ELIF ELCIN GUNAY, PhD

Clinical Assistant Professor
Mitch Daniels School of Business, Purdue University, Krannert Building, Room:528
403 Mitch Daniels Blvd, West Lafayette, IN, 47907, USA
PHONE: 937-241-0878 E-MAIL: egunay@purdue.edu

EDUCATION

Post-Doctoral Research
Industrial and Manufacturing Systems Engineering
Iowa State University, Ames, IA, USA, *08/2020*

Doctor of Philosophy
Industrial Engineering
Sakarya University, Sakarya, Türkiye, *09/2016*

Master of Science
Industrial Engineering
Sakarya University, Sakarya, Türkiye, *08/2009*

Bachelor
Industrial Engineering
Sakarya University, Sakarya, Türkiye, *06/2007*

EMPLOYMENT

Clinical Assistant Professor
Daniels School of Business, Supply Chain & Operations Management, ***Purdue University****, West Lafayette, IN, USA, 08/2025– present*

Visiting Scholar
School of Engineering, **University of Dayton**, Dayton, OH, USA, *08/2023–07/2025*

Assistant Professor
Department of Industrial Engineering, **Sakarya University**, Sakarya, Türkiye, *03/2021–07/2025*

AWARDS & HONORS

- **Günay, E. E.**, Ramadani, R., Mundiwala, M., Kashef, A., Ma, J., Hu, C., Kremer, P., Kremer, G. E. (2025, August). Design Improvement for Facilitating Transmission Control Unit Remanufacturing. *International Design Engineering Technical Conferences & Computers and Information in Engineering Conference* (IDETC-CIE 2025), Anaheim, California/USA - ***2025 DFMLC Paper of Distinction Award.***
- **Günay, E.**, Dickson, Dickson, D., Jonczyk, R., Van Hell, J., Siddique, Z., & Okudan Kremer, G. E. (2022, June). Investigation of a Professor's Feedback on Student's Divergent Thinking Performance: An Electrodermal Activity Experiment. In *American Society for Engineering Education Annual Conference & Exposition* - ***Best Paper Award in Industrial Engineering Division***.
- Zarindast, A., **Günay, E. E.**, Park K., Okudan-Kremer, G. E. (2018, May). Determination of Bus Station Locations under Emission and Social Cost Constraints. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA - ***Best Student Paper Award in Sustainable Development Division***.
- Scientific and Technological Research Council of Türkiye (TÜBİTAK), ***M.Sc. Scholarship*** Program for National Students (Program Code: 2210) for two years, Sakarya University, Sakarya, Türkiye, *10/2008–10/2010.*

- Scientific and Technological Research Council of Türkiye (TÜBİTAK), ***Ph.D. Scholarship*** Program for National Students (Program Code: 2211) for five years, Sakarya University, Sakarya, Türkiye, *10/2010–10/2015.*
- Scientific and Technological Research Council of Türkiye (TÜBİTAK), ***International Post-Doctoral Research Fellowship*** Program (Program Code: 2219) for one year. Iowa State University, Ames, IA, USA, *07/2017–07/2018*.

SPONSORED RESEARCH EXPERIENCE AS A RESEARCHER OR ACADEMIC ADVISOR

An open product marketplace orchestrator for rapid response across (Rx) health and medical supply and demand chain, University of Dayton, Dayton, OH, USA, *08/2023–06/2025, researcher*

Funding Agency: US Department of Commerce/NIST

Major research area: Operations research, supply chain management

Tools: Python/Pyomo

- Develop single and multi-objective supply chain network design models under the concept of manufacturing as a service, using linear programming to minimize the total cost, lead time, energy consumption, and risk modeling.

Data-Driven Design Decision Support for Remanufacturing of High-Value Components in Industrial and Agricultural Equipment, University of Dayton, Dayton, OH, USA, *05/2024–07/2025, researcher*

Funding Agency: REMADE Institute

Major research area: Economic analysis and product design improvement for remanufacturing

Tools: Excel

- Develop an MS Excel-based cost calculation tool to assess the cost consequences of design alternatives for remanufacturing.

Design Iteration Support Tool to Sustain Remanufacturability, University of Dayton, Dayton, OH, USA, *06/2023–06/2024, researcher*

Funding Agency: REMADE Institute

Major research area: Economic analysis

Tools: Matlab, Excel

- Develop an MS Excel plugin to generate design alternatives for remanufacturing and conduct cost analysis.

Rapid damage identification to reduce remanufacturing costs, University of Dayton, Dayton, OH, USA and Iowa State University, Ames, IA, USA, *08/2020–03/2024, researcher*

Funding Agency: REMADE Institute

Major research area: Deep learning

Tools: Python/PyTorch/TensorFlow

- Develop an experimental plan to investigate the impact of various data collection methods and data augmentation techniques for a project that focuses on defect detection.
- Building object detection models using the YOLO modeling framework for defect detection.
- Mentored two graduate students.

Neurocognitive experimentation to enhance STEM education: studies on divergent thinking in female and male engineering students, Iowa State University, Ames, IA, USA, *08/2019–08/2020, researcher*

Funding Agency: National Science Foundation (NSF)

Major research area: Engineering Education, Design of Experiment, Creativity, Electrodermal activity

Tools: MATLAB, Presentation®, SPSS, Minitab

- Develop experimental procedures for the assessment of creativity through electrodermal activity sensors.
- Mentored two graduate and four undergraduate students in experimenting with human subjects and preparing IRS documents.
- Signal Processing in MATLAB

Risk assessment for global supply chains, University of Dayton, Dayton, OH, USA, *05/2025–08/2025*
Funding Agency: Summer Undergraduate Research Experience (SURE Projects 2024), University of Dayton, *academic advisor*
Major research area: Supply chain management
Tools: GenAI tools - Llama3.1-8B, Gemma3-12B, DeepSeek-R1-14B, and Phi4-14B
- Develop a risk assessment metric for global supply chains
- Utilize text mining techniques to analyze unstructured data

Image processing-based cable assembly quality control system, Sakarya University, Sakarya, Türkiye, *10/2023–03/2025, academic advisor*
Funding Agency: Scientific and Technological Research Council of Türkiye (TÜBİTAK) ($500)
Major research area: Deep learning, design of experiment
Tools: Python/PyTorch/TensorFlow
- Develop a deep learning model to identify the order and the color of the cables.

Developing a decision support system to design eco-friendly products, Iowa State University, Ames, IA, USA, *07/2017–07/2018, research fellow*
Funding Agency: Scientific and Technological Research Council of Türkiye (TÜBİTAK) ($30,000)
Major research area: Operations research, supply chain management, data analytics
Tools: GAMS
- Develop a stochastic model to determine optimal product design considering the process and supply chain costs under currency exchange risk

Determination of Buffer Content in Automobile Assembly Lines, Sakarya University, Sakarya, Türkiye, *12/2014–11/2016, research fellow*
Funding Agencies: Scientific and Technological Research Council of Türkiye (TÜBİTAK) ($35,000) & Sakarya University ($2,500)
Major research area: Operations research, supply chain management
Tools: GAMS
- Develop a stochastic model to improve the efficiency of the automobile assembly lines

PUBLICATIONS

Publications in Refereed Journals

1. Tabassum, M., Ramadani, R., **Günay, E. E.**, & Kremer, G. E. (2025). Effects of Material Selection on the Remanufacturability of a Swashplate in an Axial Piston Pump. ***Journal of Advanced Manufacturing and Processing***, 7(3), e70027.
2. Mohammadzadeh, M., **Günay, E. E.**, Jackman, J., Kremer, G. E., & Kremer, P. (2025). Utilization of Data Augmentation Techniques in Automated Inspection Systems for Defect Detection in Metals with Limited Data. ***Journal of Advanced Manufacturing and Processing***, *7*(3), e70011.
3. Dubey, P., Miller, S., **Günay, E.E.**, Jackman, J., Kremer, G.E. and Kremer, P.A., (2025). You Only Look Once v5 and Multi-Template Matching for Small-Crack Defect Detection on Metal Surfaces. ***Automation***, *6*(2), p.16.
4. Dere, S., **Günay, E. E.**, Kula, U., & Kremer, G. E. (2024). Assessing agrivoltaics potential in Türkiye–A geographical information system (GIS)-based fuzzy multi-criteria decision making (MCDM) approach. ***Computers & Industrial Engineering***, 110598. **(SCI, Q1, IF:6.7,** as per publisher website, October 2024**)**
5. **Günay, E. E.**, & Dere, S. (2024). Hazardous Solid Waste Landfill Site Selection for İstanbul, Türkiye using Multi-Criteria Decision-Making Methods and GIS Data. ***Journal of Advanced Research in Natural and Applied Sciences***, *10*(2), 446-463.
6. **Günay, E.** (2024) A two-stage stochastic model for picker allocation problem in warehouses considering the rest allowance and picker's weight. **International Journal of Industrial Engineering Computations** 15(3), p. 685-704. **(SCI, Q2, IF:1.6,** as per publisher website, March 2024**)**

7. Dubey, P., Miller, S., **Günay, E. E.**, Jackman, J., Kremer, G. E., & Kremer, P. A. (2024). Deep learning-powered visual inspection for metal surfaces–Impact of annotations on algorithms based on defect characteristics. ***Advanced Engineering Informatics***, 62, 102727. **(SCI, Q1, IF:8,** as per publisher website, October 2024**)**
8. Kır, S., & **Günay, E. E.** (2022). Augmented artificial neural network model for the COVID-19 mortality prediction: preliminary analysis of vaccination in Türkiye. ***Sakarya University Journal of Computer and Information Sciences***, *5*(1), 22-36. **(DOAJ, Central & Eastern European Academic Source)**
9. Mutyala, R. S., Park, K., **Günay, E. E.**, Kim, G., Lau, S., Jackman, J., & Okudan Kremer, G. E. (2022). Effect of FFF process parameters on mechanical strength of CFR-PEEK outputs. ***International Journal on Interactive Design and Manufacturing*** (IJIDeM), *16*(4), 1385-1396. **(Emerging Sources Citation Index, IF: 2.1,** as per publisher website, March 2024**)**
10. **Günay, E.E**., Okudan Kremer G. E., Zarindast, A. (2021). A multi-objective robust possibilistic programming approach to sustainable public transportation network design, ***Fuzzy Sets and Systems***, *422*, 106-129. **(SCI, Q1, IF:3.9,** as per publisher website, March 2024**)**
11. Al-Araidah, O., Okudan-Kremer, G., **Günay, E. E.**, & Chu, C. Y. (2021). A Monte Carlo simulation to estimate fatigue allowance for female order pickers in high traffic manual picking systems. ***International Journal of Production Research***, *59*(15), 4711-4722. **(SCI, Q1, IF:9.2,** as per publisher website, March 2024**)**
12. **Günay, E.E.**, Park, K., Okudan Kremer G. E. (2021). Integration of product architecture and supply chain under currency exchange rate fluctuation, ***Research in Engineering Design***, *32*, 331-348. **(SCI-E, Q2, IF:3.2,** as per publisher website, March 2024**)**
13. Alshraideh, M., Ababneh, S., **Günay, E. E.**, & Al-Araidah, O. (2021). A fuzzy-TOPSIS model for maintenance outsourcing considering the quality of submitted tender documents. ***Eksploatacja i Niezawodność***, *23*(3), 443-453. **(SCI-E, Q1, IF:2.5,** as per publisher website, March 2024**)**
14. Yoo, J., **Günay, E.E.**, Park, K., Tahamtan, S., Okudan Kremer G. E. (2021). An intelligent learning framework for Industry 4.0 through automated planning, ***Computer Applications in Engineering Education***, *29*(3), 624-640. **(SCI-E, Q2, IF:2.9,** as per publisher website, March 2024**)**
15. Kandukuri, S., **Günay, E. E.**, Al-Araidah, O., & Kremer, G. E. O. (2021). Inventive solutions for remanufacturing using additive manufacturing: ETRIZ. ***Journal of Cleaner Production***, *305*, 126992. **(SCI-E, IF: 11.1,** as per publisher website, March 2024**)**
16. **Günay, E.E.**, Velineni, A., Park, K., Okudan Kremer G. E. (2020). An investigation on process capability analysis for fused filament fabrication, ***International Journal of Precision Engineering and Manufacturing***, *21*, 759-774. **(SCI-E, IF: 1.9,** as per publisher website, March 2024**)**
17. **Günay, E.E.**, Jackson, K. L., Wu, X., Okudan Kremer, G. E., and Guo, X. (2020). An investigation of effects of ambiguity, gender orientation and domain relatedness of design projects on student's performance, ***Journal of Mechanical Design***, *142*(7): 072003 (10 pages), DOI: 10.1115/1.4045300 **(SCI-E, IF: 3.4,** as per publisher website, March 2024**)**
18. Aydoğan, S., **Günay, E.E.**, Akay, D., Okudan Kremer G. E. (2020). Concept design evaluation by using z-axiomatic design, ***Computers in Industry***, 122, 103278. Doi: 10.1016/j.compind.2020. **(SCI-E, Q1, IF:10,** as per publisher website, March 2024**)**
19. **Günay, E.E.**, Kula, U. (2020). A hybrid model for mix-bank buffer content determination in automobile industry, ***European Journal of Industrial Engineering***, *14*(4), 544-572. **(SCI-E, Q4, IF:1.7,** as per publisher website, March 2024**)**
20. Shen, W., Hu, D., **Günay, E. E.**, & Kremer, G. E. O. (2020). Evolution of supply chain management: a sustainability-focused review. ***International Journal of Sustainable Manufacturing***, *4*(2-4), 319-335. **(Compendex,** as per publisher website, March 2024**)**
21. Uludag, F., Olabi, Y., **Günay, E. E.**, Kremer, G. E. O. (2019). Mitigating the effects of bottlenecks in wagon manufacturing, ***Procedia Manufacturing***, *39*, 1010-1019. **(Science Direct,** as per publisher website, March 2024**)**

22. Green, J.J., **Günay, E.E.**, & Kremer, G. E. O. (2019). A simulation model of consumer take-back decisions regarding product design, ***Procedia Manufacturing***, *33*, 671-678. **(Science Direct,** as per publisher website, March 2024**)**
23. **Günay, E. E.**, Kremer, G. E. O., Park, K. (2019). Effect of supplier selection regulations on new product design, ***Procedia Manufacturing***, *39*, 1337-1345. **(Science Direct,** as per publisher website, March 2024**)**
24. **Günay, E. E.**, Kula, U. (2018). A two-stage stochastic rule-based model to determine pre-assembly buffer content, ***Journal of Industrial Engineering International***, *14*, 655-663. **(Scopus,** as per publisher website, March 2024**)**
25. **Günay, E. E.**, Kula, U. (2017). A stochastic programming model for resequencing buffer content optimisation in mixed-model assembly lines***, International Journal of Production Research***, *55*(10), 2897-2912. **(SCI, Q1, IF:9.2,** as per publisher website, March 2024**)**
26. **Günay, E. E.**, Kula, U. (2016). Integration of production quantity and control chart design in automotive manufacturing, ***Computers & Industrial Engineering***, *102*, 374-382. **(SCI, Q1, IF:7.9,** as per publisher website, March 2024**)**

Book chapters

1. Ceylan, A., **Günay, E. E.**, Boran, S., & Kremer, G. E. O. (2025, July). Enhancing Cable Installation Quality Control with YOLOv8 Segmentation. In: Šormaz, D.N., Bidanda, B., Alhawari, O., Geng, Z. (eds) ***Intelligent Production and Industry 5.0 with Human Touch, Resilience, and Circular Economy***. ICPR-Americas 2024. Lecture Notes in Production Engineering. Springer, Cham. Doi:10.1007/978-3-031-77723-3_57
2. **Günay, E.E.**, Günay, A., Chern, W.-C., Elhabashy, A.E., Sim, J., Haapala, K.R., Kim, K.-Y., & Okudan Kremer, G.E. (2024, October). A Framework for Aggregating Timely and Potential Risks to Create Robust Supply Chains. In: Durakbasa, N.M., Gülen, K.G. (eds) Sustainable Green Conversion. ISPR 2024. ***Lecture Notes in Mechanical Engineering***. Springer, Cham.Doi: 10.1007/978-3-031-83583-4_1
3. Mohammadzadeh, M., Dubey, P., **Günay, E.E.**, Jackman, J.K., Okudan Kremer, G., Kremer, P. A. (2024). Deep learning for defect detection in inspection, ***Technology Innovation for the Circular Economy: Recycling, Remanufacturing, Design, Systems Analysis and Logistics***, 143-155. Doi:10.1002/9781394214297.ch12, **Book chapter, Scrivener Publishing**

Peer-Reviewed Conference Papers

1. **Günay, E. E.,** Ramadani, R., Mundiwala, M., Kashef, A., Ma, J., Hu, C., Kremer, P., Kremer, G. E. (2025, August). Design Improvement for Facilitating Transmission Control Unit Remanufacturing. International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC-CIE 2025), Anaheim, CA, USA.
2. Paul, G. E., Idowu, D. T., Raoufi, K., Elhabashy, A. E., **Günay, E. E.,** Sim, J., Okudan Kremer, G., Kim, K. -Y. & Haapala, K. R., E., (2025, August). Integrative Manufacturing Process Modeling and Life Cycle Assessment to Aid Process Selection for Rapid Production. International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC-CIE 2025), Anaheim, CA, USA.
3. Shen, Y., Sim, J., Elhabashy, A. E**., Gunay, E. E.**, Haapala, K. R., Okudan Kremer, G. E., & Kim, K. Y. (2025, June). Graph Topology-Guided Manufacturing Knowledge Representation and Knowledge Integration for Manufacturing Process Selection**.** Flexible Automation and Intelligent Manufacturing (FAIM) Conference, New York, NY, USA.
4. Elhabashy, A. E., **Günay, E. E.**, Sim, J., Clements, M. W., Benaggoun, H., Kabiri, M., Haapala, K. R., Okudan Kremer, G. E., & Kim, K. -Y. (2024, August). Development of a Rapid Response Online Product Marketplace. International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC-CIE 2024), Washington, DC, USA.

5. Shen, Y., Sim, J., Elhabashy, A. E., **Günay, E. E.**, Haapala, K. R., Okudan Kremer, G. E., & Kim, K. -Y. (2024, June). Open Knowledge Graph for Manufacturing Process Selection. Flexible Automation and Intelligent Manufacturing (FAIM) Conference, Taichung, Taiwan.
6. Tabassum, M., Ramadani, R., **Günay, E. E.,** Kremer, G. E. (2024). Effects of Material Selection on the Remanufacturability of a Swashplate in an Axial Piston Pump. In 2024 REMADE Circular Economy Tech Summit & Conference, Washington, DC, USA.
7. Dere, S., **Günay, E. E.**, Kula, U., (2023, May). Investigation of the Potentials of the Agrivoltaic Systems in Türkiye. In *International Symposium on Intelligent Manufacturing and Service Systems*, (pp. 534-545), Sakarya, Türkiye, Springer Nature Singapore.
8. Dubey, P., **Günay, E. E.**, Jackman, J., Kremer, G. E., & Kremer, P. (2022, June). Deep Learning-Powered Visual Inspection Using SSD Mobile Net V1 with FPN. In *International conference on Flexible Automation and Intelligent Manufacturing,* (pp. 743-752), Detroit, MI., Cham: Springer International Publishing.
9. **Günay, E. E.**, Dickson, D., Jonczyk, R., Van Hell, J., Siddique, Z., & Okudan Kremer, G. E. (2022, June). Investigation of a Professor's Feedback on Student's Divergent Thinking Performance: An Electrodermal Activity Experiment. In *Proceedings of the 129th Annual Conference of the American Society for Engineering Education,* Minneapolis, MN - ***Best Paper Award in Industrial Engineering Division***.
10. Dickson, D., Jonczyk, R., Okudan Kremer, G. E., Siddique, Z., **Günay, E. E.**, & Van Hell, J. G. (2022, June). Utilization of Automatized Creativity Ratings in Linguistically Diverse Populations: Automated Scores Align with Human Ratings. In *Proceedings of the 129th Annual Conference of the American Society for Engineering Education,* Minneapolis, MN**.**
11. Lechtenberg, T. R., **Günay, E. E.**, Chu, C.-Y., Kremer, G. E., Kremer, P. A. & Jackman, J. K. (2021, May). Development of an Ontology for Defect Classification in Remanufacturing. In *Recent Advances in Intelligent Manufacturing and Service Systems: Select Proceedings of Intelligent Manufacturing and Service Systems,* (pp. 21-33), Sakarya, Türkiye, Springer Singapore.
12. **Günay, E. E.**, Tapia L., Gould T., Raje S., Scallon J., Teberg J., Kremer G., (2020, June). Electrodermal Activity Experiment to Enhance Divergent Thinking in Engineering Students. In *Institute of Industrial and Systems Engineers Annual Conference*, (pp. 1383-1388), New Orleans, Louisiana, USA.
13. **Günay, E. E.**, Chu C.-Y., Tapia L., Elmenoufy O., Yam, An, Raje, S., Jonczyk, R., Dickson, D., Van Hell, J., Siddique Z., Kremer G., (2020, October) The Investigation of The Relationship Between Emotional Engagement and Creativity. In *American Society for Engineering Education North Midwest Conference*, Ames-Iowa/USA.
14. Chu, C.-Y., **Günay, E.E.**, Al-Araidah, O., Kremer, G., (2020, August). Evaluating Supply Chain Resource Limits from News Articles and Earnings Call Transcripts: An Application of Integrated Factor Analysis and Analytical Network Process. In *International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, (Vol. 83952, p. V006T06A013), Virtual.
15. Aydoğan S., **Günay, E. E.**, Akay, D., Kremer, G. (2019, September). Linguistic Summarization of Supply Network Interactions. In *10th International Symposium on Intelligent Manufacturing and Service Systems*, Sakarya, Türkiye.
16. **Günay, E. E.**, Park, K., Kandukuri, S., Kremer, G. E. O. (2019, May). Facility Location Selection for the Humanitarian Needs of Refugees. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA.
17. Aydoğan S., Akay, D., Kremer, G., **Günay, E. E.**, Park, K., Boran, F. E. (2019, May). Decision-making with Z-Axiomatic Design. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA.
18. **Günay, E. E.**, Park, K., Aydogan, S., Kremer, G. E. O. (2019, May). Vaccine Distribution Strategies against Polio: An Analysis of Türkiye Scenario. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA.

19. Khoje, S., **Günay, E.E.**, Kremer, G.E.O, Park, K., Jackson, K., Wu, X. (2018, May). An Evaluation Framework for Engineering Design Projects for Gender Bias, Domain Relatedness, and Ambiguity. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA.
20. **Günay, E. E.**, Lunning, M., Okudan-Kremer, G. E. (2018, May). Integration of Supply Chain Network and Product Architecture Design under Labor Cost Uncertainty. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA.
21. Yoo, J., **Günay, E. E.**, Park K., Tanniru, C., Okudan-Kremer, G. E. (2018, May). An Application of Automated Planning to Improve Readiness for Industry 4.0. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida.
22. Zarindast, A., **Günay, E. E.**, Park K., Okudan-Kremer, G. E. (2018, May). Determination of Bus Station Locations under Emission and Social Cost Constraints. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA - **Best Student Paper Award in Sustainable Development Division**.
23. Velineni, A., **Günay, E. E.**, Park, K., Okudan-Kremer, G.E., Schnieders, T. M., Stone, R. T. (2018, May). An Investigation on Selected Factors that Cause Variability in Additive Manufacturing. In *Institute of Industrial and Systems Engineers Annual Conference*, Orlando-Florida/USA.
24. Kula, U., **Günay, E. E.** (2014, October). Decide on the Production Quantities and Attribute Chart Parameters in Automobile Manufacturing. In *Computers and Industrial Engineering International Conference (CIE'44) and 9th International Symposium on Intelligent Manufacturing and Service Systems, (IMSS'14)*, Istanbul, Türkiye.

Oral Presentations

1. Khoje, S., **Günay, E. E.**, Kremer, G. (2017, April). Building a Framework to Assess the Appropriateness of a Design Project for Domain Relatedness, Ambiguity Tolerance, and Genderedness. *5th Annual Undergraduate and Graduate Research Symposium*, Iowa State University. (Poster presentation)
2. Manoharan, S., Haapala, K.R., Liu S., Sim J., Kim K., Park, K., **Günay, E. E.** and Kremer, G. E. (2017, August). A Digital Platform for Reuse of Supply Chain and Manufacturing Resource Information for Advanced Manufacturing Services. In *Iowa State University – John Deere Mini Research Symposium on Advanced Manufacturing*. (Poster presentation)
3. **Günay, E. E.**, Park K., Kremer G. E. (2017, October). Effect of Change in Labor Costs to Supply Chain and Design Optimization. In *Institute for Operations Research and the Management Sciences (INFORMS)*, Houston-Texas/USA.
4. Zarindast, A., **Günay, E. E.**, Kremer G. E. (2017, October). Optimal Bus Type and Number of Bus Stops in Public Transportation under Random Demand and Sustainability Adoption Levels within the Community. In *Institute for Operations Research and the Management Sciences (INFORMS)*, Houston-Texas/USA.
5. **Günay, E. E.**, Kula, U. (2016, October). A Heuristic Model for Buffer Content Determination.In *3rd International Conference on Computational and Experimental Science and Engineering*, Antalya, Türkiye.
6. **Günay, E. E.**, Kula U. (2015, September). Determination of Spare Vehicle Quantities for Mix-bank Buffer in Automobile Assembly Lines. In *35th National Operations Research/Industrial Engineering Conference (YAEM),* Ankara, Türkiye.
7. **Günay, E. E.**, Kula U., Ocaktan B. (2013, July). Optimal Determination of p-chart Parameters by Controlling Production Quantities in Automobile Manufacturing. In *26th European Conference on Operations Research*, Rome, Italy.
8. **Günay, E. E.**, Kula U. (2012, July). A Two-Stage Stochastic Programming Model for p-chart Design, In *25th European Conference on Operations Research*, Vilnius, Lithuania.
9. **Günay, E. E.**, Kir S. (2012, September). Early Diagnosis of Heart Disease by Using Neural Network. In *8th International Symposium on Intelligent and Manufacturing and Service Systems*, Adrasan/Antalya, Türkiye.

10. **Günay, E. E.**, Kula U. (2011, September). Maximization of Scheduled Sequence Achievement Ratio in Automobile Manufacturing. In *International Conference on Operations Research (OR)* Zurich, Switzerland.
11. **Günay, E. E.**, Kula U. (2011, July). Determining Optimal Spare Vehicles by Using Sample Average Approximation Algorithm in Automobile Assembly Lines. In *31st National Operations Research/Industrial Engineering Conference (YAEM),* Sakarya, Türkiye.
12. **Günay, E. E.**, Kula U. (2010, July). Determination of Resequencing Buffer Content in Automobile Assembly Lines. In *30th National Operations Research/Industrial Engineering Conference (YAEM),* Istanbul, Türkiye.
13. Taşkın H., Bölük A., **Günay E.E.**, Yılmaz A., Ekizoğlu B., Yanıkoğlu F.S. (2010, July). A Multi-Agent Based Architecture for Efficient Hospital Processes in Sakarya Education and Research Hospital in Türkiye: A Model for Neurology Clinic. In *7th International Symposium on Intelligent Manufacturing and Service Systems*, Sarajevo, Bosnia.
14. **Kabeloğlu, E. E.**, Kula U. (2009, October). Deciding Spare Vehicle Quantities for Automobile Assembly Lines. In *9th National Production Research Symposium (ÜAS)*, Osmangazi University, Eskişehir, Türkiye.

MANUSCRIPTS UNDER REVIEW

1. Chu, C-Y., **Günay, E. E.**, Al-Araidah, O., & Okudan Kremer, G. E., Application of Text Analytics for Supply Chain Resource Limits Assessment Incorporating Factor Analysis and Analytic Network Process, in Engineering Management Journal.
2. Kabiri, M., Elhabashy, A. E., **Günay, E. E.**, Sim, J., Haapala, K. R., Okudan Kremer, G. E., and Kim, K. -Y., Overcoming Barriers to Effective Supply Chain Functioning during Emergencies: A Meta-Systematic Literature Review under the Lens of a Global Pandemic, in Journal of Computing and Information Science in Engineering.

STUDENT MENTORING

Supported students coming from diverse backgrounds and cultures in conducting research, experimenting, writing and presenting conference proceedings, and preparing journal manuscripts

Undergraduate Level, *Iowa State University*
Ames IA, USA

- Thomas R Lechtenberg, *05/2020–05/2021*
- Liyuani Delgado Tapia, *08/2019–05/2020*
- Trevor Gould, *08/2019–05/2020*
- Shibani Raje, *08/2019–05/2020*
- Jonah Scallon, *08/2019–05/2020*
- Jenna Teberg, *08/2019–05/2020*
- Josiah J Green, *01/2018–05/2018*
- Mathew Lunning, *09/2017–12/2017*

Graduate Level, *Iowa State University*
Ames, IA, USA

- Mohammad Mohammadzadeh, *01/2022–12/2024*
- Pallavi Dubey, *01/2021–12/2023*
- Srujana Kandukuri, *01/2020–05/2020*
- Atousa Zarindast, *08/2018–05/2019*
- Rama Srikar Mutyala, *03/2019–06/2019*
- Shubham Khoje, *04/2017–01/2018*
- Anusha Velineni, *09/2017–01/2018*

TEACHING INTERESTS

- *Operations Research*
  Linear Programming, Mathematical Programming, Non-linear Programming, Stochastic Programming, Dynamic Programming, Meta-heuristics
- *Data Analytics*
  Statistics, Probability, Decision Theory, Advanced Statistics, Regression, Time Series
- *Supply Chain*
  Supply Chain Management, Closed-loop Supply Chains, Green Supply Chains

TEACHING STRATEGY

- Facilitate active learning
- Support hands-on experience in real-world applications
- Promote critical thinking
- Create a positive academic culture
- Foster student confidence
- Enrich diversity, equity, and inclusion

INVITED RESEARCH SEMINAR

- An AI-Integrated Framework for Lattice Structure Optimization, University of Prishtina, November 28, 2025
- Rapid Damage Identification to Reduce Remanufacturing Costs, REMADE webinar series, University of Dayton, Dayton, OH, USA, *03/2024*
- Using Two-Stage Stochastic Programming to Determine the Optimal Number of Spare Vehicles in an Automobile Assembly Line, Iowa State University, Ames, IA, USA, *09/2020*

INTERNATIONAL COLLABORATION

Dr. Ahmed Elhabashy	Assistant Professor, Production Engineering Department, Alexandria University, Egypt
Dr. Chih-Yuan Chu	Assistant Professor, Industrial Engineering and Enterprise Information Tunghai University, Taiwan
Dr. Danielle S. Dickson	Sandia National Laboratories, USA
Dr. Gül Kremer	Professor, Dean, School of Engineering, University of Dayton, *USA*
Dr. Janet van Hell	Professor of Psychology and Linguistics, Pennsylvania State University, *USA*
Dr. John Jackman	Associate Professor, Industrial & Manufacturing Systems Engineering, Iowa State University, *USA*
Dr. John Jung-Woon Yoo	Industrial and Manufacturing Engineering and Technology, Bradley University, *USA*
Dr. Karl Haapala	Professor, School of Mechanical, Industrial, and Manufacturing Engineering, Oregon State, *USA*
Dr. Kijung Park	Associate Professor, Incheon National University, *South Korea*
Dr. Kyoung-Yun Kim	Professor, Department of Industrial and Systems Engineering, Wayne State University, *USA*
Dr. Omar Al-Araidah	Professor of Industrial Engineering, Jordan University of Science and Technology, *Jordan*
Dr. Rafał Jończyk	Assistant professor, Adam Mickiewicz University, Poznań, *Poland*
Dr. Riad Ramadani	Assistant Professor, University of Prishtina, Faculty of Mechanical Engineering, Kosovo
Dr. Richard Stone	Associate Professor, Industrial & Manufacturing Systems Engineering, Iowa State University, *USA*
Dr. Ufuk Kula	Associate Professor, American University of Middle East, *Kuwait*
Dr. Wen Shen	School of Logistics Engineering, Wuhan University of Technology, *China*
Dr. Xinli Wu	Assistant Professor of Engineering Design, Pennsylvania State University, *USA*
Dr. Zahed Siddique	Professor, School of Aerospace and Mechanical Engineering, University of Oklahoma, *USA*

PROFESSIONAL EXPERIENCE

Stock Management Intern, Alnal Welding Company, Sakarya, Türkiye, *08/2006–09/2006*

Production Planning Intern, Eczacibasi Building Products, Bilecik, Türkiye, *07/2005–08/2005*

SERVICE

Member of Master of Science in Global Supply Chain Management (MSGSCM) Program Committee

- Identifying potential programs to increase enrollment in the online MSGSCM (08/2025 – present)

Supply Chain & Operations Management (SCOM) Advisory Board Faculty Representative (10/2025 – present)

- Connect with Office of Business Partnership to form SCOM advisory council, organize meetings, contact advisory council members

Member of Engineering Education Accreditation Committee, Sakarya University, Sakarya, Türkiye 06/2009–03/2024

- Served on Engineering Education Accreditation Committee for Industrial Engineering Program at Sakarya University, accredited by the Association for Evaluation and Accreditation of Engineering Programs in Türkiye (MUDEK)
- Contributed to writing undergraduate program evaluation self-assessment reports
- Developed a systematic approach to periodically measure and update the program educational objectives
- Prepared surveys and coordinated meetings with alumni, industry partners, and advisory board
- Managed data collection and arrangement
- Assessed and evaluated outcomes to determine achievement levels of the targeted program educational objectives
- Contributed to a tool development for periodic measurement of program outcomes to determine achievement levels
- Assess and evaluate whether program outcomes achieved

Organizing Committee Member of International Symposium on Intelligent Manufacturing and Service Systems, Sakarya University, Sakarya, Türkiye, 01/2021–12/2025

- Organizing sessions, program scheduling, and peer reviewing for the conferences in 2021, 2023, and 2025

Session Chair, Sakarya University, Sakarya, Türkiye

- Institute for Operations Research and the Management Sciences, INFORMS, 2018
- International Symposium on Intelligent Manufacturing and Service Systems, IMSS, 2023

Internship Committee, Sakarya University, Sakarya, Türkiye, 03/2009–03/2011

- Evaluated and assessed students' internship performance

Editorial Board, Sakarya University, Sakarya, Türkiye, 07/2021–03/2024

- Academic Platform Journal of Engineering and Smart Systems (APJESS)

Journal Reviewer, Sakarya University, Sakarya, Türkiye and Iowa State University, Ames, IA, USA

- Journal of Cleaner Production
- International Journal of Production Research
- Computers & Industrial Engineering
- Journal of Intelligent Manufacturing

- Annals of Operations Research
- Smart and Sustainable Manufacturing Systems

Panelist, Sakarya University, Sakarya, Türkiye

- International Day of the Girl Child, 10/2022

PROFESSIONAL ASSOCIATIONS

- Turkish National Operations Research Society (YAD), 09/2020–01/2025
- Reducing EMbodied-energy And Decreasing Emissions (REMADE), 10/2023–01/2025