JOURNAL PUBLICATIONS (# OF CITATIONS 3560 AS OF 5/25/2023)

†: graduate student under my supervision

96: †Luning Bi, Owen Wally, Guiping Hu, Albert Tenuta,Yuba Kandel, and Daren S Mueller, "A Transformer-Based Approach for Early Prediction of Soybean Yield Using Time-Series Images", Frontiers in Plant Science, in press.

95: †Mohammad Fili, Guiping Hu, Changze Han, Alexa Kort, John Trettin, and Hillel Haim, "A Classification Algorithm Based on Dynamic Ensemble Selection to Predict Mutational Patterns of the Env Protein in HIV-infected Patients", Algorithms for Molecular Biology, in press.

94: Gorkem Emirhuseyinoglu, †Mohsen Shahhosseini, Guiping Hu, and Sarah Ryan, "Validation of scenario generation for decision-making using machine learning prediction models: A case study for crop yield," Optimization Letters, in press.

93: Zheng Ni, †Saba Moeinizade, Aaron Kusmec, Guiping Hu, Lizhi Wang, and Patrick Schnable, "New insights into trait introgression with the look-ahead intercrossing strategy," G3: Genes Genomes Genetics, in press.

92: †Saiara Samira Sajid, Mohsen Shahhosseini, Isaiah Huber, Guiping Hu, and Sotirios Archontoulis, "County-Scale Crop Yield Prediction by Integrating Crop Simulation with Machine Learning Models," Frontiers in Plant Science, in press.

91: †Parvin Mohammadiarvejeh, Brandon S. Klinedinst, Qian Wang; Tianqi Li, Brittany Larsen, Amy Pollpeter, Shannin N. Moody, Sara A. Willette, Jon P. Mochel, Karin Allenspach, Guiping Hu, Auriel A. Willette, "Bioenergetic and vascular predictors of potential super-ager and cognitive decline trajectories – A UK Biobank Random Forest classification study ", *GeroScience*, in press, (2022).

90: Conard Lee, †Fatemeh Amini, Guiping Hu, and Larry Halverson, "Machine learning prediction of nitrification from ammonia-and nitrite-oxidizer community structure," Frontiers in Microbiology, in press, (2022).

89: †Luning Bi, †Mohammad Fili, and Guipng Hu, "COVID-19 forecasting and intervention plan using gated recurrent unit and evolutionary algorithm," Neural Computing and Applications, 1-19 (2022). DOI: 10.1007/s00521-022-07394-z.

88: †Saba Moeinizade, Lizhi Wang, and Guiping Hu, "A reinforcement learning approach to resource allocation in genomic selection," Intelligent Systems with Applications, Vol. 14, 200076 (2022). DOI: 10.1016/j.iswa.2022.200076.

87: †Fatemeh Amini, Guiping Hu, Lizhi Wang, and Ruoyu Wu, "The L-shaped selection algorithm for multi-trait genomic selection," Genetics (2022). DOI: 10.1093/genetics/iyac069.

86: Carolyn J. Lawrence-Dill, Robyn L. Allscheid, Albert Boaitey, Todd Bauman, Edward S. Buckler IV, Jennifer L. Clarke, Christopher Cullis, Jack Dekkers, Cassandra J. Dorius, Shawn F. Dorius, David Ertl, Matthew Homann, Guiping Hu, Mary Losch, Eric Lyons, Brenda Murdoch,

Zahra-Katy Navabi, Somashekhar Punnuri, Fahad Rafiq, James M. Reecy, Patrick S. Schnable, Nicole M. Scott, Moira Sheehan, Xavier Sirault, Margaret Staton, Christopher K. Tuggle, Alison Van Eenennaam, Rachael Voas "Ten simple rules to ruin a collaborative environment," PLOS Computational Biology, Vol. 18(4), e1009957 (2022). DOI: 10.1371/journal.pcbi.1009957.

85: †Carl Kirpes, Guiping Hu, and Dave Sly, "The 3D product model research evolution and future trends: A systematic literature review," Applied System Innovation, Vol. 5(2), 29 (2022). DOI: 10.3390/asi5020029.

84: †Saiara Samira Sajid and Guiping Hu, "Optimizing crop planting schedule considering planting window and storage capacity," Frontiers in Plant Science, Vol. 13, (2022). DOI: 10.3389/fpls.2022.762446.

83: †Mohsen Shahhosseini, Guiping Hu, and Hieu Pham, "Optimizing ensemble weights and hyperparameters of machine learning models for regression problems," Machine Learning with Applications, Vol. 7, 100251 (2022). DOI: 10.1016/j.mlwa.2022.100251.

82: Hanora Van Ert, Dana Bohan, Kai Rogers, †Mohammad Fili, Anthony Rojas Chavez, Enya Qing, Changze Han, Spencer Dempewolf, Guiping Hu, Nathan Schwery, Kristina Sevcik, Natalie Ruggio, Devlin Boyt, Michael Pentella, Tom Gallagher, J Jackson, Anna Merrill, C Knduson, Grant Brown, Wendy Maury, and Hillel Haim, "Limited variation between SARS-CoV-2-infected individuals in domain specificity and relative potency of the antibody response against the spike glycoprotein," Microbiology Spectrum, Vol. 10(1), 02676-21 (2022). DOI: 10.1128/spectrum.02676-21.

81: †Mohammad Rahdar, Lizhi Wang, Jing Dong, and Guiping Hu, "Resilient transportation network design under uncertain link capacity using a tri-level optimization model," Journal of Advanced Transportation, (2022). DOI: 10.1155/2022/5023518.

80: †Saba Moeinizade, Ye Han, Hieu Pham, Austin Dobbels, and Guiping Hu, "An applied deep learning approach for estimating soybean relative maturity from UAV imagery to aid plant breeding decisions," Machine Learning with Applications, Vol. 7, 100233 (2022). DOI: 10.1016/j.mlwa.2021.100233.

79: †Vahid Azizi and Guiping Hu, "A multi-stage stochastic programming model for the multi-echelon multi-period reverse logistics problem," Sustainability, Vol. 13(24), 13596 (2021). DOI: 10.3390/su132413596.

78: †Carl Kirpes, Dave Sly, and Guiping Hu, "Quantitative model for the value of the 3D product model use in production processes", Applied System Innovation, Vol. 4(4), 902021 (2021). DOI: 10.3390/asi4040090.

77: Komey Baghizadeh, Julia Pahl, and Guiping Hu, "Closed-loop supply chain design with sustainability aspects and network resilience under uncertainty: Modelling and Application," Mathematical Problems in Engineering (2021). DOI: 10.1155/2021/9951220.

76: †Mohsen Shahhosseini, Guiping Hu, and Sotirios Archontoulis, “Corn yield prediction with ensemble CNN-DNN,” Frontiers in Plant Science, Vol. 12 (2021). DOI: 10.3389/fpls.2021.709008.

75: †Carl Kirpes, Dave Sly, and Guiping Hu, “Value of 3D product model use in assembly processes: process planning, design, and shop floor execution”, Applied System Innovation, Vol. 4(2), 39 (2021). DOI: 10.3390/asi4020039.

74: †Luning Bi and Guipng Hu, “A genetic algorithm assisted deep learning approach for crop yield prediction,” Soft Computing, Vol. 25(16), 10617-10628 (2021). DOI: 10.1007/s00500-021-05995-9.

73: Aaron Kusmec, Zihao Zheng, Sotirios Archontoulis, Baskar Ganapathysubramanian, Guiping Hu, Lizhi Wang, Jianming Yu, and Patrick S. Schnable “Interdisciplinary strategies to enable data-driven plant breeding in a changing climate,” One Earth, Vol. 4(3), 372-383 (2021). DOI: 10.1016/j.oneear.2021.02.005

72: †Zhengyang Hu, Viren Parwani, and Guiping Hu, “Closed-loop supply chain network design under uncertainties,” Logistics, Vol. 5(1), 15, (2021). DOI: 10.3390/logistics5010015.

71: †Fatemeh Amini, Felipe Restrepo, Guiping Hu, and Lizhi Wang, "The Look Ahead trace back optimizer for genomic selection under transparent and opaque simulators," Scientific Reports, Vol. 11, 1-13 (2021). DOI: 10.1038/s41598-021-83567-5.

70: †Saba Moeinizade, Ye Han, Hieu Pham, Guiping Hu, and Lizhi Wang, “A Look-ahead Monte Carlo simulation method for improving parental selection in trait introgression,” Scientific Reports, Vol. 11(1), 1-12 (2021). DOI: 10.1038/s41598-021-83634-x.

69: Viren Parwani and Guiping Hu, “Improving manufacturing supply chain by integrating smed and production scheduling,” Logistics, Vol. 5 (1), 4, (2021). DOI: 10.3390/logistics5010004.

68: †Mohsen Shahhosseini, Guiping Hu, Ishiah Huber, and Sotirios Archontoulis, “Coupling machine learning and crop modeling improves crop yield prediction in the US Corn Belt,” Scientific Reports, Vol. 11, 1606 (2021). DOI: 10.1038/s41598-020-80820-1.

67: †Fatemeh Amini and Guiping Hu, “A hybrid two-layer feature selection method using genetic algorithm and elastic net,” Expert Systems with Applications, Vol. 166, (2021). DOI: 10.1016/j.eswa.2020.114072.

66: †Shiyang Huang and Guiping Hu, “Job shop scheduling with AGVs under variable processing time,” International Journal of Production and Scheduling, Vol. 3(2), 114-139 (2021). DOI: 10.1504/IJPS.2021.115617.

65: Preetam Kulkarni, †Vahid Azizi, Guiping Hu, and Lizhi Wang, “Analysis of decision making and information sharing strategies in a two-echelon supply chain,” International Journal of Supply Chain and Inventory Management, Vol. 4(1), 81-106 (2021). DOI: 10.1504/IJSCIM.2021.114750.

64: †Luning Bi, Guiping Hu, Muhammad Mohsin Raza, Yuba Kandel, Leonor Leandro, and Daren Mueller, "A Gated Recurrent Units (GRU)-based model for early detection of soybean sudden death syndrome through time-series satellite imagery," Remote Sensing, Vol. 12 (21), (2020). DOI: 10.3390/rs12213621.

63: Sidharth Sankhye and Guiping Hu, "Machine learning methods for quality prediction in manufacturing inspection," Logistics, Vol. 4(4), 35 (2020). DOI: 10.3390/logistics4040035.

62: †Luning Bi and Guiping Hu, "Improving image-based plant disease classification with generative adversarial network under limited training set," Frontiers in Plant Science, Vol. 11, 583438 (2020). DOI: 10.3389/fpls.2020.583438.

61: †Mohsen Shahhosseini, Guiping Hu, and Sotirios Archontoulis, "Forecasting corn yield with machine learning ensembles," Frontiers in Plant Science, Vol. 11, 11-20, (2020). DOI: 10.3389/fpls.2020.01120.

60: †Saba Moeinizade, Aaron Kusmec, Guiping Hu, Lizhi Wang, and Patrick Schnable, "Multi-trait genomic selection methods for crop improvement," Genetics, Vol. 215 (4), 931-945 (2020). DOI: 10.1534/g3.118.200842.

59: †Mohsen Shahhosseini and Guiping Hu, "Machine learning models for corn yield prediction: A survey of literature," International Journal of Environmental Sciences & Natural Resources, Vol. 25(3), 80-83 (2020). DOI: 10.19080/IJESNR.2020.25.556161.

58: †Qi Li and Guiping Hu, "Multistage stochastic programming modeling for farmland irrigation management under uncertainty," PLOS ONE, Vol. 15(6), e0233723 (2020). DOI: 10.1371/journal.pone.0233723.

57: †Vahid Azizi and Guiping Hu, "A two-stage stochastic programming model for multi-period reverse logistics network design with lot-sizing," Computers & Industrial Engineering, Vol. 143, 106397 (2020). DOI: 10.1016/j.cie.2020.106397.

56: †Vahid Azizi and Guiping Hu, "Multi-product pickup and delivery supply chain design with location-routing and direct shipment," International Journal of Production Economics, Vol. 226, 107648 (2020). DOI: 10.1016/j.ijpe.2020.107648.

55: †Zhengyang Hu, Goutham Ramraj, and Guiping Hu, "Production planning with a two-stage stochastic programming model in a kitting facility under demand and yield uncertainties," International Journal of Management Science and Engineering Management, Vol. 15(3), 237-246, (2020). DOI: 10.1080/17509653.2019.1710301.

54: †Zhengyang Hu and Guiping Hu, "Hybrid stochastic and robust optimization model for lot-sizing and scheduling problem under uncertainty," European Journal of Operational Research, Vol. 284, 485-497 (2020). DOI: 10.1016/j.ejor.2019.12.030.

53: †Saba Moeinizade, Megan Wellner, Guiping Hu, and Lizhi Wang, "Complementarity-based selection strategy for genomic selection," Crop Science, Vol. 60, 149-156 (2020). DOI: 10.1002/csc2.20070.

52: †Mohsen Shahhosseini, Rafael Martinez-Feria, Guiping Hu, and Sotirios Archontoulis, "Maize yield and nitrate loss prediction with machine learning algorithms," Environmental Research Letters, Vol. 14(12), 124026 (2019). DOI: 10.1088/1748-9326/ab5268.

51: †Vahid Azizi and Guiping Hu, "A branch and bound algorithm to solve a two-machine no-wait flowshop scheduling problem with truncated learning function," International Journal of Management Science and Engineering Management, Vol. 15(2), 89-95 (2019). DOI: 10.1080/17509653.2019.1633965.

50: †Saba Moeinizade, Guiping Hu, Lizhi Wang, and Patrick Schnable, "Optimizing selection and mating in genomic selection with a look-ahead approach: an operations research framework," G3: Genes|Genomes|Genetics, Vol. 9, 2123-2133 (2019). DOI: 10.1534/g3.118.200842.

49: †Zhengyang Hu, Ronald Askin, and Guiping Hu, "Hub relay network design for daily driver routes," International Journal of Production Research, Vol. 57, 6130-6145 (2019). DOI: 10.1080/00207543.2019.1571253.

48: †Shiyang Huang and Guiping Hu, "Automated guided vehicle dispatching based on combinatorial optimization to minimize job waiting time on shop floors," International Journal of Planning and Scheduling, Vol. 3, 28 – 46 (2019). DOI: 10.1504/IJPS.2019.103016.

47: Xiaoya Han, Yugang Yu, and Guiping Hu, "A dynamic newsvendor problem with goodwill-dependent demands and minimum commitment," Omega, Vol. 89, 242-256 (2019). DOI: 10.1016/j.omega.2018.10.012.

46: Goutham Ramraj, †Zhengyang Hu, and Guiping Hu, "A two-stage stochastic programming model for production lot-sizing and scheduling under demand and raw material quality uncertainties," International Journal of Planning and Scheduling, Vol. 3, 1 – 27 (2019). DOI: 10.1504/IJPS.2019.102993.

45: Katrina Christiansen, David Raj Raman, Guiping Hu, and Robert Anex, "First-order estimates of the costs, input-output energy analysis, and energy returns on investment of conventional and emerging biorenewable feedstocks," Biofuel Research Journal, Vol. 20, 894-899 (2018). DOI: 10.18331/BRJ2018.5.4.4.

44: †Zhengyang Hu and Guiping Hu, "A multi-stage stochastic programming for lot-sizing and scheduling under demand uncertainty," Computers & Industrial Engineering, Vol. 119, 157-166 (2018). DOI: 10.1016/j.cie.2018.03.033.

43: †Mohammad Rahdar, Lizhi Wang, and Guiping Hu, "A tri-level optimization model for inventory control with uncertain demand and lead time," International Journal of Production Economics, Vol. 195(C), 96-105 (2018). DOI: 10.1016/j.ijpe.2017.10.011.

42: †Shiyang Huang and Guiping Hu, "Biomass supply contract pricing and environmental policy analysis: an agent-based simulation approach," Energy, Vol. 145, 557-566 (2018). DOI: 10.1016/j.energy.2018.01.015.

41: †Yihua Li and Guiping Hu, "Shop floor lot-sizing and scheduling with a two-stage stochastic programming model considering uncertain demand and workforce efficiency," Computers & Industrial Engineering, Vol. 111, 263-271 (2017). DOI: 10.1016/j.cie.2017.07.014.

40: Matt Goiffon, Aaron Kusmec, Lizhi Wang, Guiping Hu, and Patrick Schnable, "Improving response in genomic selection with optimal population value selection: a population-based selection strategy," Genetics, Vol. 206, 1675-1682 (2017). DOI: 10.1534/genetics.116.197103.

39: †Qi Li, Guiping Hu, Talukder Zaki Jubery, and Baskar Ganapathysubramanian, "A farm-level precision land management framework based on integer programming," PLOS ONE, Vol. 12(3): e0174680 (2017). DOI: 10.1371/journal.pone.0174680.

38: †Shiyang Huang Guiping Hu, Carrie Chennault, Liu Su, Elke Brandes, Emily Heaton, Lisa Schulte, Lizhi Wang, and John Tyndall, "An agent-based simulation model of farmer decision making on bioenergy crop adoption," Energy, Vol. 115, 1188-1201 (2016). DOI: 10.1016/j.energy.2016.09.084.

37: Yugang Yu, Xiaoya Han, and Guiping Hu, "Optimal production for manufacturers considering consumer environmental awareness and green subsidies," International Journal of Production Economics, Vol.182, 397-408 (2016). DOI: 10.1016/j.ijpe.2016.09.014.

36: †Zhengyang Hu and Guiping Hu, "A two-stage stochastic programming model for lot-sizing and scheduling under uncertainty," International Journal of Production Economics, Vol. 180, 198-207 (2016). DOI: 10.1016/j.ijpe.2016.07.027.

35: †Qi Li and Guiping Hu, "Techno-economic analysis of biofuel production considering logistic configurations," Bioresource Technology, Vol. 206, 195-203 (2016). DOI: 10.1016/j.biortech.2016.01.101.

34: Yong Ye, Nan Liu, Guiping Hu, and Sha-lei Zhan, "Follow-up sharing character-based optimal scheduling of resource distribution for post-event response in large-scale disasters," Journal of System Science and System Engineering, Vol. 25, 77-101 (2016).

33: †Leilei Zhang, Guiping Hu, Lizhi Wang, and Yihsu Chen, "A bottom-up biofuel market equilibrium model for policy analysis," Annals of Operations Research, 236, 75–101 (2016). DOI: 10.1007/s10479-013-1497-y.

32: †Mostafa Fawzy, Paul Componation, and Guiping Hu, “Stakeholders' requirements assessment for biofuel production,” International Journal of Science and Research, Vol. 4, 2 (2015).

31: †Yihua Li, Guiping Hu, and Mark Wright, “An optimization model for sequential fast pyrolysis facility location-allocation under RFS2,” Energy, Vol. 93, 1165-1172 (2015). DOI: 10.1016/j.energy.2015.09.090.

30: †Yihua Li, Chung-Li Tseng, and Guiping Hu, “Is now a good time for Iowa to invest in cellulosic biofuels? A real options approach considering construction lead times,” International Journal of Production Economics, Vol. 167, 97-107 (2015). DOI: 10.1016/j.ijpe.2015.05.019.

29: †Qi Li, †Yanan Zhang, and Guiping Hu, “Techno-economic analysis of advanced biofuel production based on bio-oil gasification,” Bioresource Technology, Vol. 191, 88-96 (2015). DOI: 10.1016/j.biortech.2015.05.002.

28: †Narges Kazemzadeh and Guiping Hu, “Evaluation of the impacts of governmental policies on the biofuels supply chain design under uncertainty,” International Journal of Sustainable Economy, Vol. 7, 203-219 (2015). DOI: 10.1504/IJSE.2015.071136.

27: †Qi Li and Guiping Hu, “Supply chain design under uncertainty for advanced biofuel production based on bio-oil gasification,” Energy, Vol. 74, 576-584 (2014). DOI: 10.1016/j.energy.2014.07.023.

26: †Yanan Zhang, Guiping Hu, and Robert Brown, “Life cycle assessment of commodity chemicals production from forest residue via fast pyrolysis,” The International Journal of Life Cycle Assessment, Vol. 19, 1371-1381 (2014). DOI: 10.1007/s11367-014-0745-y.

25: Rajeeva Tilakaratne, Tristan Brown, †Yihua Li, Guiping Hu, and Robert Brown, “Mild catalytic pyrolysis of biomass for production of transportation fuels: a techno-economic analysis,” Green Chemistry, Vol. 16, 627-636 (2014). DOI: 10.1039/C3GC41314D.

24: †Yanan Zhang, Guiping Hu, and Robert Brown, “Integrated supply chain design for commodity chemicals production via woody biomass fast pyrolysis and upgrading,” Bioresource Technology, Vol. 157, 28-36 (2014). DOI: 10.1016/j.biortech.2014.01.049.

23: Longwen Ou, Tristan Brown, Rajeeva Thilakaratne, Guiping Hu, and Robert Brown, “Techno-economic analysis of co-located corn grain and corn stover ethanol plants,” Biofuels, Bioproducts and Biorefining, Vol. 8(3), 412-422 (2014). DOI: 10.1002/bbb.1475.

22: Guiping Hu, Lizhi Wang, Yihsu Chen, and Bopaya Bidanda, "An oligopoly model to analyze the market and social welfare for green manufacturing industry," Journal of Cleaner Production, Vol. 85, 94-103 (2014). DOI: 10.1016/j.jclepro.2014.01.016.

21: †Mohammad Rahdar, Lizhi Wang, and Guiping Hu, "Potential competition for biomass between biopower and biofuel under RPS and RFS2," Applied Energy, Vol. 119, 10-20 (2014). DOI: 10.1016/j.apenergy.2014.01.002.

20: †Yihua Li, Tristan Brown, and Guiping Hu, "An optimization model for a thermochemical biofuels supply chain network design," Journal of Energy Engineering, Vol. 140(4), (2014). DOI: 10.1061/(ASCE)EY.1943-7897.0000158.

19: †Narges Kazemzadeh and Guiping Hu, "Optimization models for biorefinery supply chain network design under uncertainty," Journal of Renewable and Sustainable Energy, Vol. 5(5), 053125 (2013). DOI: 10.1063/1.4822255

18: †Leilei Zhang and Guiping Hu, "Supply chain design and operational planning models for biomass to drop-in fuel production," Biomass and Bioenergy, Vol. 58, 238-250 (2013). DOI: 10.1016/j.biombioe.2013.08.016.

17: †Yanan Zhang, Guiping Hu, and Robert Brown, "Life cycle assessment for hydrogen and transportation fuels production from corn stover via fast pyrolysis," Environmental Research Letters, Vol. 8(2), 025001 (2013). DOI: 10.1088/1748-9326/8/2/025001.

16: Tristan Brown, Rajeeva Tilakaratne, Robert Brown, and Guiping Hu, "Regional differences in the economic feasibility of advanced biorefineries: fast pyrolysis and hydroprocessing," Energy Policy, Vol. 57, 234-243 (2013). DOI: 10.1016/j.enpol.2013.01.058.

15: †Yanan Zhang, Tristan Brown, Guiping Hu, and Robert Brown, "Comparative techno-economic analysis of biohydrogen production via bio-oil gasification and bio-oil reforming," Biomass and Bioenergy, Vol. 51, 99-108 (2013). DOI: 10.1016/j.biombioe.2013.01.013.

14: †Yanan Zhang, Tristan Brown, Guiping Hu, and Robert Brown, "Techno-economic analysis of fast pyrolysis and upgrading facilities employing two depolymerization pathways," Chemical Engineering Journal, Vol. 225, 895-904 (2013). DOI: 10.1016/j.cej.2013.01.030.

13: †Minwen Yang and Guiping Hu, "Market competition and social welfare analysis for E10 and E85 with a game theory model," International Journal of Sustainable Economy, Vol. 5, 385-403 (2013). DOI: 10.1504/IJSE.2013.056791.

12: Tristan Brown, Rajeeva Tilakaratne, Robert Brown, Guiping Hu, “Techno-economic analysis of biomass to transportation fuels and electricity via fast pyrolysis and hydroprocessing,” Fuel, Vol. 106, 463-469 (2013). DOI: 10.1016/j.fuel.2012.11.029.

11: †Yanan Zhang, Tristan Brown, Guiping Hu, and Robert Brown, “Techno-economic analysis of mono-saccharide production via biomass fast pyrolysis,” Bioresource Technology, Vol. 127, 358-365 (2013). DOI: 10.1016/j.biortech.2012.09.070.

10: Martin Gaussin, Guiping Hu, Sepideh Abolghasem, Saurabh Basu, Ravi Shankar, and Bopaya Bidanda, “Assessing the environmental footprint of manufactured products: a survey of current literature,” International Journal of Production Economics, Vol 146, 515-523 (2013). DOI: 10.1016/j.ijpe.2011.12.002.

9: Guiping Hu, “Market and social welfare analysis for hybrid sustainable manufacturing industry,” International Journal of Sustainable Manufacturing, Vol. 2, 338 – 355 (2012). DOI: 10.1504/IJSM.2012.048588.

8: Tristan Brown, †Yanan Zhang, Guiping Hu, and Robert Brown, “Techno-economic analysis of integrated catalytic processing,” Biofuels, Bioproducts and Biorefining, Vol. 6, 73-87 (2012). DOI: 10.1002/bbb.344.

7: Tristan Brown, and Guiping Hu, “Sensitivity analysis of government incentive programs for drop-in biofuel production via fast pyrolysis,” Journal of Energy Engineering, Vol. 137, 54-62 (2012). DOI: 10.1061/(ASCE)EY.1943-7897.0000061.

6: Guiping Hu, Lizhi Wang, Susan Arendt, and Randy Boeckenstedt, “Assess the self-sustainability potential of food demand in the Midwestern united states with a linear programming model,” Journal of Agriculture, Food Systems, and Community Development, Vol. 2, 1-13 (2011). DOI: 10.5304/jafscd.2011.021.004.

5: Guiping Hu, Lizhi Wang, Susan Arendt, and Randy Boeckenstedt, “Analyze sustainable, localized food production system with a systematic optimization model,” Journal of Hunger and Environmental Nutrition, Vol. 6, 220-232 (2011). DOI: 10.1080/19320248.2011.576217.

4: Guiping Hu, Lizhi Wang, and Bopaya Bidanda, “A game theory model to analyze market competition in sustainable production industry,” International Journal of Sustainable Manufacturing, Vol. 2, 161-179 (2011). DOI: 10.1504/IJSM.2011.042150.

3: Guiping Hu, Lizhi Wang, and Bopaya Bidanda, “A market analysis on green production lines penetrating into original equipment manufacturers,” International Journal on Sciences of Industrial and Systems Engineering and Management, Vol. 3, 28-48 (2009).

2: Guiping Hu, and Bopaya Bidanda, "Modeling sustainable product lifecycle decision support systems," International Journal of Production Economics, Vol. 122, 366-375 (2009). DOI: 10.1016/j.ijpe.2009.06.011.

1: Guiping Hu, Lizhi Wang, Bopaya Bidanda and Steve Fetch, "A multi-objective approach to project selection with Six Sigma criteria," International Journal of Production Research, Vol. 46, 6611-6625 (2008). DOI: 10.1080/00207540802230363.

PEER-REVIEWED CONFERENCE PROCEEDINGS

49. †Mohammad Fili, †Luning Bi, Kris De Brabanter, and Guiping Hu, "Predicting Covid-19 new cases considering mitigation policies and weather data", INFORMS Conference on Service Science, 2022. Acceptance Rate: 85%.

48. †Parvin Mohammadiarvejeh, Teresa Middleton, Marshall McDaniel, and Guiping Hu, "A random forest algorithm to understand the regulating factors for tea leave decomposition in agroecosystems," Annual System of Systems Engineering Conference, 2022. Acceptance Rate: 64%.

47. †Saiara Samira Sajid, Isaiah Huber, Sotirios Archontoulis, and Guiping Hu, "Integrating crop simulation and machine learning models to improve crop yield prediction," Annual System of Systems Engineering Conference, 2022. Acceptance Rate: 64%.

46. †Fatemeh Amini, Lizhi Wang, and Guiping Hu, "Application of the two-layer wrapper-embedded feature selection method to improve genomic selection," Annual System of Systems Engineering Conference, 2022. Acceptance Rate: 64%.

45. †Parvin Mohammadiarvejeh and Guiping Hu, "Optimization of drone-assisted parcel delivery models for healthcare," IISE annual conference, 2022. Acceptance Rate: 85%.

44. †Luning Bi, †Mohammad Fili, and Guiping Hu, "Covid-19 intervention policy optimization for the united states using a multi-population evolutionary algorithm", INFORMS Conference on Service Science, 2021. Acceptance Rate: 85%. 3rd place winner for the Best Student Paper competition.

43. †Mohammad Fili, Guiping Hu, Changze Han, Alexa Kort, and Hillel Haim, "A stacking-based classification approach: case study in volatility prediction of HIV-1 viruses", INFORMS Conference on Service Science, 2020. Acceptance Rate: 85%.

42. †Mohsen Shahhosseini and Guiping Hu, "Improved weighted random forest for classification problems," International Conference on Intelligent Decision Science (IDS - 2020), 2020. Acceptance Rate: 85%.

41. †Luning Bi and Guiping Hu, "A LSTM-based prediction model for soybean SDS with satellite imagery," IISE annual conference, 2020. Acceptance Rate: 85%.

40. †Carl Kirpes, Dave Sly, and Guiping Hu, "Value of the 3D product model use in assembly processes," IISE annual conference, 2020. Acceptance Rate: 85%.

39. †Luning Bi and Guiping Hu, "Improving plant disease recognition with generative adversarial network under limited training set," International Workshop on Machine Learning for Cyber-Agricultural Systems, 2019. Acceptance Rate: 75%.

38. †Mohsen Shahhosseini, Guiping Hu, and Hieu Pham, "Optimizing machine learning bias and variance with ensembles weights," Institute for Operations Research and the Management Sciences (INFORMS) Conference on Service Science, 2019. Acceptance Rate: 85%.

37. †Saba Moeinizade and Guiping Hu, "Predicting metropolitan crime rates using machine learning techniques," INFORMS Conference on Service Science, 2019. Acceptance Rate: 85%.

36. †Vahid Azizi and Guiping Hu, "Machine learning methods for revenue prediction in the Google merchandise store," INFORMS Conference on Service Science, 2019. Acceptance Rate: 85%.

35. †Saba Moeinizade, Lizhi Wang, and Guiping Hu, "Improving response in genomic selection with a look-ahead approach," Industrial and Systems Engineering Research Conference, 2018. Acceptance Rate: 85%.

34. Megan Wellner, †Saba Moeinizade, Guiping Hu, and Lizhi Wang, "Gender-based selection strategy for genomic selection," Industrial and Systems Engineering Research Conference, 2018. Acceptance Rate: 85%.

33. Colin Brown, †Shiyang Huang, and Guiping Hu, "AGV reduction algorithm for shop floor optimization," Industrial and Systems Engineering Research Conference, 2018. Acceptance Rate: 85%.

32. †Zhengyang Hu, and Guiping Hu, "Hybrid robust and stochastic programming for lot-sizing and scheduling problem," Industrial and Systems Engineering Research Conference, 2018. Acceptance Rate: 85%.

31. †Zhengyang Hu, Ronald G. Askin, and Guiping Hu, "Logistic network design for daily cyclic truck routes," INFORMS Transportation and Logistics Society Conference, 2017. Acceptance Rate: 85%.

30. Michael Helwig, David P. Sly, and Guiping Hu, "Improving the efficiency of large manufacturing assembly plants," International Conference on Flexible Automation and Intelligent Manufacturing, 2017. Acceptance Rate: 85%.

29. †Shiyang Huang and Guiping Hu, "Shop floor AGV assignment optimization under uncertainty," Industrial and Systems Engineering Research Conference, 2017. Acceptance Rate: 85%.

28. †Zhengyang Hu and Guiping Hu, "Multi-stage lot-sizing and scheduling under demand uncertainty," Industrial and Systems Engineering Research Conference, 2017. Acceptance Rate: 85%.

27. Goutham Ramaraj, †Zhengyang Hu, and Guiping Hu, "Lot sizing and scheduling of a multi-stage manufacturing system under uncertainty," Industrial and Systems Engineering Research Conference, 2017. Acceptance Rate: 85%.

26. Preetam Kulkarni, Maryam Nikouei-Mehr, Lizhi Wang, and Guiping Hu, "Production planning of a three-echelon supply chain with information sharing," Industrial and Systems Engineering Research Conference, 2017. Acceptance Rate: 85%.

25. Michelle Zugg, Goutham Ramaraj, Ge Guo, Maryam Nikouei-Mehr, Guiping Hu, Caroline C. Krejci, David P. Sly, Sarah M. Ryan, Lizhi Wang, and Michael Helwig, "A preliminary case study for Factboard, a decision support system," Industrial and Systems Engineering Research Conference, 2017. Acceptance Rate: 85%.

24. Minxiang Zhang, Cameron Mackenzie, Caroline Krejci, John Jackman, and Guiping Hu, "Probabilistic methods for long-term demand forecasting for aviation production planning," Industrial and Systems Engineering Research Conference, 2017. Acceptance Rate: 85%.

23. Xiangzhen Li, Caroline Krejci, Cameron Mackenzie, John Jackman, and Guiping Hu, "Capacity planning and production scheduling for aircraft painting operations," Industrial and Systems Engineering Research Conference, 2017. Acceptance Rate: 85%.

22. Alexandra Olsen and Guiping Hu, "Analysis of surgery scheduling policies using discrete event simulation," Industrial and Systems Engineering Research Conference, 2016. Acceptance Rate: 85%.

21. Alexandra Olsen and Guiping Hu, "Statistical methods for surgery duration estimation," Industrial and Systems Engineering Research Conference, 2016. Acceptance Rate: 85%.

20: †Yihua Li and Guiping Hu, "A sequential fast pyrolysis facility location-allocation model," APMS International Conference: Advances in Production Management Systems: Sustainable Production and Service Supply Chain, Sept. 2013. Acceptance Rate: 65%.

19: †Qi Li and Guiping Hu, "An optimization model for advanced biofuel production based on bio-oil gasification," APMS International Conference: Advances in Production Management Systems: Sustainable Production and Service Supply Chain, Sept. 2013. Acceptance Rate: 65%.

18. Chung-Li Tseng, †Yihua Li, and Guiping Hu, "Water efficient technology adoption considering climate change: a real options approach," Smart Water International Conference, November 2013. Acceptance Rate: 65%.

17. Paul J. Componation, Michael Dorneich, Guiping Hu, Phillip A. Farrington, and Jordan L. Hansen, “Systems engineering and project success in government and commercial organization,” American Society for Engineering Management, October 2013. Acceptance Rate: 75%.

16. Paul Componation, Michael Dorneich, Guiping Hu, and Gillian Nicholls, “Applying alternative decision-making approaches to a complex supplier selection problem,” Industrial and Systems Engineering Research Conference, May 2013. Acceptance Rate: 85%.

15. Guiping Hu, Randy Boeckenstedt, and Bopaya Bidanda, “Measuring transportation dependency for customer centric manufacturing,” The 45th CIRP Conference on Manufacturing Systems: The Challenge for the Manufacturing for the Future, Athens, Greece, May 2012. Acceptance Rate: 75%.

14. Sepideh Abolghasem, Guiping Hu, Bopaya Bidanda, Ravi Shankar, and Saurabh Basu, “Sustainable design and manufacturing by mapping microstructure from severe shear deformation in machining,” The 14th IFAC Symposium on Information Control for Smarter Manufacturing, Bucharest, Romania, May 2012. Acceptance Rate: 75%.

13. Susan Arendt, Guiping Hu, Lizhi Wang, and Randy Boeckenstedt, “Localizing food production and purchasing for schools,” Food and Nutrition Conference and Expo, San Diego, CA, Sept 2011. Acceptance Rate: 85%.

12. Guiping Hu and Bopaya Bidanda, “An oligopoly model to analyze the market and social welfare for green manufacturing industry,” Proceedings of International Conference on Production Research, Stuttgart, Germany, July 2011. Acceptance Rate: 75%.

11. Guiping Hu, Matt Liebman, and Craig Chase, “A systematic optimization model for integration of crop and livestock systems,” Proceedings of the Industrial Engineering Research Conference, Reno, Nevada, May 2011. Acceptance Rate: 85%.

10. Guiping Hu, Lizhi Wang, Susan Arendt, and Randy Boeckenstedt, “A systematic optimization model for foodshed localization,” Proceedings of the Industrial Engineering Research Conference, Reno, Nevada, May 2011. Acceptance Rate: 85%.

9. Martin Gaussin, Guiping Hu, Ravi Shankar, and Bopaya Bidanda, “Assessing the environmental footprint of manufactured products: a survey of current literature,” Proceedings of International Conference on Production Research, Shanghai, China, July 2009. Acceptance Rate: 75%.

8. Guiping Hu and Bopaya Bidanda, “A product upgrade decision model for sustainable manufacturing,” Proceedings of the Industrial Engineering Research Conference, Miami, Florida, May 2009. Acceptance Rate: 85%.

7. Guiping Hu and Bopaya Bidanda, “Modeling sustainable product lifecycle decision support systems,” Proceedings of International Conference on Production Research, Chile, July 2007. Acceptance Rate: 75%.

6. Guiping Hu, Lizhi Wang, Yan Wang, and Bopaya Bidanda, “A new model for closed loop product lifecycle systems,” Proceedings of the Industrial Engineering Research Conference, Nashville, May 2007. Acceptance Rate: 85%.

5. Guiping Hu, Lizhi Wang, and Bopaya Bidanda, “Project portfolio selection for implementing lean and six sigma concepts,” Proceedings of the Industrial Engineering Research Conference, Nashville, May 2007. Acceptance Rate: 85%.

4. Guiping Hu, Lizhi Wang, and Bopaya Bidanda, “A game theoretic model of the market competition between green and ordinary products,” Proceedings of the Industrial Engineering Research Conference, Nashville, May 2007. Acceptance Rate: 85%.

3. Guiping Hu, Yan Wang, and Bopaya Bidanda, “Product lifecycle management systems for network-centric manufacturing,” Proceedings of Industrial Engineering Research Conference, Orlando, May 2006. Acceptance Rate: 85%.

2. Guiping Hu, Yan Wang, and Bopaya Bidanda, “Product lifecycle management challenges in trans-national environments,” Proceedings of Industrial Engineering Research Conference, Orlando, May 2006. Acceptance Rate: 85%.

1. Lizhi Wang, Guiping Hu, and Zengfu Wang, “Pitch detection based on time-frequency analysis,” Fifth World Congress on Intelligent Control and Automation, June 2004. Acceptance Rate: 25%.

Formally Invited Lectures and Presentations

39. “Nurturing new directions in interdisciplinary industrial engineering”, Oklahoma State University, 2023.

38. “Deep learning and its application in agriculture,” Interpretability in Artificial Intelligence, Banff International Research Station for Mathematical Innovation and Discovery, 2022.

37. “Nurturing new directions in interdisciplinary industrial engineering,” Department of Industrial Engineering, University of Pittsburgh, 2022.

36. “Data analytics and system optimization in breeding and sustainable agriculture,” Department of Plant Breeding and Genetics, Cornell University, 2022.

35. “Data analytics and system optimization in sustainability,” Syracuse University, 2022.

34. “Data analytics, yield prediction, and system optimization,” Animal Science, Cornell University, 2022.

33. “Data analytics and system optimization in imaging science and sustainability,” Center for Imaging Science, Rochester Institute of Technology, 2021.

32. “System design thinking and data analytics in plant breeding,” F. Baker Plant Breeding Symposium, 2021.

31. “Data science in agriculture,” Women in Data Science (WiDS), Iowa State University, 2021.

30. “Data analytics and system optimization in sustainability,” Rochester Institute of Technology, 2021.

29. “Machine learning and applications in agriculture production,” Mississippi State University, 2020.

28. “Big data analytics and supply chain optimization,” Invited Seminar, GuangXi University, China, 2019.

27. “Big data analytics and genomic prediction in crop breeding,” Invited Seminar, Nanjing Agriculture University, China, 2019.

26. “Operations research in plant breeding,” Invited Workshop Seminar, Cornell University, 2019.

25. “Big data analytics and applications in manufacturing and production systems,” Invited Seminar, University of Electronics and Technology of China, 2019.

24. “Optimized planning and management for plant breeding,” Invited Seminar, National Agriculture and Food Research Organization, Japan, 2018.

23. “Advance plant breeding through optimized planning and management: challenges and opportunities,” Invited Seminar, University of Tokyo, 2018.

22. “Supply chain design and market models for renewable energy systems,” Invited Seminar, University of North Carolina Charlotte, 2016.

21. Supply chain design and bottom-up market equilibrium models for biofuel production and policy analysis,” Invited Seminar, Texas Tech University, 2016.

20. “Bioenergy system analysis: challenges and opportunities for IEs,” Institute of Industrial Engineers, ISU Chapter, Iowa State University, 2015.

19. “Biofuel supply chain and bottom-up market equilibrium model for production and policy analysis,” Iowa EPSCoR Energy Policy Seminar Workshop, 2014.

18. “Supply chain optimization and market modeling for advanced biofuel,” Institute for Sustainable Development, Hong Kong Chinese University-Shenzhen, 2014.

17. “Supply chain optimization and market modeling for advanced biofuel,” Institute for Sustainability, Beijing University of Science and Technology, 2014.

16. “Biofuel system analysis and supply chain optimization,” Beijing Agricultural University, 2014.

15. “Supply chain optimization and market modeling for advanced biofuel,” Department of Logistic Management, University of Science and Technology of China, 2014.

14. “System analysis and supply chain optimization for advanced biofuel,” Department of Industrial Engineering, Northeastern University, China, 2014.

13. “Biofuel market modeling and supply chain optimization,” Department of Mechanical Engineering, Northwest Polytechnic University, China, 2014.

12. “Biofuel supply chain optimization,” Department of Industrial Engineering, Xi’Dian University, China, 2014.

11. “Biorenewable systems analysis at Iowa State University,” University of Minnesota, 2013.

10. “Bioenergy system analysis: challenges and opportunities for IEs,” Department of Industrial and Manufacturing Systems Engineering, Iowa State University, 2013.

9. “Techno-economic analysis for In Situ catalytic pyrolysis,” Department of Energy, Office of Energy Efficiency and Renewable Energy, 2012.

8. “System analysis and supply chain optimization,” Institute for manufacturing supply chain and logistics, Northeastern University, China, 2012.

7. “Bioenergy system analysis and optimization,” Nanjing University of Aeronautics and Astronautics, China, 2012.

6. “Bioenergy system analysis and supply chain optimization,” Department of Industrial Engineering, Nanjing University, China, 2012.

5. “System analysis and supply chain optimization for renewable energy,” Institute for Renewable Energy, Southeast University, China, 2012.

4. “Supply chain design and optimization for renewable energy systems,” Department of Industrial Engineering, Zhejiang University, China, 2012.

3. “Supply chain design and optimization for renewable energy systems,” Department of Industrial Engineering and Decision Sciences, Shanghai Jiaotong University, China, 2012.

2. “Bioenergy system analysis and supply chain optimization,” Xiamen University, Institute for Renewable Energy, China, 2012.

1. “Bioenergy system analysis and supply chain optimization,” Institute of Policy and Management, Chinese Academy of Sciences, China, 2012.