Kamran Paynabar

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Kamran Paynabar

Fouts Family Professor

H. Milton Stewart School of Industrial and Systems Engineering

11/09/2022

I. EARNED DEGREES

- **The University of Michigan, Ann Arbor, MI** April 2012
  Ph.D. in Industrial and Operations Engineering
- **The University of Michigan, Ann Arbor, MI** May 2010
  M.A. in Statistics
- **Azad University, South Branch of Tehran, Tehran, Iran** January 2004
  M.Sc. in Industrial Engineering
- **Iran University of Science and Technology, Tehran, Iran** September 2002
  B.Sc. in Industrial Engineering

II. EMPLOYMENT HISTORY

- 08/2023- Present Fouts Family Professor - H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA
- 08/2018- 07/2023 Fouts Family Early Career Professor and Associate Professor - H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA
- 04/2018–07/2018 Fouts Family Early Career Professor and Assistant Professor - H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA
- 07/2012-03/2018 Assistant Professor - H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA
- 01/2008-06/2012 Graduate Student Instructor/Research Assistant, Industrial and Operations Engineering Department, University of Michigan, Ann Arbor, MI
- 09/2004-09/2007 Lecturer, Industrial Engineering Department, Azad University North Branch of Tehran, Tehran, Iran

III. HONORS AND AWARDS

A. INTERNATIONAL OR NATIONAL AWARDS (Awards given to students for joint work marked with a #)

1. Best Application Paper Award from *IISE Transactions on Quality and Reliability Engineering*, 2023.
2. QCRE Teaching Award, Institute of Industrial and Systems Engineering, 2022.
3. INFORMS QSR Best Student Paper Award, 2022. #
4. Innovation in Education Competition Runner-up, Institute of Industrial and Systems Engineering, 2021.
5. Elected Member of International Statistical Institute (ISI), 2021.
6. SPES + Q&P Student Paper Competition Award by American Statistical Association, 2021. #
7. Best Track Paper Award in Data Analytics and Information Systems (DAIS), IISE Annual Conference, 2021.
8. Finalist for Best Track Paper in QCRE Track, IISE Annual Conference, 2021 & 2023.
9. Finalist for Best Student Paper Award in DAIS Track, IISE Annual Conference, 2020. #
10. Best Student Paper Competition Runner-up in DAIS, IISE Annual Conference, 2019. #
11. INFORMS QSR Best Poster Award, 2020. #
12. INFORMS QSR Best Student Paper Award, 2019. #
13. Best Student Paper Award in Energy Track, IISE Annual Conference,2019. #
14. Finalist for Best Student Paper Competition in QCRE Track, IISE Annual Conference, 2019. #
15. INFORMS Data Mining Best Student Paper Award, 2018. #
16. INFORMS QSR Best Refereed Paper Competition Finalist, 2016.
17. INFORMS Data Mining Best Student Paper Award, 2016. #
18. ISERC QCRE Best Student Paper Award Finalist, 2016. #
19. INFORMS QSR Best Student Paper Award Finalist 2016. #
20. ISERC QCRE Best Student Paper Award Winner, 2015 #
21. INFORMS Data Mining Best Student Paper Award Winner, 2014. #
22. INFORMS Data Mining Best Student Paper Award Finalist, 2013. #
23. INFORMS QSR Best Refereed Paper Competition Winner, 2015.
24. POMS Best Paper Award Winner – College of Healthcare Operations Management, 2015.
25. Nominated and selected to participate in Frontiers of Engineering Education Symposium, by National Academy of Engineering, 2014.
26. Best Application Paper Award from IIE Transactions on Quality and Reliability Engineering, 2011.

27. INFORMS Data Mining Best Student Paper Award Winner, 2011.

B. INSTITUTE OR SCHOOL AWARDS

1. College of Engineering Outstanding Achievement in Commercialization and Entrepreneurship Award, 2022.
2. Provost Emerging Leaders Fellow, Cohort of 2021.
3. Hesburgh Award Teaching Fellow, Cohort of 2021.
4. Provost Teaching and Learning Fellow, Cohort of 2018.
5. Georgia Tech CETL/BP Junior Faculty Teaching Excellence Award, 2014.
6. Class of 1969 Teaching Fellow, Center for the Enhancement of Teaching and Learning (CETL), Georgia Institute of Technology, 2013-2014.
7. Richard C. Wilson Prize for The Best Student Paper in Manufacturing Systems, University of Michigan, 2010.

IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES (Work done at Georgia Tech marked with an *, names of advisees in bold, talk given by Ph.D. students for joint work marked with a #)

A. PUBLISHED BOOKS, BOOK CHAPTERS, AND EDITED VOLUMES

A1. BOOKS

No Data

A2. REFEREED BOOK CHAPTERS

No Data

A3. EDITED VOLUMES

No Data

B. REFEREED PUBLICATIONS AND SUBMITTED ARTICLES

B1. PUBLISHED AND ACCEPTED JOURNAL ARTICLES

1. ***Wei Y.,** Grasso M., Colosimo M., Paynabar K., (2023) "A Tensor-Based Hierarchical Process Monitoring Approach for Anomaly Detection in Additive Manufacturing", *Quality and Reliability Engineering International*, 39, 2, pp. 630-650.
2. ***Estrada Gomez, A.M., Dan L.,** Paynabar, K., (2022) "An Adaptive Sampling Strategy for Online Monitoring and Diagnosis of High-dimensional Streaming Data," *Technometrics*, 64:2, 253-269.

   Winner of Best Student Paper Award in SPES + Q&P Student Paper Competition, American Statistical Association (2021)

3. ***Popoola, A.,** Freidiani, J., Hartman, T., Paynabar, K., (2023) Mitigating underreported error in food frequency questionnaire data using a supervised machine learning method and error adjustment algorithm. *BMC Medical Informatics and Decision Making* **23**, 178.
4. *DeShong E., Peters B., Berdanier R. A., Thole K. A., Paynabar K., and Gebraeel N., (2022) "Applying Infrared Thermography as a Method for On-Line Monitoring of Turbine Blade Coolant Flow", *Journal of Turbomachinery*, 144(11): 111009.

5. *__Yan, H__., Garosso, M., Paynabar, K., Colosimo B. (2022) "Real-time Detection of Clustered Events in Video-Imaging Data with Applications to Additive Manufacturing," *IISE Transactions on Quality and Reliability Engineering*, Vol. 54, pp. 464 – 480.
6. ***Ebrahimi, S., *Reisi, M.,** Paynabar, K., Mankad S. (2022) "Monitoring Financial Networks with Online Hurdle Models", *IISE Transactions on Quality and Reliability Engineering*, Vol. 5, pp. 91-104.
7. *DeShong E., Peters, B., Berdanier, E., Thole, K., Paynabar, K., Gebraeel, N., (2022) "Correlating Time-Resolved Pressure Measurements with Rim Sealing Effectiveness for Real-Time Turbine Health Monitoring," *ASME Journal of Turbomachinery* 144(6): 061004.
8. *__Wang, Q.,__ Paynabar, K., Pacella, M., (2022) "Automatic Anomaly Detection for Photovoltaic Systems Using Thermography Imaging and Low Rank Matrix Decomposition", *Journal of Quality Technology*, 54(5), pp. 503 – 516.
9. *__Yang, W__., Chen, J., Zhang, C., Paynabar, K. (2022) "Online Detection of Cyber-Incidents in Additive Manufacturing Systems via Analyzing Multimedia Signals," *Quality and Reliability Engineering International* Vol.38, pp. 1340-1356. Invited Paper.
10. ***Ranjan, C., *Ebrahimi, S.,** Paynabar, K., (2022) "Sequence Graph Transform (SGT): A Feature Extraction Function for Sequence Data Mining", *Data Mining and Knowledge Discovery*, Vol. 36, pp. 668-708.

    INFORMS Data Mining Best Student Paper Winner (2018).
11. ***Ebrahimi, S., *Ranjan, C.,** Paynabar, K., (2022) "Monitoring and Root-cause Diagnostics of High-Dimensional Data Streams", *Journal of Quality Technology*, Vol. 54, pp. 20-43.
12. *Peters, B., *Rock, N., Emerson, B., Gebraeel, N., Paynabar, K., (2022) "Data Analytics Method for Detecting Extinction Precursors to Lean Blowout in Spray Flames", *Combustion Science and Technology*, 194(13) pp. 2597 – 2612.
13. *__Reisi, M.__, __Yan, H.__, Paynabar, K., Shi, J., (2021) "Multiple Tensor-on-Tensor Regression: An Approach for Modeling Processes with Heterogeneous Sources of Data," *Technometrics*, Vol. 63, pp. 147 – 159.

    INFORMS Data Mining Best Student Paper Winner (2018)
14. *__Estrada Gomez, A.M.,__ Paynabar, K., Pacella, M., (2021) "Functional Directed Graphical Models and Applications in Root-Cause Analysis and Diagnosis", *Journal of Quality Technology*, Vol. 53., pp. 421-437.
15. *__Li, D.,__ Gebraeel, N., Paynabar, K., (2021) "Detection and Differentiation of Replay Attack and Equipment Faults in SCADA Systems." *IEEE Transactions on Automation Science and Engineering,* Vol. 18, pp. 1626 – 1639.

Winner of Best Student Paper in Energy Systems, IISE Annual Conference (2019)

Runner-up of Best Student Paper Award in Data Analytics and Information System, IISE Annual Conference (2019)

16. *__Fang, X.__, *__Yan, H.__, Gebraeel, N., Paynabar, K., (2021) "Multi-Sensor Prognostic Modeling for Applications with Highly Incomplete Signals", *IISE Transactions on Quality and Reliability Engineering*, Vol. 53, pp 597 – 613.

Featured in IISE Magazine

17. *__Li, D.,__ Paynabar, K., Gebraeel, N., (2021) "A Degradation-Based Detection Framework Against Covert Cyberattacks on SCADA Systems," *IISE Transactions on Quality and Reliability Engineering,* Vol. 53, pp. 812 – 829.

Best Application Paper Award from *IISE Transactions on Quality and Reliability Engineering*, (2023).

Finalist of Best Student Paper Competition in Data Analytics and Information Systems, IISE Annual Conference (2020)

18. *Colosimo, B., del Castillo, E., Jones-Farmer, A., Paynabar, K., (2021) "Artificial Intelligence and Statistics for Quality Technology: An Introduction to The Special Issue," *Journal of Quality Technology*, Vol. 53, pp. 443-453.

19. *Stevens, N., Wilson, J., Driscoll, A., McCulloh, I., Michailidis, G., Paris, C., Paynabar, K., Perry M., **Reisi-Gahrooei, M.**, Sengupta S., and Sparks R. (2021) "Broader Impacts of Network Monitoring: Its Role in Government, Industry, Technology, and Beyond", *Quality Engineering*, Vol.33, pp. 749-757. Invited Discussion Paper.

20. *Stevens, N., Wilson, J., Driscoll, A., McCulloh, I., Michailidis, G., Paris, C., Parker, P., Paynabar, K., Perry M., **Reisi-Gahrooei, M.**, Sengupta S., and Sparks R. (2021) "The Interdisciplinary Nature of Network Monitoring: Advantages and Disadvantages", *Quality Engineering,* Vol.33, pp. 731-735. Invited Discussion Paper.

21. *Stevens, N., Wilson, J., Driscoll, A., McCulloh, I., Michailidis, G., Paris, C., Parker, P., Paynabar, K., Perry M., **Reisi-Gahrooei, M.**, Sengupta S., and Sparks R. (2021) "Research in Network Monitoring: Connections with SPM and New Directions", *Quality Engineering,* Vol.33, pp. 736-748. Invited Discussion Paper.

22. *Stevens, N., Wilson, J., Driscoll, A., McCulloh, I., Michailidis, G., Paris, C., Paynabar, K., Perry M., **Reisi-Gahrooei, M.**, Sengupta S., and Sparks R. (2021) "Foundations of Network Monitoring: Definitions and Applications", *Quality Engineering,* Vol.33, pp. 719-730. Invited Discussion Paper.

23. *__Zhong, Z.,__ Wang, A., Kim, H., Paynabar, K., and Shi, J., (2021) "Adaptive Cautious Regularized Run-to-Run Controller for Lithography Process," *IEEE Transactions on Semiconductor Manufacturing*, Vol. 34, no. 3, pp. 387-397.

24. *__Yan, H.__, Paynabar, K., Shi, J., (2020) "AKM^{2}D: An Adaptive Framework for Online Sensing and Anomaly Detection," *IISE Transactions on Quality and Reliability Engineering*, Vol 52, pp. 1032 – 1046.

INFORMS QSR Best Student Paper Finalist (2016)

25. *Aydemir, G., Paynabar, K., (2020) "Image-based Prognostics Using Deep Learning Approach", *IEEE Transactions on Industrial Informatics*, Vol. 16, pp. 5956 – 5964.

26. *__Reisi, M.__, *__Yan, H.__, Paynabar, K., (2020) Comments on “On Active Learning Methods for Manifold Data”, *TEST*, Vol. 29, pp. 38–41.

27. *Peters B., *Yildirim M., Gebraeel N. and Paynabar K., (2020) "Severity-based Diagnostics for Vehicular Electric Systems with Multiple Interacting Fault Modes", *Reliability Engineering and Systems Safety*, Vol. 195, pp. 1-13.

28. Hajighasemi, F., Paynabar, K., Jafari-Khouzani, K., & Rosen, B. (2020). “Reliability of Quantitative Brain Imaging Biomarkers,” *Neurology*, Vol. 94.

29. *__Reisi, M.__, Paynabar K., Pacella, M., Colosimo, B. (2019), An adaptive fused sampling approach of high-accuracy data in the presence of low-accuracy data. *IIE Transactions on Quality and Reliability Engineering*, Vol. 51, pp. 1251-1264.

30. *Gorgan Nejad, S., __Reisi, M.__, Paynabar, K., Neu, R., (2019) “Quantitative prediction of the aged state of Ni-base superalloys using PCA and tensor regression,” *Acta Materialia*, Vol. 165, pp.259-269.

31. *__Fang, X.__, Paynabar, K., Gebraeel, N., (2019) “Residual Useful Lifetime Prediction Using a Degradation Image Stream via Penalized Tensor Regression.” *Technometrics,* Vol. 61, pp. 369-384.

INFORMS Best QSR Paper Finalist (2016)

INFORMS Data Mining Best Paper Winner (2016)

32. **__Yan, H.,__** Paynabar, K., Pacella, M., (2019) “Point Cloud Data Analysis for Process Modeling and Optimization”, *Technometrics,* Vol. 61, pp. 385-395.

33. **__Reisi, M.,__** Paynabar, K., Shi, J., (2019) “Process Modeling and Prediction with High-Dimensional Variables Using Functional Regression”, *IEEE Transactions on Automation Science and Engineering,* Vol. 17, pp. 684-696.

34. *Jafari-Khouzani, K., Paynabar, K., Rosen, B., (2019) “Effect of Region of Interest Size on the Repeatability of Quantitative Brain Imaging Biomarkers”, *IEEE Transactions on Biomedical Eng.*, Vol. 66, pp. 864 - 872.

35. *Wang, Y., Mei, Y., Paynabar, K. (2018) “Thresholded Multivariate Principal Component Analysis for Phase I Multichannel Profile Monitoring”, *Technometrics*, Vol. 60, pp. 360-372.

36. *__Reisi, M.__, *Paynabar*, K., (2018) “Change Detection in a Dynamic Stream of Attributed Networks”, *Journal of Quality Technology*, Vol. 50, pp. 418-430.

37. *__Ranjan C.__, Paynabar, K., Reuter, M., Jafari-Khouzani, K., (2018) “Longitudinal MRI data analysis in presence of measurement error but absence of replicates”, *IIE Transactions on Healthcare Systems Engineering*, Vol.8, pp. 117-130.

38. *__Yan, H.__, Paynabar, K., Shi, J., (2018) “Real-time Monitoring of High-Dimensional Functional Data Streams via Spatio-Temporal Smooth Sparse Decomposition,” *Technometrics*, Vol. 60, pp.181-197.

INFORMS Best QSR Paper Award (2015)

ISERC QCRE Best Student Paper Award (2015)

39. *__Ranjan C.__, Paynabar, K., Helm, J., Pan J. (2017) "The Impact of Estimation: A New Method for Clustering and Trajectory Estimation in Patient Flow Modeling", *Production and Operations Management*, Vol. 26, pp.1893-1914.

    POMS Best Paper Award – College of Healthcare Operations Management (2015)

40. *__Fang, X.__, Gebraeel, N., Paynabar, K., (2017) "Scalable prognostic models for large-scale condition monitoring applications," *IIE Transactions on Quality and Reliability Engineering*, Vol. 49, pp.698-710.

    Featured in IIE Magazine

41. *__Yan, H.__, Paynabar, K., Shi, J., (2015) "Anomaly Detection in Images with Smooth Background Via Smooth-Sparse Decomposition," *Technometrics*, Vo. 59, pp. 102-104.

    INFORMS Data Mining Best Student Paper Award (2014)

42. *Rahmandad H., Jalali M., Paynabar, K., (2017) "A Flexible Method for Aggregation of Prior Statistical Findings". *PLoS ONE,* Vol. 12, Issue 4.

43. *Woodall, W. H., Zhao, M., Paynabar, K., Sparks, R., and Wilson, J. D. (2017). "An Overview and Perspective on Social Network Monitoring", *IIE Transactions on Quality and Reliability Engineering*, Vol. 49, pp. 354-365.

44. *__Fang, X.__, Paynabar, K., Gebraeel, N., (2017) "Multistream Sensor Fusion Based Prognostics Model for Systems with Single Failure Modes." *Reliability Engineering and Systems Safety*, Vol. 159, pp. 322-331.

45. *Mesnil O., __Yan, H.__, Ruzzene M., Paynabar, K., Shi J., (2016) "Fast Wavenumber Measurement for Accurate and Automatic Location and Quantification of Defect in Composite", *Structural Health Monitoring*, Vol. 15, pp. 223–234.

46. *Masoud, H., Reed, M. P., Paynabar, K., Wang N., Jin, J., Wan J., Kozak K. K., Gomez-Levi, G. (2016) "Predicting Subjective Responses from Human Motion: Application to Vehicle Ingress Assessment," *ASME Transactions, Journal of Manufacturing Science and Engineering*, Vol. 138, Issue 6, 061001-061001-8.

47. Guo, W., Paynabar, K., Jin, J., Miller, B., Carpenter, J., (2015) "A Decision Support System on Surgical Treatments for Rotator Cuff Tears", *IIE Transactions on Healthcare Systems Engineering,* Vol. 5, Issue 3, pp. 197-210.

    Featured in IIE Magazine

48. *Paynabar, K., Peihua, Q., and Zou C., (2016) "A Change Point Approach for Phase-I Analysis in Multivariate Profiles Monitoring and Diagnosis," *Technometrics*, Vo. 58, Issue 2, pp. 191-204.

49. *Azarnoush, B., Paynabar K., Bekki, J., Runger G., (2016) "Monitoring Temporal Homogeneity in Network Streams," *Journal of Quality Technology*, Vol. 48, pp. 28–43.

50. *Jafari-Khouzani, K., Emblem, E., Kalpathy-Cramer, K., Bjørnerud, A., Vangel, M., Gerstner, E., Schmainda K., Paynabar K., Batchelor, T., Wen, P., Rosen, B., Stufflebeam, S., (2015) "Repeatability of cerebral perfusion measurements using susceptibility contrast MRI," *Translational Oncology*, 8, Issue 3, pp. 137–146.

51. ***Yan, H.**, Paynabar, K., Shi, J., (2015) "Image-Based Process Monitoring Using Low Rank Tensor Decomposition," *IEEE Transactions on Automation Science and Engineering*, Vol. 12, Issue 1, pp. 216-227.

52. Paynabar, K., Jin, J., and M. Reed, (2015) "Hierarchical Non-Negative Garrote for Group Variable Selection," *Technometrics*, Vol. 57, Issue 4, pp. 514 – 523.

INFORMS Data Mining Best Student Paper Award (2011).

53. Paynabar, K., Jin, J., and M. Pacella, (2013) "Monitoring and Diagnosis of Multichannel Nonlinear Profile Variations Using Uncorrelated Multilinear Principal Component Analysis," *IIE Transactions on Quality and Reliability Engineering*, Vol. 45, 1235-1247.

54. Shao, C., Paynabar, K., Kim, T., Jin J., Hu, J., Spicer, P., Wang H., and Abell, J., (2013) "Feature Selection for Manufacturing Process Monitoring Using Cross-Validation," *Journal of Manufacturing Systems*, Vol. 32, Issue 4, pp. 550–555.

55. Paynabar, K., Jin, J., Agapiou, J., and Deeds, P. (2012) "Robust Leak Tests for Transmission Systems Using Nonlinear Mixed-Effect Models," *Journal of Quality Technology,* Vol. 44, 265–278.

56. Paynabar, K., Jin, J., and Yeh. B. A. (2012) "Phase I Risk-Adjusted Control Charts for Monitoring Surgical Performance by Considering Categorical Covariates," *Journal of Quality Technology*, Vol. 44, 39-53.

57. Guo, H., Paynabar, K., and Jin, J. (2011) "Multiscale Monitoring of Autocorrelated Processes Using Wavelets Analysis," *IIE Transactions on Quality and Reliability Engineering,* Vol. 44, 312-326.

58. Paynabar, K., Jin, J. (2011) "Characterization of Nonlinear Profiles Variations using Mixed-effect Models and Wavelets," *IIE Transactions on Quality and Reliability Engineering*, Vol. 43, 275–290.

Best Application Paper Award from IIE Transactions (2011).

Richard C. Wilson Prize for Best Student Paper in Manufacturing Systems, The University of Michigan (2010)

59. Abad, A., Paynabar, K., and Jin, J. (2011) "Modeling and Analysis of Operators Effect on Process Quality and Throughput in Mixed Model Assembly Systems," *ASME Transactions, Journal of Manufacturing Science and Engineering*, Vol. 133, 021016-021016-9.

60. Lei, Y., Paynabar, K., Jin, J. and Agapiou, J. (2009) "Cyclic Waveform Signal Analysis for Online Monitoring of Valve Seat Assembly Processes," *Transactions of the NAMRI/SME*, 2009, Vol. 37. 459-466.

61. Noorossana, R., Saghaei, A., Paynabar, K., and Abdi, S. (2009) "Identifying the Time of a Change in High Quality Processes," *Quality and Reliability Engineering International Journal.* Vol. 25, 875–883.

62. Noorossana, R., Saghaei, A., Paynabar, K., and Samimi, Y., (2007) "On the Conditional Decision Procedure for High Yield Processes," *Computers and Industrial Engineering*. Vol. 53, 469–477.

63. ***Zhang, Z.,** Mou, S., Paynabar, K., Shi J., (2023) "Tensor-based Temporal Control for Partially Observed High-dimensional Streaming Data," *Technometrics*, (Accepted).

    INFORMS Quality, Statistics, and Reliability Best Student Paper Winner (2022)

64. ***Kim J.,** Luettgen, C., Paynabar, K., Boukouvala, F., (2023) Physics-based Penalization for Hyperparameter Estimation in Gaussian Process Regression, *Computers & Chemical Engineering*, 178.

65. ***Zhong, Z.,** Paynabar, K., Shi, J., (2023) "Image-Based Feedback Control using Tensor Analysis", *Technometrics*, 65:3, 305-314.

    INFORMS Quality, Statistics, and Reliability Best Student Paper Winner (2019)

66. ***Dan L.,** Gebraeel, N. Paynabar, K., Meliopoulos, S., (2022) "An Online Approach to Cyberattack Detection and Localization in Smart Grid," *IEEE Transaction on Power Systems*, (Accepted).

B2. CONFERENCE PRESENTATIONS WITH PROCEEDINGS (REFEREED)

1. Aydemir, G., Paynabar, K., Acar, B., "Robust Feature Learning for Remaining Useful Life Estimation Using Siamese Neural Networks", 2022 30th European Signal Processing Conference (EUSIPCO), Belgrade, Serbia, 2022.
2. Wang, Q., Shui, H., Tran, T. T. T., Nezhad, M. Z., Upadhyay, D., Paynabar, K., & He, A. (2022). "A Novel Two-level Causal Inference Framework for On-road Vehicle Quality Issues Diagnosis", NeurIPS 2022 Workshop on Causal Machine Learning for Real–World Impact.
3. *DeShong, ET, Peters, B, Berdanier, RA, Thole, KA, Paynabar, K, & Gebraeel, N. "Correlating Time-Resolved Pressure Measurements with Rim Sealing Effectiveness for Real-Time Turbine Health Monitoring." *Proceedings of the ASME Turbo Expo 2021: Turbomachinery Technical Conference and Exposition*. *Volume 5B: Heat Transfer — General Interest; Internal Air Systems; Internal Cooling*. Virtual, online. June 7–11, 2021. V05BT14A012. ASME.
4. *Benevento, A., Santos, M., Notarstefano, G., Paynabar, K., Bloch M., Egerstedt, M., (2020) "Multi-Robot Coordination for Estimation and Coverage of Unknown Spatial Fields." *2020 International Conference on Robotics and Automation* (ICRA), Paris, France.
5. *Dan Li, Paritosh Ramanan, Nagi Gebraeel, and Kamran Paynabar, "Deep Learning based Covert Attack Identification for Industrial Control Systems", *ICMLA* 2020.
6. *Kumar, R. M., Peters, B., Emerson, B., Paynabar, K., Gebraeel, N., Lieuwen, T., (2020). "Data driven fault detection of premixer centerbody degradation in a swirl combustor," *Proceedings of ASME Turbo Expo 2020: Turbomachinery Technical Conference and Exposition GT2020*.
7. *Mesnil O., **Yan, H.**, Ruzzene M., Paynabar, K., Shi J., (2015) "Guided Wavefield Reconstruction from Sparse Measurements Using Compressed Sensing," *10th International Workshop on Structural Health Monitoring*, Stanford, CA.
8. *Mesnil O., **Yan, H.**, Ruzzene M., Paynabar, K., Shi J., (2014) "Frequency Domain Instantaneous Wavenumber Estimation for Damage Quantification in Layered Plate

Structures," *7th European Workshop on Structural Health Monitoring*, Nantes, France.

9. Aminnayeri, M., Noorossana, R., Haghighi, M., and Paynabar, K., (2007) "Economic Statistical Design of T2 Control Charts for Systems with Gamma In-control Times," *37th International Conference on Computers and Industrial Eng*., Egypt.
10. M., Aminnayeri, Paynabar, K., and Arbabzade N., (2005) "Designing Geometric Zone Control Charts in High Quality Processes," *35th International Conference on Computers and Industrial Eng.*, Turkey.

B3. OTHER REFEREED MATERIAL

No Data

B4. SUBMITTED JOURNAL ARTICLES

1. ***Fang X.**, Paynabar K., and Gebraeel N., "A Supervised Dimension Reduction-Based Prognostics Model for Applications with Incomplete Signals and Censored Failure Times", *IISE Transactions*.
2. *Benevento A., **Ahadi, P.,** Gupta S., Pacella M., and Paynabar K., "Sequential Sampling with Interval-based Exploration and Value Estimation Via SIEVE".
3. **Zhong, Z., Sengupta, R.,** Paynabar, K., Waller L., "Multi-Objective Allocation of COVID-19 Testing Centers: Improving Coverage and Equity in Access".

C. OTHER PUBLICATIONS AND CREATIVE PRODUCTS

No Data

D. PRESENTATIONS

D1. KEYNOTE ADDRESSES AND PLENARY LECTURES

1. *Low-Dimensional Learning from High Dimensional Data for System Modeling and Improvement, Annual Conference of the Institute for Quality and Reliability, Beijing, Oct. 2023
2. *Scarce Data Science in the Big Data Era, 17th International Industrial Engineering Conference, Online, Feb. 2021.
3. *New Opportunities and Challenges in Quality Engineering, Plenary Speaker, First International Quality Engineering Conference, Tehran, Iran, Dec. 2012.

D2. INVITED CONFERENCE AND WORKSHOP PRESENTATIONS

1. *Maximum Covariance Unfolding Regression: A Novel Covariate-Based Manifold Learning Approach for Point Cloud Data, ENBIS Annual Conference, Valencia, September 2023.
2. *Graph Laplacian Based Smooth Sparse Decomposition for Monitoring of Streaming Manifolds, XIVth International Workshop on Intelligent Statistical Quality Control, Washington D.C., August 2023.
3. *Statistical Process Monitoring from Industry 2.0 to Industry 4.0: Insights into Research and Practice, JSM 2023, Toronto, Canada, August 2023.

4. *Low-Dimensional Learning for Monitoring High-Dimensional Data, 7th International Symposium on Statistical Process Monitoring, Valencia, Spain, July 2023
5. *Low-Dimensional Learning for Monitoring High-Dimensional Data, 7th International Symposium on Statistical Process Monitoring, Valencia, Spain, July 2023.
6. *Image-Based Feedback Control using Tensor Analysis, Spring Research Conference, Banff, Canada, May 2023.
7. *Anomaly Detection in PV Systems using Constrained Low-Rank and Sparse Decomposition, ENBIS Annual Conference, Trondheim, June 2022.
8. *Image-Based Feedback Control using Tensor Analysis, ENBIS Annual Conference, Online, September 2021.
9. *Interpretability of Big Data in Industry 4.0, Invited Panelist, ENBIS Workshop on Interpretability for Industry 4.0, July 2021.
10. *An Adaptive Sampling Strategy for Online Monitoring and Diagnosis of High-dimensional Streaming Data, INFORMS Annual Meeting, Anaheim, 2021. #
11. *Technometrics Invited Session: Multiple Tensor-On-Tensor Regression: An Approach for Modeling Processes with Heterogeneous Sources of Data, INFORMS Annual Meeting, Anaheim, 2021. #
12. *Online Monitoring of Dynamic Spectral Functional Graphical Models, INFORMS Annual Meeting, Anaheim, 2021. #
13. *An Online Approach to Cyberattack Detection and Localization in Smart Grid, INFORMS Annual Meeting, Online, 2020. #
14. *A Tensor Decomposition Approach for Classifying Functional Brain Connectivity, INFORMS Annual Meeting, Online, 2020. #
15. *Time-to-transplant Estimation for Adult Candidates in The US Liver Allocation System, INFORMS Annual Meeting, Online, 2020. #
16. *Data Science for Manufacturing Automation, IEEE CASE 2019 Workshop on Data Science for Engineering Automation, Vancouver, Canada, August 2019.
17. *Multiple Tensor-On-Tensor Regression: An Approach for Modeling Processes with Heterogeneous Sources of Data. Joint Statistical Meeting, Denver, Co., July 2019.
18. *Image-Based Process Control Using Tensor Analysis, INFORMS Annual Meeting, Seattle, WA, October 2019. #
19. *A Degradation-Based Detection Framework Against Covert Cyberattacks in SCADA Systems, INFORMS Annual Meeting, Seattle, WA, October 2019. #
20. *Interval-based Sequential Design for the Exploration and Estimation of a Response Surface, INFORMS Annual Meeting, Seattle, WA, October 2019. #
21. *Functional Gaussian Directed Graphical Models, INFORMS Annual Meeting, Seattle, WA, October 2019. #

22. *Structured Point Cloud Data Analysis Via Regularized Tensor Regression for Process Modeling and Optimization, INFORMS Annual Meeting, Seattle, WA, Oct 2019. #
23. *A Degradation-Based Detection Framework Against Covert Cyberattacks in SCADA Systems, IISE Annual Meeting, Orlando, FL, May 2019. #
24. *AKM2D: An Adaptive Framework for Online Sensing and Anomaly Detection, ENBIS Spring Meeting 2018, Florence, Italy, June 2018. #
25. *Real-time Monitoring of High-Dimensional Functional Data Streams via Spatio-Temporal Smooth Sparse Decomposition, Spring Research Conference, New Brunswick, May 2017.
26. *Real-time Monitoring of High-Dimensional Functional Data Streams via Spatio-Temporal Smooth Sparse Decomposition, ENBIS Annual Meeting, Naples, Sep. 2017.
27. *Image Denoising and Anomaly Detection Via Smooth-Sparse Decomposition, Technometrics Invited Session, The Fourth International Conference on the Interface between Statistics and Engineering, Palermo, Italy, June 2016.
28. *Structured Point Cloud Data Modeling Via Regularized Tensor Decomposition and Regression, Nashville, Nov 2016. #
29. *Residual Useful Lifetime Prediction Using a Degradation Image Stream, Nashville, Nov 2016. #
30. *Temporal Monitoring of Dynamic Attributed Networks, Nashville, Nov 2016. #
31. *A Degradation-based Prognostic Model using Image Data, INFORMS Annual Meeting, Philadelphia, Nov 2015. #
32. *A Novel Sequence Kernel Graph Transform for Clustering and Visualization, INFORMS Annual Meeting, Philadelphia, Nov 2015. #
33. *Monitoring and Diagnostics of High Dimensional Multi-stream Data, INFORMS Annual Meeting, Philadelphia, Nov 2015. #
34. *An Integrated System for Hospital Census Modeling and Resource Optimization, POMS, Washington D.C., May 2015.
35. *Monitoring of High-Dimensional Image Streams Via Smooth-Sparse Decomposition, Spring Research Conference, Cincinnati, May 2015.
36. *Image Denoising and Defect Detection Via Smooth-Sparse Decomposition, Joint Research Conference, Seattle, June 2014.
37. *A Novel Method for Monitoring of Image Sequences, INFORMS Annual Meeting, San Francisco, Nov 2014.
38. *Image defect detection with Smooth-Sparse Decomposition, INFORMS Annual Meeting, San Francisco, Nov 2014. #
39. *Scalable Predictive Analytics for Multi-sensor Condition Monitoring Applications, INFORMS Annual Meeting, San Francisco, Nov 2014. #

40. *A Change-point Approach for System Monitoring and Diagnosis Using Multichannel Profiles, ISBIS and SLDM Joint Meeting, Durham, June 2014.
41. *A Change-point Approach for System Monitoring and Diagnosis Using Multichannel Profiles, 4th International Workshop in Sequential Methodologies, Athens, July 2013.
42. *A Change-point Approach for System Monitoring and Diagnosis Using Multichannel Profiles, INFORMS Annual Meeting, Minnesota, Oct. 2013.
43. *A Sensor-fusion based Methodology for Real-time System Prognostics, INFORMS Annual Meeting, Minnesota, Oct. 2013. #
44. *Image-Based Process Monitoring Using Low-Rank Tensor Decomposition, INFORMS Annual Meeting, Minnesota, Oct. 2013. #
45. *Flow Modeling and Prediction of Heterogeneous Patients Using Semi-Markov Mixture Clustering, INFORMS Annual Meeting, Minnesota, Oct. 2013. #
46. *A Change-point Approach for System Monitoring and Diagnosis Using Multichannel Profiles, INFORMS Annual Meeting, Phoenix, Oct. 2012. #
47. Robust Leak Tests for Transmission Systems Using Nonlinear Mixed-Effect Models, invited talk in the Journal of Quality Technology session, INFORMS Annual Meeting, Phoenix, Oct. 2012.
48. Hierarchical Non-Negative Garrote for Group Variable Selection, INFORMS Annual Meeting, Charlotte, Nov. 2011.
49. Characterization of Nonlinear Profiles Variations using Mixed-effect Models and Wavelets, invited talk in the IIE Transactions session, INFORMS Annual Meeting, Charlotte, Nov. 2011.
50. Uncorrelated Multilinear Principal Component for Analysis of Multi-Channel Sensing Data, INFORMS Annual Meeting, Charlotte, Nov. 2011.
51. Characterization of Nonlinear Profiles Variations using Mixed-effect Models and Wavelets, INFORMS Annual Meeting, San Diego, Oct. 2009.
52. Phase I Risk-Adjusted Control Charts for Monitoring Surgical Performance by Considering Categorical Covariates, Pierskalla session, INFORMS Annual Meeting, Austin, Nov. 2010.
53. Phase I Risk-Adjusted Control Charts for Monitoring Surgical Performance by Considering Categorical Covariates, Joint Session QSR/DM, INFORMS Annual Meeting, Austin, Nov. 2010.

D3. CONFERENCE AND WORKSHOP PRESENTATIONS

1. Cyclic Waveform Signal Analysis for Online Monitoring of Valve Seat Assembly Processes, The North American Manufacturing Research Conference (NAMRC), Greenville, May 2009.
2. Developing Runs Rules Geometric Control Charts in High Yield Processes, INFORMS Annual Meeting, Washington D.C., Oct. 2008.

D4. INVITED SEMINAR PRESENTATIONS

1. *Learning from High-Dimensional Data with Limited Sampling Resources, Chinese Academy of Science, October 2023.
2. *Low-Dimensional Learning from High Dimensional Data for System Modeling and Improvement, Department of Industrial Engineering, Tsinghua University, October 2023.
3. *Tutorial on Regularization: Theory and Applications, Politecnico Milano, Milan, Italy, June 2023.
4. *Low-Dimensional Learning from High Dimensional Data for System Modeling and Improvement, School of Computational Science & Engineering, McMaster University, March 2023.
5. *Low-Dimensional Learning from High Dimensional Data for System Modeling and Improvement, ISME Department, Wichita State University, Feb 2023.
6. *Learning from High-Dimensional Data with Limited Sampling Resources, Department of Industrial and Systems Engineering, Rutgers, September 2022.
7. *High-dimensional Streaming Data Analysis for System Monitoring and Control, School of Computing and Augmented Intelligence, Arizona State University, AZ, April 2022.
8. *Machine Learning-based Analytics for Industry 4.0: New Solutions for Process Improvement and Cybersecurity, Department of Mechanical Engineering, Politecnico Milano, Milan, Italy, June 2021.
9. *An Adaptive Sampling Strategy for Online Monitoring and Diagnosis of High-Dimensional Streaming Data, Department of Statistics, Information and Applications, University of Florence, Florence, Italy, July 2021.
10. *ENBIS Webinar Series on Industry 4.0: Low-Dimensional Learning from High Dimensional Data for System Modeling and Improvement, European Network of Business and Industrial Statistics, Online, September 2020.
11. *QSR Webinar Series: Low-Dimensional Learning from High Dimensional Data for System Modeling and Improvement, Quality, Statistics and Reliability Section of INFORMS, Online, October 2020.
12. *Low-Dimensional Learning from High Dimensional Data for System Modeling and Improvement, Sharif University of Technology, Online, December 2020.
13. *MECCPHD LECTURE: Low-Dimensional Learning from High Dimensional Data for System Performance Improvement, Department of Mechanical Engineering, Politecnico Milano, Milan, Italy, May 2018.
14. *Statistics Colloquium: Low-Dimensional learning from High-Dimensional Streaming Data for System Monitoring and Prognostics, Virginia Tech, Blacksburg, VA, Oct 2018
15. *Machine Learning Meets Prognostics: Analysis of High-Dimensional Data Streams for Time-to-Failure Prediction, University of Southern California, Los Angeles, CA, May 2018.

16. *Low-Dimensional Learning from High Dimensional Data for System Performance Improvement, Department of Mathematics, Université de Bretagne Sudn, France 2017.
17. *Low-Dimensional Learning from High Dimensional Data for System Performance Improvement, Department of Industrial and Systems Engineering, Texas A&M University, College Station, TX, 2017.
18. *Sequential Analysis of Functional Data for Online Anomaly Detection, Department of Industrial and Systems Engineering, University of Wisconsin – Madison, Madison, WI, 2017.
19. *Low-Dimensional Learning from High Dimensional Data for System Performance Improvement, Department of Mechanical Engineering, University of Solanto, Italy, 2017.
20. *High Dimensional Streaming Data Analysis for Process Monitoring and Defect Detection, Department of Industrial Engineering, Sharif University of Technology, Tehran, Aug 2016.
21. *Image Denoising and Defect Detection via Smooth-Sparse Decomposition," Department of Statistics, Florida State University, Tallahassee, FL, 2014.
22. *Multistream Sensor Fusion Based Prognostics Model for Systems with Single Failure Modes, Department of Industrial and Manufacturing Engineering, Florida State University, Tallahassee, FL, 2014.
23. *A Change-point Approach for System Monitoring and Diagnosis Using Multichannel Profiles," Center for Signal and Information Processing, Georgia Tech, Atlanta, GA, 2014.
24. *A Change-point Approach for System Monitoring and Diagnosis Using Multichannel Profiles, School of Computer Science, Georgia Tech, GA, 2013.
25. *Big Data Fusion Applications in Quality Improvement, School of Building Construction, Georgia Tech, Atlanta, GA, 2013.
26. Waveform Signal Analysis for System Performance Improvement, Department of Computer Science, Georgia State University, Atlanta, GA, 2012
27. Waveform Signal Analysis for System Performance Improvement, Industrial and Management Systems Engineering, University of South Florida, Tampa, FL, 2012.
28. Waveform Signal Analysis for System Performance Improvement, School of Industrial and Systems Engineering, Industrial Engineering Department, University of Arkansas, Fayetteville, AR, 2012.
29. Waveform Signal Analysis for System Performance Improvement, School of Industrial and Systems Engineering, Georgia Tech, Atlanta, GA, 2011.
30. Analysis of Heterogeneous Mortality Data for Assessing Surgical Operation Risk, Department of Industrial and Systems Engineering, Rutgers University, New Brunswick, NJ, 2011.
31. Characterization of Nonlinear Profiles Variations using Mixed-effect Models and Wavelets, Department of Statistics, The University of Michigan, Ann Arbor, MI, 2009.

E. GRANTS AND CONTRACTS

E1. AS PRINCIPAL INVESTIGATOR

1. AI-ML-based Framework for End-of-Line (EOL) Vehicle Component Tests Anomaly Detection, Source: Ford Motor Company, Role: PI, Amount: $233,000. Period of Contract: 03/01/2023 – 02/28/2025. Share: 100% ($233,000).
2. Automated Claims Binning (ACB) using Active Learning. Source: Ford Motor Company, Role: PI, Amount: $200,000. Period of Contract: 05/01/2022 – 04/30/2024. Share: 100% ($200,000).
3. STTR: Sensor Fusion for Quality Monitoring and Prediction. Source: Air Force through Aging Aircraft, Role: PI, Amount: $75,001.35. Period of Contract: 01/01/2022 – 10/31/2022. Share: 100% ($75,001.35).
4. Automatic, intelligent, and scalable statistical and machine learning detection algorithms. Source: Ford Motor Company, Role: PI, Amount: $200,000. Period of Contract: 09/01/2021 – 08/31/2023. Share: 100% ($200,000).
5. Effective Allocation of Test Centers for Covid-19 Using Machine Learning and Adaptive Sampling. Source: NIH-CTSA, Role: PI, Collaborator: Lance Waller (Co-PI), Amount: $451,158. Period of Contract: 08/01/2020 – 07/31/2022. Share: 91% ($410,692.87).
6. Automating Detection and Diagnosis of Faults, Failures, and Underperformance in PV Plants. Role: GT-PI, Collaborator: Michael Bolen (EPRI-PI), Christopher Perullo (Turbine Logic- PI). Amount: $2,500,000, Period of Contract: 03/01/2020 – 02/28/2023. Share: 11% ($274,781.00).
7. ML-based Recommendation System for Diagnosis and Root-Cause Identification of On-Road Quality Issues. Source: Ford Motor Company, Role: PI, Amount: $199,816.21. Period of Contract: 02/01/2020 – 01/31/2022. Share: 100% ($199,816.21).
8. EAGER: Real-D: Integrating Data-Driven Methods and Engineering Models in Manufacturing Systems, Source: National Science Foundation (NSF), CMMI, Role: PI, collaborator: Edmon Chow (Co-PI), Amount: $299,951.00, Period of Contract: 08/22/2018 – 8/31/2020. Share: 75% (200,000).
9. Machine Learning Methods for Analysis of Streaming Big Data to Improve Pulp and Paper Production Systems, Source: Renewable Bioproducts Institute, GT, Role: PI, Collaborator: Chris Leuttgen and Fani Boukouvala. Period of Contract: 08/15/2018 – 8/14/2022. Share: 50%.
10. Data-Driven Reconfigurable Manufacturing Systems for the Air Force Aircraft Maintenance Environment – Phase II, Source: SBIR Program – Air Force, Amount: $125,000, Role: PI, collaborator: Jan Shi (Co-PI), Period of Contract: 10/1/2017 – 10/01/2018. Share: 50% ($62,500).
11. Data-Driven Reconfigurable Manufacturing Systems for the Air Force Aircraft Maintenance Environment, Source: SBIR Program – Air Force, Amount: $50,000, Role: PI, collaborator: Jan Shi (Co-PI), Period of Contract: 10/1/2016 – 03/03/2017. Share: 50% ($25,000).

12. Variation Analysis for Composite Manufacturing, Source: Boeing Company, Role: PI, Amount: $153,000, Period of Contract: 1/1/2016 – 12/31/2017. Share: 100% ($153,000).
13. EAGER: Big Data Analytics for Advanced Manufacturing Improvement, Source: National Science Foundation (NSF), MES Program, Role: PI, Amount $300,000, Period of Contract: 9/1/2014 – 8/31/2017. Share: 100% (300,000).
14. REU: Big Data Analytics for Advanced Manufacturing Improvement, Source: Sandia National Lab, Role: PI, Amount: $22,000, Period of Contract: 6/1/2015 – 9/1/2015. Share: 100% (22,000).
15. Reliability Modeling, Analysis, and Improvement of FUSE Video System, Source: Endochoice Company, Amount: $80,000, Role: PI, Collaborator: Jan Shi (Co-PI), Period of Contract: 4/1/2014 – 4/1/2015, Share: 50% ($40,000).
16. Process Capability Analysis and Improvement, Source: CSM Bakery, Amount: $22,000, Role: PI, Period of Contract: 4/1/2014 – 1/1/2015, Share: 100% (22,000).
17. A Statistical Framework for Modeling & Prediction of Hospital Readmissions, Source: George Family Foundation Grant, Amount: $5,000, Role: PI, Collaborator: Adel Alaeddini, Period of Contract: 6/1/2015 – 6/1/2016, Share: 100% (5,000).
18. An Integrated Statistical-Optimization Approach for Hospital Census Model, Source: George Family Foundation Grant, Amount: $10,000, Role: PI, Collaborator: Jonathan Helm, Period of Contract: 6/1/2015 – 6/1/2016, Share: 100% (10,000).
19. A Decision Support System for Treatment Determination of Rotator Cuff Tears Patients, Source: George Family Foundation Grant, Amount: $5,000, Role: PI, Period of Contract: 3/1/2014 – 3/1/2015, Share: 100% (5,000).

E2. AS CO-PRINCIPAL INVESTIGATOR

20. Real-Time Health Monitoring for Gas Turbine Components using Online Learning and High Dimensional Data, Source: Department of Energy, Role: co-PI, Amount: $750,297, Collaborators: Nagi Gebraeel (PI), Timothy Lieuwen (co-PI), Karen Thole (co-PI), Reid Berdanier (co-PI), Period Contract: 1/1/2018 – 12/31/2020, Share 15% ($112,545K).
21. A Prognostic Modeling Methodology for Multistream Degradation-based Signals, Source: National Science Foundation (NSF), Role: co-PI, Amount: $320,000, Collaborator: Nagi Gebraeel (PI), Period Contract: 12/1/2015 – 11/30/2018, Share 50% ($160,000).
22. Variation Analysis for Composite Manufacturing, Source: Boeing Company, Role: Co-PI, Amount: $270,000, Collaborator: Jan Shi (PI), Period of Contract: 1/1/2013 – 12/31/2015, Share: 50% ($135,000).

E3. AS SENIOR PERSONNEL OR CONTRIBUTOR

No Data

E4. PENDING PROPOSALS

No Data

F. OTHER SCHOLARLY AND CREATIVE ACCOMPLISHMENTS

No Data

G. SOCIETAL AND POLICY IMPACTS

1. Collaboration with Chamblee Charter High School, Atlanta. 01/2014 – 01/2018:
    - Serving on the Career Tech Advisory Board since 2016 – 2-18.
    - Mentoring high-school student interns to learn and use statistical methods in their capstone projects. Four students since 2014 - 2018.

H. OTHER PROFESSIONAL ACTIVITIES

1. Co-founder and Chief Science Officer of ProcessMiner™, a Startup Company on Machine Learning application for Quality Modeling and Improvement in Manufacturing Systems. 2015 – Present.
2. Academic consultant for Schiff-Hardin law firm. 02/2015 – 10/2015.
    - Analyzing injury data in Braves baseball games to estimate the probability of the occurrence of a critical injury for fans across different sections and rows.

V. EDUCATION

A. COURSES TAUGHT

Semester, Year	Course Number	Course Title	# of Students
Spring 2022 - online	ISyE 8803	High-Dimensional Data Analytics	73
Spring 2022 – on-campus	ISyE 8803	High-Dimensional Data Analytics	25
Spring 2022	ISyE 6382	Quality and Six Sigma	10
Fall 2021	ISyE 8803	High-Dimensional Data Analytics	79
Summer 2021	ISyE 8803	High-Dimensional Data Analytics	118
Spring 2021	ISyE 6382	Quality and Six Sigma	11
Spring 2021	ISyE 8803	High-Dimensional Data Analytics	66
Fall 2020	ISyE 8803	High-Dimensional Data Analytics	89
Summer 2020	ISyE 8803	High-Dimensional Data Analytics	197
Spring 2020	ISyE 6382	Quality and Six Sigma	13
Spring 2020	ISyE 6739	Statistical Methods	40
Spring 2020	ISyE 8803	High-Dimensional Data Analytics	29
Fall 2019	ISyE 8803	High-Dimensional Data Analytics	25

Summer 2019	ISyE 8803	High-Dimensional Data Analytics	115
Spring 2019	ISyE 6810	System Monitoring and Prognostics	10
Spring 2019	ISyE 8803	High-Dimensional Data Analytics	25
Spring 2019	ISyE 6382	Quality and Six Sigma	17
Fall 2018	ISyE 2028	Statistical Methods for Quality Improvement	68
Spring 2018	ISyE 2028	Basic Statistical Methods	78
Spring 2018	ISyE 6810	System Monitoring and Prognostics	7
Spring 2018	ISyE 6382	Quality and Six Sigma	
Spring 2017	ISyE 2028	Basic Statistical Methods	53
Spring 2017	ISyE 6810	System Monitoring and Prognostics	5
Spring 2017	ISyE 6382	Quality and Six Sigma	6
Summer 2016	ISyE 3039	Statistical Methods for Quality Improvement	29
Summer 2016	ISyE 2028	Basic Statistical Methods	29
Spring 2016	ISyE 6739	Statistical Methods	43
Spring 2016	ISyE 3039	Statistical Methods for Quality Improvement	67

B. INDIVIDUAL STUDENT GUIDANCE

B1. PH.D. STUDENTS

B1.a. GRADUATED PH.D. STUDENTS

1. Chitta Ranjan, ISyE-Statistics. Graduated: September 2016.
    - Dissertation: Novel Statistical Learning and Data Mining Methods for Service Systems Improvement.
    - Current position: Director of Data Science at ProcessMiner.
    - Winner of 2016 INFORMS Data Mining Best Student Paper Award Competition
    - Finalist for 2016 ISERC QCRE Best Student Paper Award Competition.
    - Finalist for 2013 INFORMS Data Mining Best Student Paper Award Competition.
    - Winner of 2015 POMS Best Paper Award Competition – College of Healthcare Operations Management.

2. Hao Yan, ISyE-System Informatic and Control (SIAC). Graduated: April 2017.
    - Dissertation: Sequential High-Dimensional Data Analysis for Anomaly Detection and System Monitoring.
    - Position: Assistant Professor of the School of Computing, Informatics, and Decision Systems Engineering at Arizona State University
    - Finalist for 2016 INFORMS QSR Best Student Paper Award Competition.
    - Winner of the 2015 INFORMS QSR Best Paper Award Competition.
    - Winner of the 2015 QCRE Best Student Paper Award Competition at ISERC.
    - Winner of the 2014 INFORMS Data Mining Best Student Paper Award Competition.
    - Co-advised by Jan Shi.
3. Xiaolei Fang, ISyE-SIAC. Graduated: April 2018.
    - Dissertation: Degradation Modeling and Predictive Analytics of Complex Engineering Systems Using High-Dimensional Signals.
    - Position: Assistant Professor of the Industrial and Systems Engineering Department at North Carolina State University.
    - Winner of the 2016 INFORMS Data Mining Best Student Paper Award Competition.
    - Co-advised with Nagi Gebraeel.
4. Samaneh Ebrahimi, ISyE-SIAC. Graduated: September 2018.
    - Dissertation: Monitoring and Diagnosis of Multi-stream and Network Data.
    - Current position: Senior Data Scientist at Pandora.
    - Winner of the 2016 INFORMS Data Mining Best Student Paper Award Competition.
5. Mostafa Reisi, ISyE-SIAC. Graduated: May 2019.
    - Dissertation: Process Monitoring and Fault Diagnosis in Multi-Stage Processes Using Functional Data.
    - Current Position: Assistant Professor of the Industrial and Systems Engineering Department at the University of Florida.
    - Winner of INFORMS Data Mining Best Paper Award, 2018.
    - Co-advised with Jan Shi.
6. Ana Maria Estrada Gomez, ISyE-Statistics. Graduated: July 2021
    - Dissertation: Modeling, Monitoring, and Diagnosis of Complex Systems with HD Streaming Data.
    - Current Position: Assistant Professor of the School of Industrial Engineering at Purdue.
    - Winner of Best Student Paper Award in SPES + Q&P Student Paper Competition, American Statistical Association (2021)

7. Dan Li, ISyE-SIAC. Graduated: July 2021
    - Dissertation: Data-Driven Online Detection Against Cyberattacks in Cyber-Physical Systems.
    - Current Position: Assistant Professor of the Industrial Engineering Department at Clemson.
    - Data Analytics and Information Systems Best Student Paper Competition IISE Annual Conference, 2020.
    - Energy Systems Best Student Paper Award in, IISE Annual Conference, 2019.
    - Co-advised with Nagi Gebraeel.
8. Zhen Zhong, ISyE-SIAC. Graduated: May 2021
    - Dissertation: Automatic Control in High Precision Manufacturing.
    - Current Position: Data Scientist at Amazon.
    - Winner of the 2019 INFORMS QSR Best Student Paper Award Competition.
    - Co-advised by Jan Shi.
9. Qian Wang, ISyE-ML. Graduated: May 2023.
    - Dissertation: Novel Learning Methods for High-dimensional Data with Applications in Process Modeling and Monitoring.
    - Current Position: Data Scientist at Wells Fargo.
    - Finalist of the QCRE Best Track Paper, IISE Annual Conference, 2023.
10. Wei Yang, ISyE-ML. Started Aug 2019.
    - Dissertation: Multi-resolution Analysis of High-dimensional Streaming Data for Anomaly Detection with Applications in Green Energy and Additive Manufacturing.
    - Current Position: Data Scientist at Intuitive.

B1.b. IN PROCESS PH.D. STUDENTS

11. Jinhyeun Kim, ChBE. Started Aug 2018.
    - Co-advised with Fani Boukouvala and Chris Luttegen
    - Qualifying exam passed in 2020
12. Anjolaoluwa Popoola, ISyE-ML. Started Aug 2020.
    - Qualifying exam passed in 2021.
13. Pouya Ahadi, ISyE-ML. Started Aug 2021.
    - Qualifying exam passed in 2022.
14. Che-Yi Liao, ISyE-ML. Started Aug 2021.
    - Qualifying exam passed in 2022.

15. Zihan Zhang, ISyE-SIAC. Started Aug 2021.
    - Co-advised by Jan Shi
    - Qualifying exam passed in 2021
16. Che-Yi Liao, ISyE-ML. Started Aug 2021.
17. Alina Gorbunova, ISyE -SIAC, Started Aug 2022.
    - Co-advised by Jan Shi
    - Qualifying exam passed in 2023
18. Mehrdad Moradi, ISyE-ML, Started Aug 2022.
19. Mahya Qorbani, ISyE-ML, Started Aug 2022.
20. Melika Baghi, ISyE-SIAC, Started Aug 2023.
21. Junghee Pyeon, ISyE-SIAC, Started Aug 2023.

B2. M.S. STUDENTS

1. Penfei Chen, CSE, Graduated: Spring 2018, Non-thesis masters.
    - Performed research in Spring and Fall 2017
    - Research Topic: Process Monitoring Through Deep Learning.
2. Ribhu Sangupta, ISyE. Graduated Fall 2021, Non-thesis masters.
    - Performed research in Fall 2020-Fall 2021 .
    - Research Topic: COVID-19 Test Center Allocation.

B3. UNDERGRADUATE STUDENTS

1. Ribhu Sangupta, ISyE. Fall 2016-Spring 2017
    - Research Topic: Monitoring of Social Network Data Streams.
    - Passed undergraduate research ISyE 4699.
2. Qiaxuan Hu, Math. Spring 2017-
    - Winner of PURA undergraduate research award (for our project) Summer 2017.
    - Research Topic: Change Detection in high-dimensional data streams using deep learning.
    - Passed undergraduate research Math 4080.
3. Kimberly Diaz, IE, University of Turabo. Summer 2015
    - Summer Undergraduate Research in Engineering/Science (SURE) scholar.
    - Research Topic: Study Process and Design Factors for Additive Manufacturing Improvement.
    - Sponsored by REU grant from Sandia Lab.
4. Chinaza Ochiobi, Biology, University of Georgia. Summer 2015

- Summer Undergraduate Research in Engineering/Science (SURE) scholar.
- Research Topic: Minimizing 3D Printer Error.
- Sponsored by REU grant from Sandia Lab.

5. Ahmad Azhan, ISyE. Summer 2014.
   - Research Topic: Process Capability Analysis for CSM Bakery Products.
6. Timothy Lin, ISyE. Summer 2014.
   - Research Topic: Process Capability Analysis for CSM Bakery Products.
7. Andres Martinez, ISyE. Summer 2013.
   - Summer Undergraduate Research in Engineering/Science (SURE) scholar.
   - Research Topic: Image-based process monitoring using CUSUM control charts.

B3.b. HIGH SCHOOL STUDENTS

1. Mohd Hasan, Chamblee Charter High School. Spring 2016.
   - Research Topic: Detection of spam emails using classification.
2. Mitchell Gant, Chamblee Charter High School. Spring 2015.
   - Research Topic: Increasing the speed of skateboards through factorial designs.
   - Current status: Undergraduate student at Georgia Tech.
3. Nick Ahern, Chamblee Charter High School. Spring 2015.
   - Research Topic: Improving the functionality of trash cans in student food court using factorial designs.
4. Shuvajit Dey, Chamblee Charter High School. Spring 2014.
   - Research Topic: Statistical Analysis for Systems Performance Improvement.
   - Current status: Undergraduate student at Georgia Tech.

B4. SERVICE ON THESIS OR DISSERTATION COMMITTEES

B4.a. INTERNAL

1. William Bradley, ChBE, Advisor: Fani Boukouvala. Successfully defended dissertation in 2022.
2. Michael Beihler, ISyE, Advisor: Jan Shi. Successfully presented dissertation proposal in 2022.
3. Lujia Wang, ISyE, Advisor: Jing Li. Successfully presented dissertation proposal in 2021.
4. Shancong Mou, ISyE, Advisor: Jan Shi. Successfully presented dissertation proposal in 2021.

5. Benjamin Peters, ISyE, Advisor: Nagi Gebraeel. Successfully defended dissertation in 2021.
6. Andi Wang, ISyE, Advisor: Jan Shi. Successfully defended dissertation in 2021.
7. Sanam GorganNejad, ME, Richard Neu. Successfully defended dissertation in 2020.
8. Xinran Shi, ISyE, Advisor: Jan Shi. Successfully defended dissertation in 2020.
9. Mayuri Rajput, School of Architecture, Advisor: Godfried Augenbroe. Successfully defended dissertation in 2020.
10. Taewoon Kong, ISyE. Advisor: Brani Vidacovic. Successfully defended dissertation in 2019.
11. Ajay Singh Saini, Civil Engineering. Advisor: Iris Tien. Successfully defended dissertation in 2019.
12. Michael Ibrahim, ISyE. Advisor: Spyros Reveliotis. Successfully defended dissertation in 2019.
13. Shuang Li, ISyE. Advisor: Yao Xie. Successfully defended dissertation in 2019.
14. Geet Lahoti, ISyE. Advisor: Chuck Zhang. Successfully defended dissertation in 2019.
15. Ruizhi Zhang, ISyE. Advisors: Yajun Mei and Jan Shi. Successfully defended dissertation in 2019.
16. Mohammad Nabahan, ISyE. Advisors: Yajun Mei and Jan Shi. Successfully defended dissertation in 2019.
17. German A. Schnaidt Grez, ISyE. Advisor: Brani Vidacovic. Successfully defended dissertation in 2019.
18. Yuchen Wen, ISyE. Adivsor: Jan Shi. Successfully defended dissertation in 2018.
19. Xiaowei Yue, ISyE. Adivsor: Jan Shi. Successfully defended dissertation in 2018.
20. Yang Cao, ISyE. Advisor: Yao Xie. Successfully defended dissertation proposal in 2018.
21. Saman Yarmohammadi, Building Construction, Advisor: Daniel Castro. Successfully defended dissertation proposal in 2017.
22. Yung-Hang Chang, ISyE, Advisors: Ben Wang and Chuck Zhang. Successfully defended dissertation proposal in 2018.
23. Junzhuo Chen, ISyE. Advisors: Yao Xie and Seong-Hee Kim. Successfully defended dissertation proposal in 2018.
24. I-Hsiang Lee, ISyE. Adivsor: Brani Vidakovic Successfully defended dissertation proposal in 2017.
25. Minkyoung Kang, ISyE. Advisor: Brani Vidakovic. Successfully defended dissertation in 2016.

26. Olivier Mensil, Aerospace. Advisor: Massimo Ruzzene. Successfully defended dissertation in 2016.
27. Yuan Wang, ISyE. Advisors: Yajun Mei and Jeff Wu. Successfully defended dissertation in 2016.
28. Tonya Woods, ISyE. Advisor: Brani Vidakovic. Successfully defended dissertation in 2015.
29. Li Hao, ISyE. Advisors: Nagi Gebraeel and Jan Shi. Successfully defended dissertation in 2015.
30. Justin Vastola, ISyE. Advisor: JC Lu. Successfully defended dissertation in 2013.
31. Hin Kyeol Woo, ISyE. Advisors: Nagi Gebraeel and Jan Shi. Successfully defended dissertation in 2012.

B4.b. EXTERNAL

1. Mojtaba Khanzadehdaghalian, ISE at Mississippi State University, Advisor: Linkan Bian. Successfully defended dissertation in 2019.

B5. MENTORSHIP OF POSTDOCTORAL FELLOWS OR VISITING SCHOLARS

B5.a. POSTDOCTORAL FELLOWS

1. Mohammad N. Bisheh, March 2023 – Present.
2. Peiling Bai, Postdoc., June 2021 – March 2022, Current Position: Senior Data Scientist in Morgan Stanley.
3. Fanrosuh Naderkhani, Postdoc., September 2017 – August 2019. Current Position: Assocaite Professor at Concordia Institute for Information System Engineering (CIISE).

B5.b. VISITING SCHOLARS

1. Davide Cacciarelli, Ph.D. Student, Department of Applied Mathematics and Computer Science, Denmark Technical University. Visiting Period: September 2023 – November 2023.
2. Stefania Cacace, Assistant Professor, Department of Mechanical Engineering, Politechnico Milano. Visiting Period: January 2023 – July 2023.
3. Gurkan Aydemir, Ph.D. Student, Department of Electrical Engineering, Bogazici University. Visiting Period: September 2018 – June 2019.
4. Alessia Benevento, Ph.D. Student, Department of Engineering, University of Salento. Visiting Period: January 2019 – September 2019.
5. Chuanjun Zhu, Associate professor, Department of Industries and Manufacturing Engineering, School of Mechanical Engineering, Hubei University of Technology. Visiting Period: Spring 2016 – Spring 2017.
6. He Fei, Research Fellow in National Engineering Research Center of Flat Rolling Equipment, University of Science and Technology Beijing. Visiting Period: Spring 2014 – Spring 2015.

7. Zhidong Li, Ph.D. Student in Distributed Simulation Laboratory at Academy of Opto-Electronics, Chinese Academy of Science. Visiting Period: Fall 2012 – Fall 2013.

C. EDUCATIONAL INNOVATIONS AND OTHER CONTRIBUTIONS

C1. COURSE DEVELOPMENT

1. ISyE 8803 – Topics on High-Dimensional Data Analytics. An online and on-campus course, developed for the Masters of Analytics program (Spring 2019).
2. ISyE 6382 – Quality and Six Sigma. An online course, developed for the Professional Masters in Manufacturing Leadership program (Spring 2017).

C2. COURSE INNOVATION AND IMPROVEMENT

1. ISyE 2028 – Basic Statistical Methods. An innovative pedagogy integrating flipped classroom with team-based learning, problem-based learning, and gamification was developed for teaching this course. It was flipped and taught by Paynabar for the first time in Spring 2017. Some analytical assessment and survey show the effectiveness of the flipped style.
2. ISyE 6810 – Systems Monitoring and Prognostics. A core course for ISyE-SIAC student and part of SIAC comprehensive exam. It was originally developed by N. Gebraeel in 2008 and was revised jointly by N. Gebraeel and K. Paynabar in Spring 2014. Paynabar significantly modified and updated the contents of the first module of the course on process monitoring.

VI. SERVICE

A. PROFESSIONAL CONTRIBUTIONS

A1. EDITORIAL SERVICES

1. Associate Editor for *Technometrics*, 2019 – present.
2. Editorial Board Member for *Journal of Quality Technology*, 2016 – present.
3. Department Editor for *IISE-Transactions, Quality & Reliability Eng.*, 2018 – present.
4. Associate Editor for *INFORMS Journal on Data Science* (2020 - present).
5. Associate Editor for *IEEE Transactions on Automation Science and Engineering*, 2019 – present.
6. Associate Editor for *INFORMS Journal on Computing*, 2019 – 2022.
7. Associate Editor for *IISE-Transactions*, 2017 – 2018.
8. Associate Editor for *Journal of Applied Statistics* 2017 – 2020.

A2. SOCIETY OFFICES, ACTIVITIES, AND MEMBERSHIP

1. Chair of Quality, Reliability and Statistics Section of INFORMS, 2016 – 2019.
2. President of Quality Control and Reliability Engineering of IISE, 2016 – 2019.
3. Council member of Quality, Reliability and Statistics Section of INFORMS, 2016 – 2020.
4. Board Member of Quality Control and Reliability Engineering of IISE 2013 - 2019.

5. Member of Institute for Operations Research and the Management Sciences (INFORMS), IEEE, Institute of Industrial and Systems Engineers (IISE), American Society for Quality (ASQ), and American Statistical Association (ASA).
6. Elected Member of International Statistical Institute (ISI)

A3. ORGANIZATION AND CHAIRMANSHIP OF TECHNICAL SESSIONS, WORKSHOPS AND CONFERENCES

1. Co-chair of IISE Annual Conference, 2021.
2. Co-organizer of QSR Workshop at INFORMS Annual Meeting, 2020.
3. Co-chair of QSR Pre-conference Workshop at INFORMS Annual Meeting, 2019.
4. Co-organizer of Invited Session of QCRE Track at IISE conference, 2019.
5. Chair and organizer of QSR Cluster at INFORMS Annual Meeting, 2017.
6. Co-chair and co-organizer of QCRE Track at IISE conference, 2017.
7. Co-chair and co-organizer of QCRE Track at ISERC conference, 2016.
8. Co-chair and co-organizer of QSR Best Refreed Paper Competition at ISERC conference, 2021 and 2022.
9. Co-chair and co-organizer of QCRE Best Student Paper Competition at ISERC conference, 2015.
10. Chair and organizer of Data Mining Best Student Paper Competition at INFORMS Annual Meeting, 2015.
11. Chair and organizer of QCRE Best Student Paper Competition at ISERC conference, 2014.
12. Invited Session Organization:
    - Co-Chair and Co-organizer (with Ana Maria Estrada Gomez) a session titled "Analysis of Sensor Networks with High-dimensional Data for Data-driven Decision Raking" at QSR Sections of INFORMS Annual Meeting, 2021.
    - Co-Chair and Co-organizer (with Ana Maria Estrada Gomez) a session titled "Modeling, Monitoring and Diagnosis in Sensor Networks with High-Dimensional Data" at QSR Sections of INFORMS Annual Meeting, 2020.
    - Co-Chair and Co-organizer (with Dan Li) a session titled "Statistical Methods for Industrial Control System Cybersecurity" at QSR Sections of INFORMS Annual Meeting, 2020.
    - Co-Chair and Co-organizer (with Mostafa Reisi) a session titled "Learning from Multimodal Data: Promises and Challenges" at QSR Sections of INFORMS Annual Meeting, 2020.
    - Co-Chair and Co-organizer (with Mostafa Reisi) a session titled "High Dimensional Data Analysis and its Applications in Systems Informatics and Control" at QSR Sections of INFORMS Annual Meeting, 2019.
    - Co-Chair and Co-organizer (with Mostafa Reisi) a session titled "High Dimensional Data Analysis and its Applications in Systems Informatics and Control" at QSR Sections of INFORMS Annual Meeting, 2018.

- Co-Chair and Co-organizer (with Hao Yan) a session titled “Image and Functional Data Analysis: Methods and Applications” at QSR Sections of INFORMS Annual Meeting, 2017.
- Co-Chair and Co-organizer (with Hao Yan) a session titled “Image and Functional Data Analysis: Methods and Applications” at Data Mining Sections of INFORMS Annual Meeting, Nov. 2016.
- Co-Chair and Co-organizer (with Chiwoo Park) a session titled “Image and Shape Data Analysis” at Data Mining Sections of INFORMS Annual Meeting, Nov. 2016.
- Chair and organizer a session titled “Data Mining in Medical and Sociological Decision Making” at Data Mining Sections of INFORMS Annual Meeting, Nov. 2016.
- Co-Chair and Co-organizer (with Chitta Ranjan) a session titled “Data Mining in Medical and Sociological Decision Making” at Data Mining Sections of INFORMS Annual Meeting, Nov. 2015.
- Chair and organizer a session titled “Image and Functional Data Analysis: Methods and Applications” at Quality, Statistics and Reliability Section of INFORMS Annual Meeting, Nov. 2015.
- Chair and organizer a session titled “Data Mining in Medical Decision Making and Bioinformatics Applications” at Data Mining and Health Applications Society Sections of INFORMS Annual Meeting, Nov. 2014.
- Chair and organizer a session titled “Image and Functional Data Analysis: Methods and Applications” at Quality, Statistics and Reliability Section of INFORMS Annual Meeting, Nov. 2014.
- Co-Chair and organizer (with Ran Jin) a session titled “Data Fusion in Healthcare Applications” at Quality, Statistics and Reliability Section of INFORMS Annual Meeting, Oct2013.
- Chair and organizer a session titled “Data Mining in Medical Decision Making and Bioinformatics Applications” at Data Mining and Health Applications Society Sections of INFORMS Annual Meeting, Oct. 2013.
- Chair and organizer two sessions titled “Image and Functional Data Analysis: Methods and Applications” at Quality, Statistics and Reliability Section of INFORMS Annual Meeting, Oct. 2013.
- Chair and organizer a session titled “Image and Functional Data Analysis: Methods and Applications” at Quality, Statistics and Reliability Section of INFORMS Annual Meeting, Oct. 2012.
- Chair and organizer a session titled “Data Mining in Medical Decision Making and Bioinformatics Applications” at Data Mining Section of INFORMS Annual Meeting, Oct. 2012.
- Co-Chair and organizer (with Judy Jin) a session titled “Profile Data Analysis: Methods and Applications” at Quality, Statistics and Reliability Section of INFORMS Annual Meeting, Nov. 2011.

A4. TECHNICAL JOURNAL OR CONFERENCE REFEREE ACTIVITIES

1. Refereeing for Journals:

    - Technometrics, IIE Transactions – Quality and Reliability Engineering, Journal of Quality Technology, IIE Transactions – Design and

Manufacturing, Journal of Applied Statistics, IEEE Transactions on Automation Science and Engineering, IEEE Transactions on Human-Machine Systems, Journal of Manufacturing Systems, Production and Operations Management (POM), Quality and Reliability Engineering International, International Journal of Quality in Health Care, Quality Technology and Quantity Management, Naval Research Logistics.

A5. PROPOSAL PANELS AND REVIEWS

1. National Science Foundation (NSF): 1 panel 2014, 1 panel 2017, 1 panel 2020.
2. Army Research Lab (ARL): 1 proposal 2015.

B. PUBLIC AND COMMUNITY SERVICE

1. Mentoring and advising high-school interns, Chamblee Charter High School, 2014-2016.
2. Member of Chamblee Charter High School's Career Tech Advisory Board for the 2016-19 school year.
3. Georgia Iranian Students Organization's Advisory Board, 2014 - 2018.

C. INSTITUTE CONTRIBUTIONS

C1. INSTITUTE COMMITTEE SERVICE

1. GTMI Director Search Committee, Spring 2022.
2. Research Next Phase II Strategic Planning Committee, Spring 2021.
3. CETL/BP Teaching Award Committee in 2015.
4. Resume Speed Dating Mentor for ADVANCE 2019 and 2020.

C2. COLLEGE COMMITTEE SERVICE

1. Research advisor in SURE (Summer Undergraduate Research in Engineering and Science) program in Summers 2013 and 2015.
2. Co-organize workshop on "CAREER Awards & the Education Component" for COE faculty, April 2019.

C3. SCHOOL COMMITTEE SERVICE

1. ISyE Mentorship Committee, Georgia Tech, Fall 2020 – Fall 2022.
2. ISyE Advisory Committee, Georgia Tech, Fall 2019 – Fall 2021.
3. ISyE Graduate Committee, Georgia Tech, Fall 2018 – Fall 2020.
4. ISyE Ph.D. Admission Committee, Georgia Tech, 2017 – 2021.
5. Organizer of ISyE Departmental Seminar Series, Fall and Spring 2016.
6. Faculty chair in SIAC Graduate Students Symposium, Fall 2016.
7. Organizer of System Informatics and Control Seminars, Fall 2012-Present.
8. Comprehensive PhD Exam committee for SIAC Track, 2013 and 2015.

C4. PROGRAM DEVELOPMENT: ACADEMIC

1. Developed ISyE 8803 –Topics on High-Dimensional Data Analytics. An online and on-campus course, developed for the Masters of Analytics program, Spring 2019.
2. Developed ISyE 6382 – Quality and Six Sigma, an online course for the Professional Masters in Manufacturing Leadership, Spring 2017.

C5. OTHER INSTITUTE SERVICE CONTRIBUTIONS

1. Representative of Industrial and Operations Engineering Department and Session Chair for the College of Engineering Graduate Symposium at University of Michigan, 2010.