science Seminar Series. Pireaus, Greece.
5. 2018 (Scheduled) "Discovery of New Fraud Patterns using Data Analytics". European Health Care Fraud Network Open House. Athens, Greece.

6. 2018 (Scheduled) “Medical Fraud Analytics”. Texas State University Material Science, Engineering Commercialization Graduate Program Seminar Series. San Marcos, TX.
7. 2018 “Topic Modelling for Medical Prescription Fraud and Abuse Detection”. Joint Statistical Meetings (JSM). Vancouver, Canada.
8. 2018 “Bayesian Hierarchical Methods for Medical Prescription Fraud and Abuse Detection”. ISBIS Annual Conference. Athens, Greece.
9. 2018 “Bayesian Hierarchical Methods for Medical Prescription Fraud and Abuse Detection”. Poster. ISBA 2018 World Meeting. Edinburgh, Scotland.
10. 2018 “Medical Fraud Analytics”. Texas State University McCoy College of Business Woods Award Seminar. San Marcos, TX.
11. 2018 “Bayesian Hierarchical Methods for Medical Fraud Assessment”. Bowling Green State University College of Business Department of Applied Statistics and Operations Research Seminar. Bowling Green, OH.
12. 2017 “Structural Topic Model based Prescription Fraud and Abuse Detection”. Poster. International Workshop on Objective Bayes Methodology (OBayes17). Austin, TX.
13. 2017 “Augmented Probability Simulation Methods for Non-cooperative Games”. INFORMS Annual Meeting. Houston, TX.
14. 2017 “Information Theoretic Multi-Stage Sampling Framework for Medical Audits”. INFORMS Annual Meeting. Houston, TX.
15. 2017 (2 sessions) “Data Analytics: playing the game to make money”. Texas State Association of Information Technology Professionals (AITP) High School Symposium. San Marcos, TX.
16. 2017 “Bayesian Mixture based Models for Medical Overpayments”. ISI World Statistics Congress. Marrakech, Morocco.
17. 2017 “Improving Medical Audit Quality with Unsupervised Data Mining”. 34th Quality and Productivity Research Conference (QPRC). Storrs, CT.
18. 2017 “Data-driven pre-screening of claims for medical audits”. ISBIS Annual Conference Statistics in Analytics. Yorktown Heights, NY.
19. 2017 “Statistical Approaches for Medical Fraud Assessment”. Association of Certified Fraud Examiners Austin Chapter February Meeting. Austin, TX.
20. 2017 “Quantifying Sample Information for Better Decisions: Stratification and Sampling decisions in Medicare”. Poster. Texas State University Healthcare Scholar Showcase. San Marcos, TX.
21. 2017 “Nested Augmented Simulation For Stochastic Optimization”. INFORMS Computing Society Conference. Austin, TX.
22. 2017 “Unsupervised Bayesian Hierarchical Methods For Medical Fraud Assessment”. INFORMS Computing Society Conference. Austin, TX.
23. 2016 “Territory Design With Risk For A Micro Finance Institution”. INFORMS Annual Meeting. Nashville, TN.
24. 2016 “Nested Augmented Simulation for Stochastic Optimization”. INFORMS Annual Meeting. Nashville, TN.
25. 2016 “Data Analytics: playing the game to make money”. Texas State Association of Information Technology Professionals (AITP) High School Symposium. San Marcos, TX.

26. 2016 “Statistical Applications for Medical Fraud Assessment”. Texas State University Computer Information Systems and Quantitative Methods Department Advisory Board Meeting. San Marcos, TX.
27. 2016 “Augmented Simulation Approaches for Computational Decision and Game Theory”. University of Texas Austin Industrial Engineering and Operations Research Graduate Program IEOR Seminar Series. Austin, TX.
28. 2016 “Latent Dirichlet Allocation for Medical Fraud Assessment”. International Society of Bayesian Analysis (ISBA) World Meeting. Sardinia, Italy.
29. 2016 “Unsupervised Approaches for Medical Fraud Assessment”. ISBIS International Symposium on Business and Industrial Statistics. Barcelona, Spain.
30. 2016 “Augmented Probability Simulation based Stochastic Programming”. SAMSI Games and Decisions in Reliability and Risk Workshop. Durham, NC.
31. 2016 “Understanding Hispanic Purchase Behavior toward Counterfeit Branded Merchandise”. Texas State University McCoy College Research Committee Brown Bag Seminar. San Marcos, TX.
32. 2016 “Unsupervised Bayesian Approaches For Medical Fraud Assessment”. The Conference of Texas Statisticians. San Antonio, TX.
33. 2015 “Bayesian Approaches for Medical Fraud Assessment”. Mimar Sinan Fine Arts University Department of Statistics Seminar Series. Istanbul, Turkey.
34. 2015 “Simulation Based Approaches for Stochastic Optimization with Endogenous Uncertainty”. INFORMS Annual Meeting. Philadelphia, PA.
35. 2015 “Stochastic Multi-objective Auto-optimization For Resource Allocation Decision-making”. INFORMS Annual Meeting. Philadelphia, PA.
36. 2015 “Unsupervised Data Mining for Medical Fraud Detection”. INFORMS Annual Meeting. Philadelphia, PA.
37. 2015 “Statistics: How not to be fooled by the numbers”. Texas State Association of Information Technology (AITP) Professionals High School Symposium. San Marcos, TX.
38. 2015 “Estimation and Sampling for Medical Fraud Detection”. University of Connecticut Department of Statistics Colloquia. Storrs, CT.
39. 2015 “Medical Overpayment Estimation Models”. BISP 9th Workshop on Bayesian Inference in Stochastic Processes. Istanbul, Turkey.
40. 2015 “Integrated Maintenance and Production Planning with Decision Dependent Uncertain Yield”. GDRR-2015 4th Symposium on Games and Decisions in Reliability and Risk. Istanbul, Turkey.
41. 2015 “Statistical Medical Fraud Assessment”. Texas State University McCoy College Research Committee Brown Bag Seminar. San Marcos, TX.
42. 2014 “Call Center Staffing Optimization with Uncertainty in Arrival, Service and Abandonment Rates”. INFORMS Annual Meeting. San Francisco, CA.
43. 2014 “Fuzzy Resource Allocation in Health Systems”. INFORMS Annual Meeting. San Francisco, CA.
44. 2014 “Augmented MCMC Simulation for two-stage stochastic programming with recourse”. Poster. ISBA World Meeting. Cancun, Mexico.
45. 2013 “Integrated Maintenance and Production Planning with Endogenous Uncertainty”. INFORMS Annual Meeting. Minneapolis, MN.

46. 2013 “Simulation-based SP under Endogenous Uncertainty with Applications in Operations Management”. International Conference on Stochastic Programming. Bergamo, Italy.
47. 2013 “Stochastic Programming under Endogenous Uncertainty”. University of Texas Austin Industrial Engineering and Operations Research Graduate Program IEOR Seminar Series. Austin, TX.
48. 2012 “Bayesian Co-Clustering Methods in Healthcare Fraud Detection”. 7th INFORMS Workshop on Data Mining and Health Informatics. Phoenix, AZ.
49. 2012 “Bayesian Co-clustering Methods in Healthcare Industry”. INFORMS Annual Meeting. Phoenix, AZ.
50. 2012 “Simulation-based Two Stage Stochastic Programming with Recourse and Endogenous Uncertainty”. INFORMS Annual Meeting. Phoenix, AZ.
51. 2012 “Application of Bayesian Methods in Healthcare Fraud Detection”. 16th Annual Medicare & Medicaid Statistics Data Analysis Conference. Alexandria, VA.
52. 2012 “Application of Bayesian Ideas in Healthcare Industry,” ISBIS Young Business and Industrial Statisticians Conference. Lisbon, Portugal.
53. 2012 “Simulation-based Stochastic Programming”. Texas State University Computer Information Systems and Quantitative Methods Department Seminar. San Marcos, TX.
54. 2011 “Simulation-based Two Stage Stochastic Programming with Recourse and Endogenous Uncertainty”. INFORMS Annual Meeting. Charlotte, NC.
55. 2011 “Simulation-based Two Stage Stochastic Programming with Recourse”. International Research Conference on Bayesian Learning. Istanbul, Turkey.
56. 2010 “Effectiveness-Equity Trade-offs using mean-Gini Efficient Frontier in Facility Location Problems on Networks”. The George Washington University Decision Sciences Department Seminar Series. Washington, DC.
57. 2010 “Simulation Based Deterministic Optimization and One Stage Linear Stochastic Programming”. INFORMS Annual Meeting. Austin, TX.
58. 2009 “Simulation Based Stochastic Programming”. The George Washington University Decision Sciences Department Seminar Series. Washington, DC.
59. 2009 “Bayesian Time Series Analysis of Mortgage Default Rates”. The George Washington University Doctoral Summer Paper Colloquium. Washington, DC.

**Collaborator
Presentations of
Joint Work**

1. 2018 Zafari, B. “Bayesian Hierarchical Methods for Medical Prescription Fraud and Abuse Detection”. University of New Hampshire Peter T. Paul College of Business and Economics Data Science Seminar. Durham, NH.
2. 2017 Zafari, B. “Medical Fraud and Abuse Assessment Using Prescriber Level Medicare Data”. INFORMS Annual Meeting. Houston, TX.
3. 2017 Polson, N. “Optimisation Simulation for Stochastic Programming”. 10th Bayesian Inference in Stochastic Processes (BISP) Workshop. Milan, Italy.
4. 2017 Schaetz, M. “Engagement of Student Parents at Community Colleges”. Poster. Association for Education Finance and Policy 42nd Annual Conference. Washington, DC.
5. 2016 Schaetz, M. “Engagement of Student Parents at Community Colleges”. Texas State University Graduate College Eighth International Research Conference. San Marcos, TX.

6. 2016 Zafari, B. "Healthcare Fraud Analysis Using Sequential Data Mining". INFORMS Annual Meeting. Nashville, TN.
7. 2016 Aktekin, T. "Bayesian Inference And Augmented Probability Simulation In Call Center Staffing". INFORMS Annual Meeting. Nashville, TN.
8. 2015. Musal, R. "The Use of Lindleys Entropy in Dynamic Sampling Decisions". INFORMS Annual Meeting. Philadelphia, PA.
9. 2015 Polson, N. "Augmented Simulation for Stochastic Programming". City University of Hong Kong Systems Engineering and Engineering Management Department Seminar Series. Hong Kong.
10. 2015 Polson, N. "Simulation-based Stochastic Programming with Decision Dependent Uncertainty". GDRR-2015 4th Symposium on Games and Decisions in Reliability and Risk. Istanbul, Turkey.
11. 2014 Musal, R. "A Dynamic Sampling Framework for Medical Overpayments". INFORMS Annual Meeting. San Francisco, CA.
12. 2013 Soyer, R. "Statistical Issues in Medical Fraud Assessment". Politecnico Milano Department of Mathematics Seminar Series. Milan, Italy.
13. 2013 Ieva, F. "Applications of Bayesian Methods in Medical Fraud Assessment". Prognostics and System Health Management Conference. Milan, Italy.

TEACHING

Courses Taught

- Texas State University McCoy College of Business
 - QMST 5334 Advanced Statistical Methods for Business. Graduate (MBA core). 12 sections.
 - QMST 2333 Business Statistics. Undergraduate (BBA core). 7 sections.
 - QMST 3339 Data Mining and Visualization. Undergraduate (BBA in CIS core). 6 sections (1 more section scheduled for Spring 2019).
 - QMST 4373C Topics in Data Analytics. Undergraduate (BBA in CIS elective). 2 sections. (1 more section scheduled for Spring 2019).
 - MGT 5399 Thesis. Graduate (MBA elective). 3 sections.
- The George Washington University School of Business
 - DNSC 6202 Statistics for Managers. Graduate (MSPM core). 2 sections (1 online).
 - HCMBA 221 Judgment, Uncertainty, and Decisions. Graduate (MBA core). 5 sections, online as facilitator instructor.
 - HCMBA 222 Data Analysis and Decisions. Graduate (MBA core). 5 sections, online as facilitator instructor.

Short

Courses/Trainings

- 2018 (Scheduled) "Statistical Tools against Fraud and Waste in Healthcare II". European Health Care Fraud Network Training. Athens, Greece.
- 2018 (Proposed) "Fraud Analytics". ISI World Statistics Congress. Kuala Lumpur, Malaysia.

Guest Lectures

- 2016 Texas State University Ingram School of Engineering Master of Science in Industrial Engineering. ENGR5310 Probability, Random Variables and Stochastic Processes for Engineers. “Statistical Issues for Medical Fraud Assessment.” San Marcos, TX.
- 2016 Northwestern University Master of Science in Predictive Analytics. PREDICT 490-DL Special Topics in Predictive Analytics: Stochastic Simulation and Monte Carlo Methods. “Simulation Based Stochastic Programming”. Online.
- 2015 Texas Tech University Master of Science in Data Science Program. ISQS 6348 Applied Multivariate Statistics. “Unsupervised Statistical Techniques”. Lubbock, TX.
- 2015 (twice) Northwestern University Master of Science in Predictive Analytics. PREDICT 422-DL Practical Machine Learning. “Analytics for Medical Fraud Detection”. Online.
- 2012 Texas State University Ingram School of Engineering Bachelor of Science in Industrial Engineering. IE 4370 Probabilistic Operations Research “Simulation-based Two-stage Stochastic Programming”. San Marcos, TX.

Curriculum Development

- 2017. M.S. in Data Analytics and Information Systems. Member of the Curriculum sub-committee. Waiting for approval.
- 2017 QMST 5336 Business Analytics. Prepared the syllabus and course content for approval. Approved.
- 2017 QMST 5343 Data Mining. Prepared the syllabus and course content for approval. Approved.
- 2016 QMST 4373C Topics in Data Analytics. Prepared the syllabus, course content and completed the paperwork for approval. Approved.
- 2016 QMST 4314 Optimization Methods and Applications. Prepared the syllabus and course content for approval. Approved.
- 2015-2016 Undergraduate Analytics Concentration in BBA CIS. Member of the Curriculum sub-committee. Approved.
- 2015-2016 M.S. in Supply Chain and Analytics. Member of the Curriculum sub-committee. Discontinued.

SERVICE

University Service

- University level
 - 2018. Committee Member. Texas State University. Maniel Muir Mentoring Award Committee
 - 2018. Panelist. “Strategies for Successful Research/Scholarship/Creative Activities”. Texas State University New Faculty Orientation.
 - 2018- Present. Associate Doctoral Faculty. Texas State University Material Science, Engineering Commercialization (MSEC) Doctoral Program.
 - 2017- Present. Texas State University Honors College Undergraduate Research Advisor.
 - 2017- Present. Texas State University Center for Communication, Collaboration and Creativity Affiliate Faculty Expert.
 - 2013 - Present. Affiliate Faculty. Texas State University Ingram School of Engineering Center for High Performance Systems (CHIPS).

- 2016 - 2017. Committee Member. Texas State University Ingram School of Engineering Industrial Engineering Faculty Search Committee.
- College level
 - 2018- Present. Committee Member. Texas State University McCoy College of Business Endowed Professorship Committee.
 - 2017- Present. Committee Member. Texas State University McCoy College of Business Research Committee.
 - 2013 - 2018. Committee Member. Texas State University McCoy College of Business MBA Core Course Coordinators Committee.
 - 2017. Panelist. McCoy Research Jump-Start. San Marcos, TX.
 - 2017. Presenter. Texas State University McCoy College of Business Advisory Board Meeting. “Research at McCoy College: Medical Fraud Analytics”.
 - 2016. Committee Member. Texas State University McCoy College of Business Research Enhancement Program Committee.
 - 2015 - 2016. Committee Member. Texas State University McCoy College of Business MSAIT Admissions sub-committee.
 - 2014 - 2016. Committee Member. Texas State University McCoy College of Business Graduate Policies Committee.
 - 2013. Presenter. Texas State University McCoy College of Business Research Committee Brown Bag Seminar. “Grants: Writing, Budgeting, and Reporting”.
- Department level
 - 2017 - 2018. Committee Member. Texas State University CIS & QMST Department Quantitative Methods Faculty Search Committee.
 - 2013 - Present. Course Coordinator. QMST 5334 Advanced Statistical Methods.
 - 2017- Present. Course Assessment Coordinator. QMST 3339 Data Mining and Visualization.
 - 2016 - 2017. Committee Member. Texas State University CIS & QMST Department Journal List Task Force.
 - 2015 - 2016. Committee Member. Texas State University CIS & QMST Department Quantitative Methods Faculty Search Committee.
 - 2014, 2016. Department Representative. Texas State University Bobcat Day.

Professional Service

- Executive Positions
 - 2017-2019. Vice President. International Society for Business and Industrial Statistics (ISBIS).
 - 2017-2019. Chair. ISBIS Young Business and Industrial Statisticians (y-BIS) Committee.
- Committee Positions
 - 2018. Committee Member. ISI World Congress ISBIS Presidential Gosset Lecture Award Committee.
 - 2018. Committee Member. ISBIS 2018 Annual Conference Travel Awards Committee.

- 2016-2017. Organizing Committee Member. ISBIS 2017 Annual Conference. “Statistics in Business Analytics”. Yorktown Heights, NY.
- 2016-2017. Programme Committee Member. ISBIS y-BIS International Workshop on Modern Methods in Insurance and Industrial Statistics, Hamedan, Iran.
- Poster Competitions
 - 2017 Chair. ISBIS 2017 Conference Poster Competition. Yorktown Heights, NY.
 - 2016 Judge. ISBIS 2016 Meeting. Barcelona, Spain.
 - 2016 Judge. The Conference of Texas Statisticians. San Antonio, Texas.
 - 2014 Judge. INFORMS Annual Meeting Interactive Poster Competition. San Francisco, CA.
- Session Chair/Organizer
 - (Scheduled) 2019 ISI World Statistics Congress. Kuala Lumpur, Malaysia.
 - 2018 ISBIS Annual Meeting. Athens, Greece.
 - 2017 INFORMS Annual Meeting Simulation Track. Houston, TX.
 - 2017 ISBIS 2017 Conference. Yorktown Heights, NY.
 - 2016 INFORMS Annual Meeting Simulation Track. Nashville, TN.
 - 2016 ISBA World Meeting. Sardinia, Italy.
 - 2016 Texas State University Association of Information Technology Professionals (AITP) High School Symposium. San Marcos, TX.
 - 2015 INFORMS Annual Meeting Simulation Track. Philadelphia, PA
 - 2015 INFORMS Annual Meeting Optimization Track. Philadelphia, PA
 - 2013 INFORMS Annual Meeting Optimization Track. Minneapolis, MN.
 - 2012 ISBIS Young Business and Industrial Statisticians Conference. Lisbon, Portugal.
- Editorial Board Member
 - (Statistics). *Arab Journal of Basic and Applied Sciences*
- Reviewer
 - *Arab Journal of Basic and Applied Sciences*: 2018 (3)
 - *Naval Research Logistics*: 2018 (2)
 - *European Journal of Industrial Engineering*: 2018 (2)
 - *Applied Stochastic Models in Business and Industry*: 2018 (1)
 - *Journal of Applied Statistics*: 2018 (1), 2017(1), 2016(2), 2015(1)
 - *AMMCS-2017 Conference Proceedings*: 2018 (1)
 - *Applied Statistics for Business, Economics and Finance* 2017 (4) Book chapter review
 - *Journal of Operational Research Society*: 2017(2)
 - *Winter Simulation Conference*: 2017(1)
 - *Supply Chain Forum: an International Journal*: 2017(1)
 - *Health Services and Outcomes Research Methodology*: 2017(1), 2016(1)
 - *Military Medicine Journal*: 2017(2), 2016(1), 2015(2)

- *Annals of Operations Research*: 2016(2)
- *International Transactions in Operational Research*: 2016(2)
- *Information Systems, Logistics and Supply Chain Conference*: 2016(2)
- *Journal of Defense Modeling and Simulation*: 2016(1), 2015(1), 2014(2)
- *PLOS One*: 2015(1)
- *Journal of Systems Science and Systems Engineering*: 2015(2)
- Member
 - Institute for Operations Research and Management Science (INFORMS). 2007 - Present.
 - * INFORMS Simulation Society. 2011 - 2018.
 - * INFORMS Analytics Society. 2016 - 2018.
 - * INFORMS Optimization Society. 2010 - 2015.
 - * INFORMS Decision Analysis Society. 2013 - 2015.
 - International Society of Bayesian Analysis (ISBA). 2011- Present.
 - * ISBA Industrial Statistics Section. 2012- Present.
 - * ISBA j-ISBA Section. 2012 - 2015.
 - International Society for Business and Industrial Statistics (ISBIS). 2012 - Present.
 - * ISBIS Young Business and Industrial Statisticians (y-BIS) Committee. 2012 - Present.
 - American Statistical Association. 2017- Present.
 - American Statistical Association Statistical Auditing Interest Group. 2018- Present.
 - EURO Working Group on Stochastic Modelling. 2016- Present.
 - EURO Working Group on Operational Research Applied to Health Services. 2016 - Present.
 - The Stochastic Programming Society (SPS). 2013 - 2016.
 - Decision Sciences Institute (DSI). 2011- 2012.
 - Global Association of Risk Professionals. 2010 - 2012.

Development Activities

- 2018 Workshop Attendance. “Texas Analytics Summit 2018”. University of Texas at Austin, Austin, TX.
- 2018 Training Attendance. “Zoom for Online Teaching”. Texas State University. San Marcos, TX.
- 2017 Attendance. “Co-search Weekend 2017” Texas State University Center for Communication, Collaboration and Creativity. San Marcos, TX.
- 2017 Training Attendance. “Rising Trends: Leveraging Data in Investigations”. National Healthcare Anti-Fraud Association. San Antonio, TX.
- 2017 Seminar Attendance. “Medical Fraud Assessment: Statistics-Your Friend Not Foe”. Integrity Management Services. Online.
- 2016 Seminar Attendance. “National Science Foundation Grants Conference Webcast”. National Science Foundation. Online.
- 2016 Class Attendance. “Survival Spanish”. Texas State University Human Resources Professional Development. San Marcos, TX.

- 2016 Official Company Visit “Externship at USAA”. USAA. San Antonio, TX.
- 2016 Short Course Attendance. “Nonparametric Bayesian inference and machine learning”. ISBA 2016 World Meeting. Cagliari, Italy.
- 2016 Short Course Attendance. “Games and Decisions in Reliability and Risk Workshop”. SAMSI Institute and National Science Foundation. Durham, NC.
- 2016 Seminar Attendance. “Linking Research and Commercialization”. Texas State University. San Marcos, TX.
- 2016 Seminar Attendance. “NSF CAREER and Other Young Investigator Programs,” Texas A&M University. Online.
- 2016 Workshop Attendance. “NSF Grant Workshop”. Texas State University. San Marcos, TX.
- 2014 Workshop Attendance. “Write Winning NIH Grant Proposals”. Texas State University. San Marcos, TX.
- 2013 Short Course Attendance. “Stochastic Programming Short Course Series”. Stochastic Programming Community. Bergamo, Italy.
- 2013 Seminar Attendance. “Gregg Master Teacher Symposium”. Texas State University McCoy College of Business. San Marcos, TX.
- 2012-2013 Continuing Education Program Attendance. “Program for Excellence in Teaching and Learning”. Texas State University Academic Development and Assessment. San Marcos, TX.

Last Update: 09/20/2018.