

CURRICULUM VITAE

Dr. Jing Li

Associate Professor in Industrial Engineering & Computer Engineering
Co-founder and Associate Director of ASU-Mayo Center on Innovative Imaging (AMCII)

School of Computing, Informatics and Decision Systems Engineering
Arizona State University, Tempe, AZ, 85287-5906

Tel: (480)965-0125 (O)

Email: jinglz@asu.edu

URL: <http://www.public.asu.edu/~jli09/>

EDUCATION

- Ph.D.** 2007, Industrial and Operations Engineering, University of Michigan (Advisor: Dr. Jianjun (Jan) Shi)
- M.A.** 2005, Statistics, University of Michigan
- B.S.** 2000, Civil Engineering, Tsinghua University, P. R. China

EMPLOYMENT

- Associate Professor**, Industrial Engineering, Computer Engineering, Arizona State University, 2013~present
- Adjunct Clinical Faculty**, Department of Radiology, Mayo Clinic Arizona
- Assistant Professor**, Computer Engineering, Arizona State University, 2011~2013
- Assistant Professor**, Industrial Engineering, Arizona State University, 2007~2013

HONORS AND AWARDS

- Mayo Clinic-ASU Alliance Fellow, 2017
- Harold Wolff-John Graham Award (Research Award) by the American Academy of Neurology, 2016
- Harold G. Wolff Lecture Award (Best Paper) by the American Headache Society, 2015
- IISE Transactions Best Paper Award, 2014
- Outstanding Junior Faculty Award, School of Computing, Informatics and Decision Systems Engineering, ASU, 2013
- NSF CAREER Award, 2012
- Best Paper Award from Industrial Engineering Research Conference, 2008
- Distinguished Academic Achievement Award, University of Michigan, 2007
- Best Paper Award from Industrial Engineering Research Conference, 2006
- Rackham Predoctoral Fellowship, University of Michigan, 2006~2007
- Barbour Scholarship for Women Students, University of Michigan, 2006~2007

RESEARCH INTEREST

My research is data fusion and statistical machine learning intersecting with systems or domains having complex data characteristics such as high dimensionality, heterogeneity, multi-source, multi-level, and multi-task. My research contributes to the methodological development in the following subfields of machine learning:

- Transfer learning
- Sparse learning
- Graphical models
- Semi-supervised learning
- Model fusion (machine learning and mechanistic models)

Through developing novel methodologies to tackle the data science challenges, my research contributes to the following application domains:

- Health care and personalized/precision medicine: my research aims for modeling and integrating multi-modality imaging, genomics, electronic patient health records, and other health datasets to provide solutions best suiting individual patients for diagnosis, prognosis, telemonitoring, and treatment. I have experience working on the following health domains:
 - Radiomics for precision treatment of brain cancer
 - Alzheimer's Disease early detection
 - Migraine subtyping
 - Prognostics of traumatic brain injury
 - Telemonitoring of Parkinson's Disease using smartphones
 - Radiation toxicity prediction on prostate and lung cancer
- Engineering systems:
 - Process data mining for manufacturing quality improvement (semi-conductor, metal forming, etc)
 - Monitoring and anomaly detection in large communication networks

RESEARCH GRANTS

Total funding of projects I am an ASU PI or co-PI for: \$3.11M

Total funding of projects I am an ASU PI for: \$2.85M

- **Imaging the Migraine Brain Pre-and Post-Erenumab: an MRI Study to Identify Functional and Structural Changes that Correlate with Patient Improvement**
Funding Period: 1/1/2019-12/31/2021
Agency/company: Amgen
Overall PI: Dr. Todd Schwedt at Mayo Clinic Arizona (MCA)
Role: ASU PI
Award Amount: \$1,184,551 (ASU share is \$240,012)
- **Quantifying Multiscale Competitive Landscapes of Clonal Diversity in Glioblastoma (U01)**

Funding Period: 9/1/2017-8/31/2022
Agency/company: NIH-NCI
Overall PIs: Drs. Swanson/Hu/Tran/Mitchell at MCA
Role: ASU PI
Award Amount: \$3,937,178 (ASU share is \$483,382)

- **Genotype-Phenotype Associations in Reading Disorders (F32)**
Funding Period: 9/1/2017-8/31/2020
Agency/company: NIH-NICHHD
Role: Faculty mentor (Postdoc trainee is Dr. Hope Lancaster)
Award Amount: \$186,222
- **Developing Quantitative Models for Linking Radiation Treatment Options with Clinical Outcomes**
Funding Period: 10/1/2015-12/31/2018
Agency/company: MCA
Role: PI
Award Amount: \$140,699
- **Toward New Classification Criteria for Mild and Moderate Traumatic Brain Injury by a Data-Inclusive Cross-Study Analysis using FITBIR (R21)**
Funding Period: 7/1/2015-6/31/2018
Agency/company: NIH-NICHHD
Overall PIs: Dr. Jing Li at ASU and Dr. Todd Schwedt at MCA
Role: Overall PI
Award Amount: \$436,374 (ASU share is \$216,657)
- **Multi-Modality Image Data Fusion and Machine Learning Approaches for Personalized Diagnostics and Prognostics of MCI due to AD (STTR Phase I)**
Funding Period: 9/1/2016-8/31/2018
Agency/company: NIH-NIA
Overall PI: Dr. Fleming Lure at MS Technologies Corp
Role: ASU PI
Award Amount: \$149,936 (ASU share is \$80,001)
- **Sex-Specific Profiles of White Matter Repair following Concussion**
Funding Period: 7/1/2016-6/31/2017
Agency/company: ASU-Mayo Seed Grant Program
Overall PIs: Dr. Jing Li at ASU and Dr. Catherine Chong at MCA
Role: Overall PI
Award Amount: \$50,000 (ASU share is 50%)
- **CAREER: Transfer Learning Based Quality Improvement in Spatially-Temporally Complex Systems**
Funding Period: 9/1/2012-1/31/2018
Agency/company: NSF-CMMI
Role: PI

Award Amount: \$426,824

- **Application of MRI-based Maps of Histologic Invasion and Genetic Heterogeneity to Guide Surgical Biopsy and Resection in Glioblastoma**
Funding Period: 2016-2017
Agency/company: MCA
Role: PI
Award Amount: \$43,169
- **Radiology Efficiency Process Improvement**
Funding Period: 2015-2017
Agency/company: Mayo Clinic
Role: Co-PI (PI is Dr. Teresa Wu at ASU)
Award Amount: \$164,731
- **MRI-based Mapping for Identification of Genomic Diversity in Glioblastoma (R21)**
Funding Period: 2013-2016
Agency/company: NIH-NINDS
Overall PI: Dr. Leland Hu at MCA
Role: ASU co-PI (ASU PI is Dr. Teresa Wu)
Award Amount: \$440,000 (ASU share is \$37,802)
- **CORE-Utilization of Standardized Reports and Novel Quantitative Imaging Tools to Improve Tumor Response Measurement Accuracy, Diagnostic Outcomes and End-User Satisfaction**
Funding Period: 2015-2016
Agency/company: Mayo Kern Center for the Science Healthcare Delivery
Overall PIs: Dr. Alvin Silver at MCA and Dr. Teresa Wu at ASU
Role: ASU co-PI
Award Amount: \$114,000 (ASU share is \$50,000)
- **Magnetic Resonance Imaging Texture Analysis for the Discrimination of Human Papilloma Virus Related Oropharyngeal Cancer**
Funding Period: 2014-2015
Agency/company: ASU-Mayo Seed Grant Program
Overall PIs: Dr. Jing Li at ASU and Dr. Joseph Hoxworth at MCA
Role: Overall PI
Award Amount: \$50,000 (ASU share is 50%)
- **Collaborative Research: Multi-Level Data Fusion for Real-Time Prognostic Health Management of Hierarchical Systems**
Funding Period: 2012-2015
Agency/company: NSF-CMMI
Role: PI
Award Amount: \$194,342
- **A Computational Infrastructure to Support Evidence-based Proton Beam Treatment**

Planning

Funding Period: 2013-2014

Agency/company: ASU Rising Star Grant

Role: PI

Award Amount: \$50,000

- **Sparse Structure Identification from High-Dimensional Epigenomic Data by Novel Statistical Methods (R01)**

Funding Period: 2010-2015

Agency/company: Joint NIH-NIGMS and NSF-DMS Program

Overall PI: Dr. Ji Zhu at U of Michigan

Role: ASU PI

Award Amount: \$1,132,877 (ASU share is \$288,881)

- **Big Data in Large Communication Networks - Mining and Visualization**

Funding Period: 2012-2014

Agency/company: US Army

Role: PI

Award Amount: \$282,598

- **Novel Network Statistics for Modern Social Interaction Modeling and Inference**

Funding Period: 2012-2013

Agency/company: Army Research Office

Role: PI

Award Amount: \$49,736

- **Regression-based Quality Improvement in Complex Systems with Consideration of Data Uncertainty**

Funding Period: 2008-2013

Agency/company: NSF-CMMI

Role: PI

Award Amount: \$190,476

- **Effectiveness of Young Driver Training and Graduated Licensing Laws**

Funding Period: 2008-2011

Agency/company: Arizona Department of Transportation

Role: co-PI (PI is Dr. Rong Pan at ASU)

Award Amount: \$200,000

- **Heterogeneous Data Fusion and Analysis for Alzheimer's Disease Study**

Funding Period: 2008-2009

Agency/company: Arizona Alzheimer's Consortium

Role: co-PI (PI is Dr. Jieping Ye at ASU)

Award Amount: \$10,000

PUBLICATIONS

Journal Papers

(Authors in italic are my students)

1. Yoon, H. & Li, J., "A Novel Positive Transfer Learning Approach for Telemonitoring of Parkinson's Disease." IEEE Transactions on Automation Science and Engineering, in press.
2. Liu, X., Fatyga, M., Wu, T., & Li, J., "Integration of Biological and Statistical Models toward Personalized Radiation Therapy of Cancer." IISE Transactions, in press.
3. Wang, K., & Li, J., "Integration of Sparse Singular Vector Decomposition and Statistical Process Control for Traffic Monitoring and Quality of Service Improvement in Mission-Critical Communication Networks." IISE Transactions, in press.
4. Si, B., Dumkrieger, G., Wu, T., Zafonte, R., Dodick, D. W., Schwedt, T. J., & Li, J. "A Cross-study Analysis for Reproducible Sub-classification of Traumatic Brain Injury." Frontiers in Neurology, in press.
5. Gao, F., Wu, T., Li, J., Zheng, B., Ruan, L., Shang, D., & Patel, B., "SD-CNN: a Shallow-Deep CNN for Improved Breast Cancer Diagnosis." Computerized Medical Imaging and Graphics, in press.
6. Si, B., Dumkrieger, G., Wu, T., Zafonte, R., Valadka, A.B., Okonkwo, D.O., Manley, G.T., Wang, L., Dodick, D.W., Schwedt, T.J. and Li, J., 2018, "Sub-classifying Patients with Mild Traumatic Brain Injury: A Clustering Approach based on Baseline Clinical Characteristics and 90-day and 180-day Outcomes." PloS one, 13(7), p.e0198741.
7. Liu, X., Gough, A., Li, J., 2018, "Semiconductor Corner Lot Generation Robust to Process Variation: Modeling and Analysis". IISE Transactions, 50(2):126-39.
8. Gaw, N., Schwedt, T., Chong, C., Wu, T., Li, J., 2018, "A clinical Decision Support System using Multi-modality Imaging Data for Disease Diagnosis", IISE Transactions on Healthcare Systems Engineering, 8(1):36-46 (*This paper was selected as a Feature Article by IISE Magazine.*).
9. Liu, X., Chen, K., Wu, T., Weidman, D., Lure, F., Li, J., 2018, "Use of Multi-modality Imaging and Artificial Intelligence for Diagnosis and Prognosis of Early Stages of Alzheimer's Disease." Translational Research (impact factor: 4.880), 194: 56-67.
10. Patel, B.K., Ranjbar, S., Wu, T., Pockaj, B.A., Li, J., Zhang, N., Lobbes, M., Zhang, B. and Mitchell, J.R., 2018, "Computer-Aided Diagnosis of Contrast-Enhanced Spectral Mammography: A Feasibility Study." European Journal of Radiology, 98: 207-213.
11. Danala, G., Patel, B.K., Aghaei, F., Heidari, M., Li, J., Wu, T., Zheng, B., 2018, "Classification of Breast Masses Using a Computer-Aided Diagnosis Scheme of Contrast Enhanced Digital Mammograms." Annals of Biomedical Engineering, 1-13.
12. Ramkumar, S., Ranjbar, S., Ning, S., Lal, D.,...,Li, J., Hoxworth, J., 2017, "MRI-Based Texture Analysis to Differentiate Sinonasal Squamous Cell Carcinoma from Inverted Papilloma", American Journal of Neuroradiology (impact factor: 3.888), 38(5):1019-1025.
13. Ranjbar, S., Ning, S., Zwart, C.M., Wood, C.P., Weindling, S.M., Wu, T., Mitchell, J.R., Li, J. and Hoxworth, J.M., 2018. "Computed Tomography-Based Texture Analysis to Determine Human Papillomavirus Status of Oropharyngeal Squamous Cell Carcinoma." Journal of Computer Assisted Tomography, 42(2):299-305.

14. Si, B., Lamb, G., Schmitt, M., & Li, J., 2017, "A Multi-response Multilevel Model with Application in Nurse Care Coordination." IISE Transactions, 49(7): 669-681. (This paper was selected as a Feature Article by IISE Magazine.)
15. Si, B., Yakushev, I., & Li, J., 2017, "A Sequential Tree-based Classifier for Personalized Biomarker Testing of Alzheimer's Disease Risk." IISE Transactions on Healthcare Systems Engineering, 7(4): 248-260. (The student author won the 3rd place for IISE Healthcare Research Student Best Paper Competition.)
16. Ning, S., Byon, E., Wu, T., & Li, J., 2017, "A Sparse Partitioned-Regression Model for Nonlinear System-Environment Interactions." IISE Transactions, 49(8): 814-826.
17. Hu, L.S., Ning, S., Eschbacher, J.M., Baxter, L.C., Gaw, N., ..., & Li, J., 2017, "Radiogenomics to Characterize Regional Genetic Heterogeneity in Glioblastoma." Neuro-Oncology (impact factor: 9.384), 19(1): 128-137.
18. Wang, K., Zwart, C., Wellness, C., Wu, T., Li, J., 2017, "Integration of Multiple Health Information Systems for Quality Improvement of Radiologic Care", IISE Transactions on Healthcare Systems Engineering, 7(3): 169-180. (The student author won the IISE Society for Health Systems Student Paper Competition.)
19. Schwedt, T., Si, B., Li, J., Wu, T., Chong, C., 2017, "Migraine Subclassification via a Data-Driven Automated Approach Using Multimodality Factor Mixture Modeling of Brain Structure Measurements", Headache: The Journal of Head and Face Pain, 57(7): 1051-1064.
20. Zou, N., Li, J., 2017, "Modeling and Change Detection of Dynamic Network Data by a Network State Space Model," IISE Transactions, 49(1): 45-57. (This paper was selected as a Feature Article by IISE Magazine.)
21. Chong, C., Gaw, N., Fu, Y., Li, J., Wu, T., Schwedt, T., 2017, "Migraine Classification Using Magnetic Resonance Imaging Resting-State Functional Connectivity Data", Cephalalgia (impact factor: 6.052). 37(9): 828-844. (This paper received the Harold Wolff-John Graham Award from the American Academy of Neurology.)
22. Liu, X., Li, J., Wu, T., Schild, S. E., Schild, M. H., Wong, W., ... & Fatyga, M, 2017, "Statins and Metformin Use Is Associated with Lower PSA Levels in Prostate Cancer Patients Presenting for Radiation Therapy." Journal of Cancer Therapy, 8(2): 73-85.
23. Liu, X., Li, J., Wu, T., Schild, S. E., Schild, M. H., Wong, W., ... & Fatyga, M., 2016, "Patient Specific Characteristics Are an Important Factor That Determines the Risk of Acute Grade \geq 2 Rectal Toxicity in Patients Treated for Prostate Cancer with IMRT and Daily Image Guidance Based on Implanted Gold Markers." OMICS Journal of Radiology, 5(3): 225.
24. Zou, N., Baydogan, M., Zhu, Y., Wang, W., Zhu, J., Li, J., 2015, "A Transfer Learning Approach for Predictive Modeling of Degenerate Biological Systems," Technometrics, 55(3):362-373.
25. Hu, L. S., Ning, S., Eschbacher, J. M., Gaw, N., Dueck, A. C., Smith, K. A., ... & Li, J., 2015, "Multi-Parametric MRI and Texture Analysis to Visualize Spatial Histologic Heterogeneity and Tumor Extent in Glioblastoma," PloS one, 10(11): e0141506.
26. Titov, N., Diehl-Schmid, J., Shi, K., Perneczky, R., Zou, N., Förster, S., Grimmer, T., Li, J., Drzegza, A., Yakushev, I. "Metabolic Connectivity for Differential Diagnosis of Dementing Disorders." 2015. Journal of Cerebral Blood Flow & Metabolism (impact factor: 4.929). 0271678X15622465.

27. Schwedt, T., Chong, C., Gaw, N., Fu, Y., Wu, T., Li, J., 2015, "Accurate Classification of Chronic Migraine via Brain Magnetic Resonance Imaging", Headache: The Journal of Head and Face Pain, 55(6):762-77. (This paper received the Harold G. Wolff Lecture Award from the American Headache Society.)
28. Huang, S., Li, J., Lamb, G., Schmitt, M., and Fowler, J., 2014, "Multi-data Fusion for Enterprise Quality Improvement by a Multilevel Latent Response Model," IISE Transactions, 46(5), 512-525.
29. Zou, N., Chetelat, G., Baydogan, M., Li, J., Fischer, F., Titov, D., Dukart, J., Fellgiebel, A., Schreckenberger, M., Yakushev, I., 2014, "Metabolic Connectivity as Index of Verbal Working Memory," Journal of Cerebral Blood Flow & Metabolism (impact factor: 4.929), 35:1122-1126.
30. Li, M., Liu, J., Li, J., Kim, B., 2014, "Bayesian Modeling of Multi-state Hierarchical Systems with Multi-level Information Aggregation," Reliability Engineering & System Safety, 124, 158-164.
31. Huang, S., Li, J., Ye, J., Fleisher, A., Chen, K., Wu, T., and Reiman, E., 2013, "A Sparse Structure Learning Algorithm for Bayesian Network Identification from High-Dimensional Data," IEEE Transactions on Pattern Analysis and Machine Intelligence, 35(6), 1328-1342. (The student author of this paper received Best Student Paper Award (2nd place) in Quality Statistics and Reliability Subdivision of INFORMS Annual Conference 2011.)
32. Inman, R.R., Blumenfeld, D.E., Huang, N., Li, J., and Li, J., 2013, "Survey of Recent Advances on the Interface between Production System Design and Quality," IISE Transactions, 45(6), 557-574.
33. Huang, S., Li, J., Chen, K., Wu, T., Ye, J., Wu, X., and Li, Y., 2012, "A Transfer Learning Approach for Network Modeling," IISE Transactions, 44(11), 1-17. (This paper received IISE Transactions Best Paper Award).
34. Lyon, J., Pan, R., and Li, J., 2011, "National Evaluation of the Effect of Graduated Driver Licensing Laws on Teenager Fatality and Injury Crashes," Journal of Safety Research, 43(1), 29-37.
35. Li, J., and Jin, J., 2010, "Optimal Sensor Allocation by Integrating Causal Models and Set-Covering Algorithms," IISE Transactions, 42(8), 564-576. (This paper received Best Paper Award in Industrial Engineering Research Conference 2008.)
36. Li, J., and Huang, S., 2010, "Regression-based Process Monitoring with Consideration of Measurement Errors," IISE Transactions, 42(2), 146-160. (This paper was selected as a Feature Article by IISE Magazine.)
37. Huang, S., Li, J., Sun, Li., Ye, J., Fleisher, A., Wu, T., Chen, K., and Reiman, E., 2010, "Learning Brain Connectivity of Alzheimer's Disease by Sparse Inverse Covariance Estimation," NeuroImage (impact factor: 7.079), 50, 935-949.
38. Huang, S., Pan, R., and Li, J., 2010, "A Graphical Technique and Penalized Likelihood Method for Identifying and Estimating Infant Failures," IEEE Transactions on Reliability, 59(4), 650-660.
39. Li, J., Xie, H., and Jin, J., 2010, "Optimal Process Adjustment by Integrating Production

Data and Design of Experiments," Quality and Reliability Engineering International, 27(3), 327-336.

40. Jin, J. and Li, J., 2009, "Multiscale Mapping of Aggregated Signal Features to Embedded Time-Frequency Localized Operations Using Wavelets," IISE Transactions, 41(7), 615-625 (*This paper was selected as a Feature Article by IISE Magazine.*)
41. Li, J., Jin, J., and Shi, J., 2008, "Causation-based T² Decomposition for Multivariate Process Monitoring and Diagnosis," Journal of Quality Technology, 40(1), 46-58 (*This paper received Best Paper Award in Industrial Engineering Research Conference 2006.*)
42. Li, J., Huang, K.Y., Jin, J., and Shi, J., 2008, "A Survey on Statistical Methods for Health Care Fraud Detection," Health Care Management Science, 11, 275-287.
43. Li, J., Shi, J., and Satz, D., 2008, "Modeling and Analysis of Disease and Risk Factors through Learning Bayesian Network from Observational Data," Quality and Reliability Engineering International, 24, 291-302.
44. Li, J., and Shi, J., 2007, "Knowledge Discovery from Observational Data for Process Control using Causal Bayesian Networks," IISE Transactions, 39 (6), 681 - 690.
45. Li, J., Shi, J., and Chang, T.S., 2007, "On-line Seam Detection in Rolling Processes using Snake Projection and Discrete Wavelet Transform," ASME Transactions, Journal of Manufacturing Science and Engineering, 129(5), 926-933.
46. Lin, G., Li, J., Hu, S. J., and Cai, W., 2007, "A Computational Response Surface Study of 3D Aluminum Hemming using Solid-to-Shell Mapping," ASME Transactions, Journal of Manufacturing Science and Engineering, 129(2), 360-368.
47. Jin, R., Li, J., and Shi, J., 2007, "Quality Prediction and Control in Rolling Processes using Logistic Regression," Transactions of NAMRI/SME, 35, 113-120.
48. Liu, J., Li, J., and Shi, J., 2005, "Integration of Engineering Knowledge Driven Cause-Effect Modeling and Statistical Analysis for Multi-Operational Machining Process Diagnosis," Transactions of NAMRI/SME, 33, 65-72.

Conference Papers (peer-reviewed, acceptance rate < 20%)

1. Huang, S., Li, J., Ye, J., Wu, T., Chen, K., Fleisher, A., Reiman, E., "Identifying Alzheimer's Disease-Related Brain Regions from Multi-Modality Neuroimaging Data using Sparse Composite Linear Discrimination Analysis," The 25th Annual Conference on Neural Information Processing Systems (NIPS 2011) (*paper acceptance rate 4.8%*) December 13-15, 2011, Granada, Spain.
2. Huang, S., Li, J., Ye, J., Fleisher, A., Chen, K., and Wu, T., Reiman, E., "Brain Effective Connectivity modeling for Alzheimer's Disease by Sparse Bayesian Network," The 17th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining (KDD 2011) (*paper acceptance rate 17.5%*), August 21-24, 2011, San Diego, USA.
3. Huang, S., Li, J., Sun, Li., Ye, J., Chen, K., and Wu, T., Fleisher, A., and Reiman, E., "Learning Brain Connectivity of Alzheimer's Disease from Neuroimaging Data," NIPS 2009 (*paper acceptance rate 8%*), December 7-9, 2009, Vancouver, B.C., Canada.
4. Sun, L., Patel, R., Liu, J., Chen, K., Wu, T., Li, J., Reiman, R., and Ye, J., 2009, "Mining Brain Region Connectivity for Alzheimer's Disease Study via Sparse Inverse Covariance

Estimation," KDD 2009 (*paper acceptance rate 9.8%*), June 28-July 1, 2009, Paris, France.

5. Ye, J., Chen, K., Wu, T., Li, J., Zhao, Z., Patel, R., Bai, M., Janardan, R., Liu, H., Alexander, G., and Reiman, E., 2008, "Heterogeneous Data Fusion for Alzheimer's Disease Study," KDD 2008 (*paper acceptance rate 14%*), August 24-27, 2008, Las Vegas, USA.

PATENT

- Co-inventor for provisional patent (M18-276L) "Methods for using Machine Learning and Mechanistic Models for Cell Density Mapping of Glioblastoma with Multiparametric MRI", pending.

TEACHING

- Graduate course "Statistical Learning and Predictive Models," IE, ASU.
- Graduate course "Advanced Quality Control," IE, ASU.
- Graduate course "Regression," IE, ASU.
- Undergraduate course "Quality Control," IE, ASU.
- Undergraduate course "Engineering Statistics with Probability," IE, ASU.
- Undergraduate course "Introduction to Industrial Engineering," IE, ASU.

INVITED TALKS

- "A novel positive transfer learning model for telemonitoring of Parkinson's Disease by remote sensing," Penn State University, 2018
- "Data Fusion and Transfer Learning in Patient Care life Cycle - from diagnosis to care to system-level decision making," University of South California, 2017
- Panel Discussion on Publishing in Quality and Reliability: The Editors' Perspective," INFORMS Annual Conference, Houston, 2017
- "A Multi-response Multilevel Model with Application in Nurse Care Coordination," IISE Transactions invited session, INFORMS Annual Conference, Houston, 2017
- "A Sparse Partitioned-Regression Model for Nonlinear System-Environment Interactions," Center of Quality and Data Science, Chinese Academy of Sciences, Beijing, China, 2017
- Panel Discussion on Publishing in Quality and Reliability: The Editors' Perspective," INFORMS Annual Conference, Nashville, 2016
- "Faulty Equipment Identification in Semiconductor Manufacturing Processes," Center of Quality and Data Science, Chinese Academy of Sciences, Beijing, China, 2016
- "IEEE Intelligent Systems Invited Panel Discussion on Healthcare Intelligence," INFORMS Annual Conference, Philadelphia, 2015
- "Regression-based Process Monitoring with Consideration of Measurement Errors," IISE

Transactions invited session, INFORMS Annual Conference, Philadelphia, 2015

- “Semiconductor Corner Lot Generation Robust to Process Variation - Modeling and Analysis,” Center of Quality and Data Science, Chinese Academy of Sciences, Beijing, China, 2015
- “Transfer Learning in Quality and Reliability Engineering,” Academy of Mathematics & System Sciences, Center of Quality and Data Science, Chinese Academy of Sciences, Beijing, China, 2014
- “Test Data Analytics for Large Communication Network Traffic Modeling and Visualization,” US Army Electronic Proving Ground, 2013
- “Multi-level Information Aggregation for Health Monitoring of Hierarchical Systems,” Center of Quality and Data Science, Chinese Academy of Sciences, Beijing, China, 2012
- “Computational Informatics in Production and Health systems,” University of Wisconsin-Madison, 2012
- “Transfer Learning in Data Fusion with Applications in Health Care,” Beijing University of Science and Technology, 2011
- “Regression-based Process Monitoring with Consideration of Measurement Errors,” IISE Transactions invited session, INFORMS Annual Conference, Austin, 2010
- “Transfer Learning of Exploratory Graphical Models with Application in Alzheimer’s Disease,” University of Wisconsin-Madison, 2009
- “Transfer Learning of Exploratory Graphical Models with Application in Alzheimer’s Disease,” Georgia Tech, 2009
- “Learning Brain Connectivity of Alzheimer’s Disease by Exploratory Graphical Models,” the First International Conference on the Interface between Statistics and Engineering, Beijing, China, 2009.
- “Causation-based Methodologies with Applications in Health Care,” University of Pittsburgh, 2009
- “Multitask Learning of Bayesian Networks with Application in Alzheimer’s Disease Study,” Center of Quality and Data Science, Chinese Academy of Sciences, Beijing, China, 2009.
- “Causation-based T^2 Decomposition for Multivariate Process Monitoring and Diagnosis,” Journal of Quality Technology invited session: Data and Knowledge Engineering for Quality, INFORMS Annual Conference, D.C., 2008
- “Causation-based Quality Control Methodologies and Applications,” Center of Quality and Data Science, Chinese Academy of Sciences, Beijing, China, 2008.

CONFERENCE PRESENTATIONS

- My students regularly presented papers in each INFORMS or/and ISERC Annual Conference since I became an Assistant Professor.
- In addition to the IE society, my students also presented in leading medical conferences:

- Society for Neuro-Oncology Annual Conference
- American Academy of Neurology Annual Meeting
- SPIE Medical Imaging Conference
- Congress of the International Headache Society
- Annual Scientific Meeting of the American Headache Society
- AAPM (American Association of Physicists in Medicine) Annual Conference

ADVISEES

Ph.D. students (graduated)

- Shuai Huang (Assistant Professor, Department of Industrial & Systems Engineering, University of Washington).
- Na Zou (Assistant Instructional Professor, Department of Industrial & Systems Engineering, Texas A&M).
- Bing Si (Assistant Professor, Department of Systems Science & Industrial Engineering, Binghamton University - State University of New York).
- Shuluo Ning (Data Scientist, Amazon).
- Kun Wang (Data Scientist, Tencent).
- Hyunsoo Yoon (Postdoc, ASU-Mayo Center for Innovative Imaging).

Ph.D. students (ongoing)

- Xiaonan Liu (expected to graduate in April 2019)
- Nathan Gaw (expected to graduate in April 2020)
- Lujia Wang (expected to graduate in April 2021)
- Zhiyang Zheng (expected to graduate in April 2022)

Thesis M.S. students (graduated)

- Junghae Kim
- Andrew Gough
- Burhan Şentürk
- Rashik Kotwal

Postdoc

- Mustafa Baydogan (2012-2013; current position: Assistant Professor, Department of Industrial Engineering, Bogazici University, Turkey)
- Hope Lancaster (2017-2020)
- Hyunsoo Yoon (2019-2021)

PROFESSIONAL SERVICE

Editorial Activities

- Editor-in-Chief, *Quality Technology & Quantitative Management*, 2016-present
- Editorial Board, *Journal of Quality Technology*, 2014-present
- Associate Editor, *IIE Transactions on Healthcare Systems Engineering*, 2014-present
- Associate Editor, *Quality Technology & Quantitative Management*, 2013-2015
- Guest Editor, *IIE Transactions Special Issue on Integration of Manufacturing System Design and Quality Management*, 2012
- Guest Editor, *Journal of Quality and Reliability Engineering International Special Issue on Data Mining*, 2013
- Guest Editor, *Journal of Quality and Reliability Engineering International Special Issue on INFORMS 2009 Annual Conference*, 2010

Society Activities

- Panelist for NSF (CMMI, QuBBD, NIGMS) and NIH panels (related to cancer and Alzheimer's disease)
- Invited Judge for *IIE Transactions Best Paper Award for Focus Issue Quality and Reliability Engineering* (multiple years)
- Invited Judge for *INFORMS/QSR Referred Research Best Paper Award*, for *INFORMS/QSR Best Student Paper Award*, *INFORMS/DM Best Student Paper Award*, *ISERC/QCRE Best Student Paper Award* (multiple years)
- Chair, *INFORMS Subdivision on Data Mining*, 2011-2012
- Chair-elect, *INFORMS Subdivision on Data Mining*, 2010-2011
- Elected Council Member, *INFORMS Section on Data Mining*, 2009-2010

Conference Organizing Activities

- Practice & Analytics Chair, *INFORMS Annual Conference 2018*.
- Program Committee, the 33rd *Quality and Productivity Research Conference*, Tempe, AZ, 2016
- Program Chair, the 2nd *International Symposium on System Informatics and Engineering*; theme: Big Data, Data Mining, Data Quality (consisting of 18 technical sessions and panels), Xi'an, China, 2013
- Organizer and Chair, *Data Mining Cluster/Track* (consisting of 23 technical sessions and panels), *INFORMS Annual Conference*, Charlotte, 2011
- Organizer and Chair, panel discussion on "Funding Opportunities from NSF, NIH, and DOD," *INFORMS Annual Conference*, Charlotte, 2011
- Organizer and Chair, panel discussion on "Research on the Interface between Statistics and OR," *INFORMS Annual Conference*, Austin, 2010

- Organizing Committee, INFORMS Regional Conference, Tempe, AZ, 2009
- Organizer and Chair, panel discussion on “Health Care in System Engineering: Past, Present, and Future Directions,” INFORMS Annual Conference, San Diego, 2009
- Organizer and Chair (also led paper review committee), the 3rd pre-INFORMS Workshop on Data Mining and Health Informatics, D.C., 2008

University-wide Service

- Graduate Program Committee, IE, ASU, 2018-present
- SCIDSE Personnel Committee, ASU, 2016-2018
- Faculty Search Committee Chair, SCIDSE, ASU, 2017
- SCIDSE Director Search Committee, ASU, 2016
- Faculty Advisor, IISE Student Chapter, ASU, 2010-2013
 - ASU IISE Student Chapter won the 2011 Gold Award
 - Three students nominated in 2012 all won IISE scholarships and fellowships
- Graduate Program Committee, IE, ASU, 2012-2013
- Faculty Search Committee, IE, ASU, 2011, 2013, 2015
- Faculty Honors Advisor, Barrett Honors College, ASU, 2009-2013
- Undergraduate Affairs Committee, IE, ASU, 2007~2012

Professional Affiliations

- Member of Institute of Industrial Engineers (IISE)
- Member of Institute for Operation Research and the Management Sciences (INFORMS)
- Member of Institute of Electrical and Electronics Engineers (IEEE)