

Golshan Madraki

Assistant Professor of Engineering and Management
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Summary

Education

- Ph.D., Industrial & System Engineering, Ohio University, Athens, OH, USA 2017
Dissertation Advisor: Dr. Robert. P. Judd, Chair of ISE Department.
Dissertation Title: Efficient algorithm to find performance measures in systems under structural perturbations.
- M.S., Operation Management, Allameh Tabataba'i University, Tehran, Iran 2013
Thesis Advisor: Dr. Maghsoud Amiri.
Thesis Title: Efficient simulation-based methodology to maximize production rate in unreliable job shop systems.
- B.S., Industrial Management, Allameh Tabataba'i University, Tehran, Iran 2010

Employment History

- Clarkson University – Tenured Associate Professor, Reh School of Business, Potsdam, NY, Fall 2023– Present.
- Associate Director of Honors Program, Clarkson University, Potsdam, NY, Aug. 2022 – Present.
- Clarkson University – Tenure Track Assistant Professor, Reh School of Business, Potsdam, NY, Fall 2017 – 2023.
- Ohio University – Instructor, Department of Industrial and Systems Engineering, Athens, OH, Fall 2015- Spring 2016.
- Ohio University – Research Assistant, Department of Industrial & Systems Engineering, Athens, OH, Fall 2013 - Fall 2016.

Research

Research Interests

- Methodologies:
 - Network & Graph Theory
 - Operations Research
 - Algorithms and Data Structures
 - Data Analysis
- Problem domains:
 - Supply Chain Networks
 - Manufacturing system & shop scheduling
 - Social Media Networks

Refereed Journal Publications

1. Matthews A. (**graduate student**), Otala J. (**graduate student**), Wali E. (**graduate student**), Millington L. (**undergraduate student**), Simpson M. (**undergraduate student**), **Madraki G.**, Matthews J. Politicians, Pundits, and Platform Migration: A Comparison of Political Polarization on Parler and Twitter. *Northeast Journal of Complex Systems*. <https://doi.org/10.22191/nejcs/vol1/iss1/5/>
2. Matthews, A., Otala, J. M., Wali, E., Kurtic, G., Millington, L., Simpson, M., **Matthews J.** & **Madraki, G.** (2023). Politicians, Pundits, and Platform Migration: A Comparison of Political Polarization on Parler and Twitter. *Northeast Journal of Complex Systems (NEJCS)*, 5(1), 5.
3. Atems, B., Mette, J., Lin, G., & **Madraki, G.** (2023). Estimating and forecasting the impact of nonrenewable energy prices on US renewable energy consumption. *Energy Policy*, 173, 113374. <https://doi.org/10.1016/j.enpol.2022.113374>.
4. **Madraki, G.**, & Mousavian, S. (2022). Simultaneously Updating Multiple Performance Measures of Manufacturing Systems after Scheduling Perturbations. *IFAC-PapersOnLine*, 55(10), 2809-2814. <https://doi.org/10.1016/j.ifacol.2022.10.156>.
5. **Madraki, G.**, Mousavian, S., & Salmani, Y. (2022). A theoretical framework to accelerate scheduling improvement heuristics using a new longest path algorithm in perturbed DAGs. *International Journal of Production Research*, 1-21. <https://doi.org/10.1080/00207543.2021.2017057>
6. Otala, J. (**graduate student**), Minard, A. (**undergraduate student**), **Madraki, G.**, & Mousavian, S. (2021). Graph-Based Modeling in Shop Scheduling Problems: Review and Extensions. *Applied Sciences*, 11(11), 4741. <https://doi.org/10.3390/app11114741>.

7. Hekmat, S., Amiri, M., & **Madraki, G.** (2021). Strategic Supplier Selection in Payment Industry: A Multi-Criteria Solution for Insufficient and Interrelated Data Sources. *International Journal of Information Technology & Decision Making*, 1-35. <https://doi.org/10.1142/S0219622021500474>
8. **Madraki, G.** & Judd R. P (2021). Accelerating the Calculation of Makespan Used in Scheduling, Improvement Heuristics. *Computer & Operations Research*. <https://doi.org/10.1016/j.cor.2021.105233>.
9. Motlagh, M. M., Azimi, P., Amiri, M., & **Madraki, G.** (2019). An efficient simulation optimization methodology to solve a multi-objective problem in unreliable unbalanced production lines. *Expert Systems with Applications*, 138, 112836. <https://doi.org/10.1016/j.eswa.2019.112836>.
10. **Madraki, G.** & Judd, R. P. (2019). Recalculating the Length of the Longest Path in Perturbed Directed Acyclic Graph. *IFAC-PapersOnLine*, 52(13), 1560-1565. <https://doi.org/10.1016/j.ifacol.2019.11.422>.
11. Mehrdad, S., Mousavian, S., **Madraki, G.**, & Dvorkin, Y. (2018). Cyber-Physical Resilience of Electrical Power Systems Against Malicious Attacks: a Review. *Current Sustainable/Renewable Energy Reports*, 5(1), 14-22. <https://doi.org/10.1007/s40518-018-0094-8>.
12. **Madraki, G.** & Judd, R. P. (2018). Efficient algorithm to find makespan in manufacturing systems under multiple scheduling perturbations. *International Journal of Production Research*, 56(16), 5402-5418. <https://doi.org/10.1080/00207543.2017.1407884>.

Working Papers

1. Ojala J., **Madraki G.**, Lukaszewski M., Vahidpour B., Compani M., & Matthew J. Polarized Social Media Networks: A Novel Approach to Quantify the Polarization of Individual Users. *INFORMS Journal on Computing* (Under Review).
2. **Madraki, G.**, Mousavian, S. Advancing the Calculation Process in Each Iteration of Scheduling Heuristic Algorithms. *International Journal of Production Research* (Under Review).
3. Salmani Y., Ariannezhad A., **Madraki G.**, Application of Association Rule Mining Algorithm in Analyzing Urban Residents' Quality of life, *Computers & Industrial Engineering* (Under Review).
4. Fallah Lajimi H., Soheilifar S., **Madraki G.**, Mousavian S. A Practical Sustainable Supplier Segmentation Framework to Generate Effective Supplier Development Strategies under Uncertainty Conditions. *Supply Chain Management: An International Journal*. (Under review).
5. Akbar Ghanadian S., Ghanbartehrani S., **Madraki G.**, Mousavian S. How to Evaluate Each Component of a Closed-Loop Supply Chain Network Using New Metrics from Social Network Analysis: A Theoretical Framework, *International Journal of Production Economics*. (Under review).

6. **Madraki G.** & Judd R. P. A Simple and Fast Algorithm to Find the Length of the Longest Path in Structurally Perturbed Directed Acyclic Graphs: Case Study on Job Shop Scheduling Problem. *European Journal of Operational Research* (In submission).
7. Hadiannasab A. & **Madraki G.**, Common Method Bias in Sport Management Research. (In Progress).
8. Salmani Y., Mousavian S., & **Madraki G.** Capacity Expansion Modeling in Self-Driving Truck Industry. (In Progress).

Refereed Published Conference Proceedings

1. **Madraki, G.**, Grasso, I. (**undergraduate student**), M. Ojala, J. (**graduate student**), Liu, Y., & Matthews, J. (2021, April). Characterizing and comparing COVID-19 misinformation across languages, countries and platforms. In *Companion Proceedings of the Web Conference 2021* (pp. 213-223). <https://doi.org/10.1145/3442442.3452304>. (The average **acceptance rate** is **16%** in the last 5 years).
2. M. Ojala, J. (**graduate student**), Kurtic, G. (**undergraduate student**), Grasso, I. (**undergraduate student**), Liu, Y., Matthews, J., & **Madraki, G.** (2021, April). Political Polarization and Platform Migration: A Study of Parler and Twitter Usage by United States of America Congress Members. In *Companion Proceedings of the Web Conference 2021* (pp. 224-231). <https://doi.org/10.1145/3442442.3452305>. (The average **acceptance rate** is **16%** in the last 5 years).
3. Merritt J. (**undergraduate student**), **Madraki G.** (2021). Campus COVID-19 Testing strategies: Case study of Clarkson University. *Proceedings of the American Society for Engineering Management 2021 International Annual Conference*.
4. Kurtic, G. (**undergraduate student**), Tessier, A. (**undergraduate student**), & **Madraki, G.** Leadership Style for Various Industries with High Rate of Turnover. In *IIE Annual Conference Proceedings May 2019*. Institute of Industrial and Systems Engineers (IISE).
5. **Madraki, G.**, Bahalkeh, E., & Judd, R. Efficient Algorithm to Find Makespan under Perturbation in Operation Times. In *IIE Annual Conference Proceedings 2015 Jan 1* (p. 1474). Institute of Industrial and Systems Engineers (IISE).
6. Bahalkeh, E., **Madraki, G.**, & Judd, R. Efficient System Matrix Calculation for Manufacturing Systems. In *IIE Annual Conference. Proceedings 2015 Jan 1* (p. 1943). Institute of Industrial and Systems Engineers (IISE).
7. **Madraki, G.**, Mohtashami, A., & Amiri, M. An Efficient Simulated Based Methodology to Maximize Production Rate in Unreliable Job Shop System. In *IIE Annual Conference. Proceedings 2015 Jan 1* (p. 1916). Institute of Industrial and Systems Engineers (IISE).

Conference Presentation

1. **Madraki, G.** (2022). Calculating Makespan in Scheduling Improvement Heuristics, INFORMS Annual Meeting, Indianapolis, IN, October 2022.

2. **Madraki G.** & Mousavian S. Simultaneously Updating Multiple Performance Measures for Manufacturing Systems after Scheduling Perturbations, *10th MIM-IFAC conference on Manufacturing Modelling, Management and Control*. Nantes, France. June 2022, (Attending Online).
3. **Madraki G.** Accelerating the Calculation of Makespan Used in Scheduling Improvement Heuristics, *2022 CORS/INFORMS International Conference, Vancouver, Canada*, June 2022.
4. **Madraki G.** Improving job shop Scheduling Heuristics, *22nd annual conference of the National Business & Economics Society*, Maui, USA, March 2022.
5. Merritt J. (**undergraduate student**), **Madraki G.** (2021). Campus COVID-19 Testing strategies: Case study of Clarkson University. *Proceedings of the American Society for Engineering Management 2021 International Annual Conference*. (Attending Online).
6. Ojala, J (**undergraduate student**), **Madraki G.** Characterizing the Behavior of a Single User in Polarized Social Media Network. Abstract Accepted in *IIE Annual Conference*, New Orleans, LA, USA, May 2020.
7. **Madraki, G.** Finding the length of the longest path in perturbed Directed Acyclic Graph, New Approach, *INFORMS Annual Meeting 2019*, Seattle, WA, October 2019.
8. **Madraki, G.,** Finding the longest path in a structurally perturbed Directed Acyclic Graph, *INFORMS International Meeting 2019-Cancun, Mexico*, June 2019.
9. Lindsay, C. (**undergraduate student**), Blanchard, K. (**undergraduate student**), Mulhern, W. (**undergraduate student**), **Madraki, G.** Finding Appropriate Leadership Styles to Reduce Employee Turnover in Healthcare. Abstract Accepted in *IIE Annual Conference*, Orlando, FL, USA, May 2019.
10. **Madraki, G.** Finding the longest path in a structurally perturbed Directed Acyclic Graph, *MCCNNY 2018*, Clarkson University, Potsdam, NY, Oct 2018. (Invited by Dr. Guangming Yao.)
11. **Madraki, G.** Finding the length of the longest path in a structurally perturbed Directed Acyclic Graph, *INFORMS Annual Meeting 2018- Phoenix, AZ*, November 2018.
12. **Madraki, G.** Accelerating the Scheduling Improvement Heuristics by Finding the Longest Path in the Perturbed Graph, *INFORMS Annual Meeting 2018 Phoenix, AZ*, November 2018. (Invited speaker.)
13. **Madraki, G.** Efficient Algorithm to Find the Longest Path in a DAG under Multiple Structural Perturbations, *Annual International INFORMS Conference 2016*, Waikoloa Village, Hawaii, June 2016.
14. **Madraki, G.** Improving all Scheduling Heuristics for Deterministic Manufacturing Systems, Doctoral Colloquium, *IIE Annual Conference & Expo 2016*, Anaheim, CA, May 2016.
15. **Madraki, G.** Efficient algorithms to find Makespan in systems under scheduling perturbations, *International INFORMS 2016*, Waikoloa Village, HI, June 2016.
16. **Madraki, G.** Efficient methodology for maximizing total noise reduction and minimize total cost in traffic design, *INFORMS Annual Meeting 2015*, Philadelphia, PA, November 2015.
17. **Madraki, G.** A simulation-based methodology to maximize production rate in unreliable job shop system, *IIE Annual Conference & Expo 2015*, Nashville, TN, May 2015.
18. **Madraki, G.,** Algorithm to find make-span under perturbation in operation times, *IIE Annual Conference & Expo 2015*, Nashville TN, May 2015.

19. **Madraki, G.** Efficient system matrix calculation for manufacturing systems, *IIE Annual Conference & Expo 2015*, Nashville TN, May 2015.
20. **Madraki, G.** Comparison of algorithms to calculate Kleene Star in the Max-Plus Dioid. *Ohio University Student Research and Creativity Expo*, Ohio University, Spring 2015.
21. **Madraki, G.** Designing optimum noise control barriers by applying RSM and simulation methodology, *Ohio University Student Research and Creativity Expo*, Ohio University, Spring 2014.
22. **Madraki, G.** Simulation of different types of production systems based on queuing theory and discrete-event systems. *Ohio University Student Research and Creativity Expo*, Ohio University, Fall 2014.
23. **Madraki, G.** Developing a multi objective mathematical model for job shop systems, *Ohio University Student Research and Creativity Expo*, Ohio University, Spring 2013.
24. **Madraki, G.** Application of response surface methodology (RSM) in estimating of cost function of a Two-echelon inventory system and optimization by genetic algorithm, *Ohio University Student Research and Creativity Expo*, Ohio University, Fall 2013.

Research Funding

- A Quantified Gender-Based Analysis of Polarization in Social Media. Lead PI: **G. Madraki**. *AAUW-American Fellowship- Short term research publication grant*. \$6,000 (Submitted in Aug. 2021- **Granted** \$6,000 for the 2022-23 award year.
<https://www.aauw.org/resources/programs/fellowships-grants/current-opportunities/american/short-term-research-publication-grants/>
- Entrepreneurial social media influencers' impact on Mitigating Vaccine Hesitancy. PI: **G. Madraki**, *Clarkson University Research Grant by Joel Goldschein '57 Chair in Supply Chain Management and the Reh Family Endowed Chair in Entrepreneurial Leadership: Spring 2022*. **Granted** \$5,000.
- Mitigating Vaccine Hesitancy on Social Media among the US Users in Health Disparities Communities, Lead PI: **G. Madraki**, *Clarkson University Undergraduate Faculty Research Award: January 2022*, **Granted** \$5,000.
- Analyzing and Mitigating Polarization in Social Media to Fight against COVID-19 Pandemic, Lead PI: **G. Madraki**, *Clarkson University Epidemic and Virus-Related Research Innovation Fund*, Co-PIs: Y. Liu (ECE), Jeanna Matthews (CS). June 2020, **Granted** \$60,000.
- Graph-theoretic Analyzing the Behavior of Polarized Networks and Balancing and Mitigating Approaches for Polarization, Lead PI: **G. Madraki**, *Clarkson University Undergraduate Faculty Research Award: 2019*, Co-PIs: Y. Liu. February 2020, **Granted** \$3,330.
- DCSA: Graph-theoretic Cyberattack Propagation Modeling & Robust Prevention & Mitigation Approaches in Interconnected Power & Electric Transportation Systems, Lead PI: S. Mousavian, *Clarkson University Grants Pilot Program to Support Ignite Graduate Research Fellowship*, Co-PIs: L. Wu (Stevens Institute of Technology), **G. Madraki** (Clarkson University), March 2019, **Granted** \$300,000.

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- HGS and CDED: Mitigating Vaccine Hesitancy on Social Media among the US Users in Communities Facing Health Disparities. Lead PI: **G. Madraki**, Co-PIs: Jeanna Matthews, Amir Mousavian. *Clarkson University Team-Science Faculty Research Funding: 2022*. \$60,000 (Submitted in Jan. 2022- Attempted).
 - FAI: Concrete Metrics to Measure Multiple Types of Bias Throughout the ML/NLP Pipeline to Reduce the Bias in Deployed Systems, PI: J. Matthews, Co-PI: **G. Madraki**. *National Science Foundation, Division of Information & Intelligent Systems*. \$897,237. (Submitted in July 2020- Attempted).
 - CDED: Analyzing, Balancing, and Mitigating Polarization in Social Media for Thread Detection, Lead PI: **G. Madraki**. *Clarkson University Grants Pilot Program to Support Ignite Graduate Research Fellowship*, Co-PIs: Y. Liu. (Submitted in January 2020- Attempted).

Research Honors

- Nominated for John W. Graham Jr. Faculty Research Award 2023 at Clarkson University. Spring 2023.
- I was selected by the Honors Student Body to receive the **Kristen Craig Memorial Faculty Recognition Award** which is bestowed by Honors students on the faculty member who has most positively impacted them. Spring 2021
- Invited to present my paper entitled “Characterizing and comparing COVID-19 misinformation across languages, countries and platforms” in-person in the *Center for Collective Dynamics of Complex Systems (CoCo)*, Binghamton University, Sep. 2021. (Invited by Dr. Hiroki Sayama).
- Nominated for 2018-INFORMS Computing Society Prize for the Best English Language Paper. INFORMS Annual Meeting, Phoenix, Arizona, Nov 2018.
- 1st Place in the Poster Competition, Efficient algorithm to find makespan under perturbation in operation times, Student Research and Creativity Expo (Section I), *IIE Annual Conference & Expo*, Nashville, TN, May 2015.
- 1st Place in the Poster Competition, Discrete event dynamic simulation for modeling a real job shop system, Student Research and Creativity Expo (Section II), *IIE Annual Conference & Expo*, Nashville, TN, May 2015.
- Distinguished Member of *Alpha Pi Mu Chapter*, Ohio University, March 2014.
- Certified presenter at *Idea Pitch Competition, Innovation and Entrepreneurship Center*, Ohio University, April 2015.
- Certified Safety ERC/OSHA Workshop Attendee, *University of Cincinnati*, Cincinnati, OH, December 2014.
- Graduate Research Assistantship Awarded, Department of Industrial and Systems Engineering, Ohio University, 2013 - present.

Other Research Impact

Title	Journal	Year	Impact Factor	Eigen Factor	Citations	Classification
Politicians, Pundits, and Platform Migration: A Comparison of Political Polarization on Parler and Twitter	<i>Northeast Journal of Complex Systems</i>	2023	NA	NA	–	–
Estimating and forecasting the impact of nonrenewable energy prices on US renewable energy consumption	<i>Energy Policy</i>	2023	6.14	98	11	Premier
Simultaneously Updating Multiple Performance Measures of Manufacturing Systems after Scheduling Perturbations	<i>IFAC-PapersOnLine</i>	2022	1.13	NA	–	–
A Theoretical Framework to Accelerate Scheduling Improvement Heuristics Using a New Longest Path Algorithm in Perturbed DAGs	<i>International Journal of Production Research</i>	2022	8.57	88	2	Major
Strategic Supplier Selection in Payment Industry: A Multi-Criteria Solution for Insufficient and Interrelated Data Sources	<i>International Journal of Information Technology & Decision Making</i>	2021	2.22	38	5	–
Graph-Based Modeling in Shop Scheduling Problems: Review and Extensions	<i>Applied Sciences</i>	2021	1.85	NA	8	–
Accelerating the Calculation of Makespan Used in Scheduling, Improvement Heuristics	<i>Computers & Operations Research</i>	2021	4	89	9	Major
An Efficient Simulation Optimization Methodology to Solve a Multi-Objective Problem in Unreliable Unbalanced Production Lines	<i>Expert Systems with Applications</i>	2019	6.95	98	44	Premier
Recalculating the Length of the Longest Path in Perturbed Directed Acyclic Graph	<i>IFAC-PapersOnLine</i>	2019	1.13	NA	7	–
Cyber-Physical Resilience of Electrical Power Systems against Malicious Attacks: A Review	<i>Current Sustainable/Renewable Energy Reports</i>	2018	New	NA	70	–
Efficient Algorithm to Find Makespan in Manufacturing Systems under Multiple Scheduling Perturbations	<i>International Journal of Production Research</i>	2018	8.57	88	7	Major

Title	Proceeding	Year	Citation	Classification
Characterizing and comparing COVID-19 misinformation across languages, countries and platforms	<i>Companion Proceedings of the Web Conference 2021</i>	2021	17	Undergraduate Research, Conference Proceeding
Political Polarization and Platform Migration: A Study of Parler and Twitter Usage by United States of America Congress Members	<i>Companion Proceedings of the Web Conference 2021</i>	2021	19	Undergraduate Research, Conference Proceeding
Campus COVID-19 Testing strategies: Case study of Clarkson University.	<i>Proceedings of the American Society for Engineering Management 2021 International Annual Conference</i>	2021	–	Undergraduate Research, Conference Proceeding
Leadership Style for Various Industries with High Rate of Turnover	<i>Proceedings of the IISE Conference 2019</i>	2019	–	Undergraduate Research, Conference Proceeding
Efficient Algorithm to Find Makespan under Perturbation in Operation Times.	<i>Proceedings of the IISE Conference 2015</i>	2015	11	Conference Proceeding
Efficient System Matrix Calculation for Manufacturing Systems	<i>Proceedings of the IISE Conference 2015</i>	2015	10	Conference Proceeding
An Efficient Simulated Based Methodology to Maximize Production Rate in Unreliable Job Shop System.	<i>Proceedings of the IISE Conference 2015</i>	2015	5	Conference Proceeding

Research-Related Workshop Attendances

- Global Supply Chain Management (GSCM) Executive Seminar, Clarkson University, Potsdam, NY, Summer 2018. Invited by Dr. Farzad Mahmoodi.

Teaching

Teaching Experiences

Note that EM380 and OM380 are cross-registered courses where a section of each is taught at the same time and the same class.

- HP 490, Honors Capstone Final Project, Clarkson University
 - Fall 2022 (30 students)
- HP 390, Honors Capstone Proposal Course, Clarkson University
 - Spring 2023 (35 students)
- EM482, Systems Engineering and Management, Clarkson University,
 - Fall 2022, *Section 1*
 - Fall 2021, *Section 1 & 2*. (**Hybrid= In-person & Online**)
 - Fall 2020, *Section 1 & 2*. (**Hybrid= In-person & Online**)
 - Fall 2019, *Section 1 & 2*.
 - Fall 2018, *Section 1*.
 - Spring 2018, *Section 1*.
 - Fall 2017, *Section 1 & 2*.
- OM/EM 380, Project Management, Clarkson University,
 - Spring 2023, *Section 3*
 - Spring 2021, *Section 1 & 2*. (**Hybrid= In-person & Online**)
 - Spring 2020, *Section 1 & 2*. (**Fully Online**)
 - Spring 2019, *Section 1 & 2*.
 - Fall 2018, *Section 3*.
 - Spring 2018, *Section 1 & 2*.
 - Fall 2017, *Section 3*.
- ET3300/5300, Engineering Economics, Instructor, Ohio University, Fall 2015, 30 Students.
- ET3300/5300, Engineering Economics, Teaching Assistant (TA), Ohio University, Summer 2015.

Teaching Awards and Honors

- Selected by Clarkson University Students Association (CUSA) to give a "Last Lecture" for the Class of 2022 at Clarkson University.
- Spring 2021- I was selected by the Honors Student Body to receive the **Kristen Craig Memorial Faculty Recognition Award** which is bestowed by Honors students on the faculty member who has most positively impacted them.
- Received 2019-20 Faculty Teaching Excellence Award, Reh School of Business, Clarkson University.

- Adviser of the winners of the 2020 *Ignite President's Challenge* including a team of **undergraduate students** (Jonathan Burbank (E&M), Elizabeth Roberts (E&M), and Luke Dixon (Mechanical Eng.)” who won a series of awards for their Maglet project, including *Overall Winner*, *Best in Category*, *Most Creative/Innovative*, and second place for their video (Showcase).

Teaching Evaluations Scores at Clarkson University

Evaluation scores based on question 19: Overall, how would you rate this instructor?

Course	Semester	Evaluation Scores					Number of Responding Students	Total Number of Students	Semester Ave
		1	2	3	4	5			
EM/OM 380 - 03	Spring 2023	0	0	0	0	24	24	31	5
EM 482 - 01	Fall 2022	0	0	0	1	11	12	15	4.8
EM 482 - 01	Fall 2021	0	0	0	2	13	15	15	4.9
EM 482 - 02	Fall 2021	0	0	0	1	11	11	11	4.9
EM/OM 380 - 01	Spring 2021	0	0	0	2	3	5	13	4.6
EM/OM 380 - 02	Spring 2021	0	0	0	0	5	5	40	5
EM 482 - 01	Fall 2020	0	0	1	2	10	13	15	4.7
EM 482 - 02	Fall 2020	0	0	0	1	5	6	13	4.8
EM/OM 380 - 01	Spring 2020	0	1	0	1	23	25	56	4.8
EM/OM 380 - 02	Spring 2020	0	0	1	2	18	21	55	4.8
EM 482 - 01	Fall 2019	0	0	1	2	18	21	24	4.9
EM 482 - 02	Fall 2019	0	0	0	1	13	14	15	4.9
EM/OM 380 - 01	Spring 2019	0	1	0	3	26	30	38	4.8
EM/OM 380 - 02	Spring 2019	0	0	1	1	16	18	25	4.8
EM/OM 380- 03	Fall 2018	0	0	0	0	18	18	22	5
EM 482- 01	Fall 2018	0	1	1	8	15	25	30	4.5
EM/OM 380- 01	Spring 2018	0	0	0	7	35	42	49	4.8
EM/OM 380- 02	Spring 2018	0	0	0	9	16	25	39	4.6
EM 482- 01	Spring 2018	0	0	0	1	10	11	13	4.9
EM/OM 380 - 03	Fall 2017	0	0	1	11	13	25	27	4.5
EM 482 - 01	Fall 2017	0	1	2	1	8	12	12	4.3
EM 482 - 02	Fall 2017	0	0	1	2	3	6	9	4.4
Overall Percentage		0.00%	1.04%	2.34%	15.10%	81.77%	384	567	4.76

Teaching Development

- Collaboration with Richard Akers, the Professional Development Director at Kiewit Corporation in their Learning Initiative project for their company. Sharing e-learning and online-teaching experience and its potential application at industry. Dec 2020.
- RISE Certification for **Online Teaching**, Clarkson University, Potsdam, NY, July 2020.
- New Faculty Two-weeks Workshop, Clarkson University, Potsdam, NY, July 2018. Invited by Dr. William Jemison.
- INFORMS New Faculty Colloquium, Houston, Texas, USA, Oct. 2017.
- Service-Learning for Faculty and Instructors, Ohio University, Athens, OH, Fall 2015.

Service

External Service

Professional Society Memberships

- Member of Institute for Operations Research and Management Sciences (INFORMS), Summer 2015 – Present.
- Member of INFORMS Junior Faculty Interest Group (JFIG), Fall 2018 – Present.
- Member of INFORMS Women in OR/MS (WORMS), Fall 2017 – Present.
- Member of INFORMS Manufacturing & Service Operations Management Society (MSOM), Fall 2017 – Present.
- Member of Institute of Alpha Pi Mu, Industrial Engineering Honor Society, Fall 2014 – Present.
- Member of Institute of Industrial Engineers (IISE), Spring 2014 – Present.
- Attended the INFORMS Annual Meeting every year since 2015 serving in roles of Research Speaker, Invited speaker, and Session Chair. In addition, I attended INFORMS New Faculty Colloquium in Oct 2017 in Houston, Texas.
- Participated IISE Annual Meeting, and IFAC triannual conference on Manufacturing Modelling, Management and Control.

Professional Society Conference Service

- Organizing NERCCS 2023 (the Sixth Northeast Regional Conference on Complex Systems) at Clarkson University, April 2023 for the first time.
- Invited Reviewer, IISE Annual Conference Proceeding 2022, Feb 2022
- Session Chair and Organizer, Session Title: “TB42. Graph Algorithms and Applications I”. *INFORMS Annual Meeting 2019*, Seattle, WA, Oct 2019.
- Session Chair and Organizer, Session Title: “TC42. Graph Algorithms and Applications II”. *INFORMS Annual Meeting 2019*, Seattle, WA, Oct 2019.
- Invited Reviewer, IISE Annual Conference Proceeding 2019, Feb 2019
- Session Chair and Organizer, Session title: “Network Optimization in Applications”. *INFORMS Annual Meeting 2018*, Phoenix, AZ, Nov 2018.
- Invited Speaker, Session chair: Foad Mahdavi Pajouh. “Optimization Network”. *INFORMS Annual Meeting 2018*, Phoenix, AZ, Nov 2018.

Peer-Review Service

- Invited Reviewer, journal of *Safety and Health at Work*, July 2023.
- Invited Reviewer, *International Journal of Production Economics*, July 2022.
- Invited Reviewer, *Computers and Operations Research*, April & July. 2022.
- Invited Reviewer, journal of *Healthcare Analytics*, Nov. 2021.
- Invited Reviewer, journal of *Social Media & Society*, Oct. 2021.
- Invited Reviewer, *International Journal of Data Science and Analytics*, Aug. 2021.
- Invited Reviewer, *IEEE Transaction on Systems, Man, Cybernetics: Systems*, May 2020 and August 2020. (2 papers)
- Invited Reviewer, *IFAC-PapersOnLine*, Feb. 2019.
- Invited Reviewer, *Engineering Science and Technology, an International Journal*, April 2020.
- Invited Reviewer, *Journal of Complexity*, Sep. 2018.
- Invited Reviewer, *International Journal of Production Research*, July 2017.

Community Service and Others

- Contributing to the Coded Bias Virtual Film Series Screening, Clarkson University, March 2021.
- Contributing to several panels including "The Change I Want for My Daughter" as a part of 2021 Virtual Film Series during Women's History Month, Brought by the ACM (Association for Computer Machinery) Technology Policy Council, the ACM Diversity and Inclusion Council, an NSF Advance Grant to Clarkson University and the Clarkson Open-Source Institute, March 2021.
- Attending the annual *RightCon*, The World's Leading Summit on Human Rights in the Digital Age Conference July 2020 and 2021.
- Contributing (sharing local products, creating arts, etc.) to the “#AsyncArts Project” a series of public art installations around the North Country. Developed by SLC Arts a non-profit organization located in Potsdam, St. Lawrence County, New York State, since Spring 2020.

Internal Service

Administrative Position

- Associate Director of Honors Program at Clarkson University- 3 years contract, Aug 2022-25.

Clarkson University Services

- Leading E&M social media team since Fall 22.
- Serving in the “Global Business Programs Review Committee” - 1 year term, 2022-23.
- Organizer and instructor of the Young Scholars Summer Program 2022: a guided problem-solving program on the topic of “The Cool and the Terrifying: Powerful Digital Storytelling Based on Simple Data’, since Spring 2022, Clarkson University, Potsdam, NY.
- Faculty Advisor of Alpha Kappa Psi chapter, Professional Co-ed Business Fraternity, at Clarkson University, since Spring 2022.
- Serving on the “Dissertation committee” of a Ph.D. student “Beheshteh Raouf” for her dissertation, "Mathematical models for operations of energy markets and security of interconnected cyber-physical systems". Research Advisor: Prof. Amir Mousavian, Expected graduation May 2023.
- Interview in Clarkson Ignite Podcast series, Fall 2021.
 - Spotify: <https://open.spotify.com/episode/7JdUr1QgbKWx6DYJLEEGFW?si=P2ASVr7ESceI50CnaOpaPA>
 - Apple Podcasts:
 - <https://podcasts.apple.com/us/podcast/clarkson-ignite-podcast/id1437009452?i=1000538710394>
 - Google Podcasts:
 - <https://podcasts.google.com/feed/aHR0cHM6Ly9jbGFya3Nvbmlnbml0ZXBvZGNhc3QuYmxlYnJyeS5uZXQvZmVlZC9wb2RjYXN0Lw>
- Serving in “Faculty Senate Teaching Effectiveness Committee”, since Oct. 2021.
- Serving in RSB Awards Committee, Spring 2021.
- Serving in the university wide “Research Advisory Committee (RAC)”, Strategy-Subgroup, since July 2020.
- Serving in the “C3S2 Clarkson Center of Complex Systems Science” since July 2020
- Organizer and member of Alpha Pi Mu - Clarkson University Chapter, the American honor society for Industrial and Systems Engineering Society since Spring 2019.
- Serving in “Clarkson Campus Safety Advisory Committee”, since Spring 2018.
- Serving in Master Thesis Committee of a graduate student “Zack Rauen” for his thesis, "Improving the role of Human-Computer Interaction in Continuous User Verification in Smartphone Sensing". Thesis Advisor: Prof. Burak Kantarci, Spring 2018.

Research Presentations in Clarkson University

- Presented two research projects as the Invited Speaker in *C3S2 Clarkson Center of Complex Systems Science*, Fall 2020 and Spring 2022. Invited by Dr. Erik Bolt.
- Presented my Ignite Graduate Research fellowship proposal in the Reh School of Business Seminar Series, March 2020.
- Presented my research in the Reh School of Business Seminar Series, Feb. 8, 2019.

- Presented my research as the Invited Speaker in *Department of Mathematics colloquium*, Clarkson University, March 2019. Invited by Dr. Marko Budišić.
- Invited Speaker in Mathematics Competition and Conference of Northern New York (MCCNNY) 2018, Clarkson University, Potsdam, NY, Oct. 2018. Invited by Dr. Guangming Yao.

PhD Student Advisor

- Research Advisor of the following 2 Ph.D. students:
 - **Jacqueline (Jackie) Ojala**, Ph.D. in the Engineering Science since Fall 2020.
 - **Kimberly Van Exel**, Ph.D. degree in the Math since Fall 2021

Honors Thesis Advisor

- Research Advisor
 - **Gillian Kurtic**, undergraduate student, Honors Thesis: “Polarized Social Media and its impact on Politics and COVID-19 Misinformation/ Disinformation”, Fall 2019-Spring 2021.

Undergraduate Research Advisor Clarkson University

- **Matthew Lukaszewski** in the following project:
 - Ojala J. (**graduate student**), **Madraki G.**, Vahidpour B. (**graduate student**), Lukaszewski M. (**undergraduate student**), & Matthews J. Characterizing the Behavior of Individual Users in Polarized Social Media Network. (In Progress).
- **Joseph Mendoza** and **Ashley Bravo Torreblanca** (both undergraduate E&M students) in the following project:
 - Atems B., Mette J., Lin G., **Madraki G.**, Mendoza J. (**undergraduate student**), Bravo Torreblanca A. (**undergraduate student**). Estimating and Forecasting the Impact of Nonrenewable Energy Prices on Renewable Energy Consumption. (In progress).
- **Lynden Millington** and **Michael Simpson** (both undergraduate Computer Science students) in the following project:
 - Matthews A., Ojala J., Wali E. (**graduate student**), Millington L. (**undergraduate student**), Simpson M. (**undergraduate student**), **Madraki G.**, Matthews J. Politicians, Pundits, and Platform Migration: A Comparison of Political Polarization on Parler and Twitter. In Progress.
- **Jacqueline (Jackie) Ojala** (‘2020 E&M, Graduate student ‘2022) in the following projects:
 - Matthews A., Ojala J., Wali E. (**graduate student**), Millington L. (**undergraduate student**), Simpson M. (**undergraduate student**), **Madraki G.**, Matthews J. Politicians,

- Pundits, and Platform Migration: A Comparison of Political Polarization on Parler and Twitter. In *Social media + Society* (Under Review).
- **Madraki, G.**, Grasso, I. (**undergraduate student**), M. Otala, J. (**graduate student**), Liu, Y., & Matthews, J. (2021, April). Characterizing and comparing COVID-19 misinformation across languages, countries and platforms. In *Companion Proceedings of the Web Conference 2021* (pp. 213-223). <https://doi.org/10.1145/3442442.3452304>. (The average **acceptance rate** is **16%** in the last 5 years).
 - M. Otala, J.(**graduate student**), Kurtic, G.(**undergraduate student**), Grasso, I.(**undergraduate student**), Liu, Y., Matthews, J., & **Madraki, G.** (2021, April). Political Polarization and Platform Migration: A Study of Parler and Twitter Usage by United States of America Congress Members. In *Companion Proceedings of the Web Conference 2021* (pp. 224-231). <https://doi.org/10.1145/3442442.3452305>. (The average **acceptance rate** is **16%** in the last 5 years).
 - Otala, J. (**graduate student**), Minard, A. (**undergraduate student**), **Madraki, G.**, & Mousavian, S. (2021). Graph-Based Modeling in Shop Scheduling Problems: Review and Extensions. *Applied Sciences*, 11(11), 4741. <https://doi.org/10.3390/app11114741>.
- **Alden Minard** (undergraduate E&M student) in the following project:
 - Otala, J. (**graduate student**), Minard, A. (**undergraduate student**), **Madraki, G.**, & Mousavian, S. (2021). Graph-Based Modeling in Shop Scheduling Problems: Review and Extensions. *Applied Sciences*, 11(11), 4741. <https://doi.org/10.3390/app11114741>
 - **Jacob Merritt** (undergraduate E&M student) in the following project:
 - Merritt J.(**undergraduate student**), **Madraki G.**. (2021). Campus COVID-19 Testing strategies: Case study of Clarkson University. *Proceedings of the American Society for Engineering Management 2021 International Annual Conference*).
 - **Isabella (Izzi) Grasso** (undergraduate Data Analytics student) in the following projects:
 - **Madraki, G.**, Grasso, I. (**undergraduate student**), M. Otala, J. (**graduate student**), Liu, Y., & Matthews, J. (2021, April). Characterizing and comparing COVID-19 misinformation across languages, countries and platforms. In *Companion Proceedings of the Web Conference 2021* (pp. 213-223). <https://doi.org/10.1145/3442442.3452304>. (The average **acceptance rate** is **16%** in the last 5 years).
 - M. Otala, J.(**graduate student**), Kurtic, G.(**undergraduate student**), Grasso, I.(**undergraduate student**), Liu, Y., Matthews, J., & **Madraki, G.** (2021, April). Political Polarization and Platform Migration: A Study of Parler and Twitter Usage by United States of America Congress Members. In *Companion Proceedings of the Web Conference 2021* (pp. 224-231). <https://doi.org/10.1145/3442442.3452305>. (The average **acceptance rate** is **16%** in the last 5 years).
 - **Gillian Kurtic** (undergraduate E&M student) in the following projects:
 - M. Otala, J.(**graduate student**), Kurtic, G.(**undergraduate student**), Grasso, I.(**undergraduate student**), Liu, Y., Matthews, J., & **Madraki, G.** (2021, April). Political Polarization and Platform Migration: A Study of Parler and Twitter Usage by United States of America Congress Members. In *Companion Proceedings of the Web Conference 2021* (pp. 224-231). <https://doi.org/10.1145/3442442.3452305>. (The average **acceptance rate** is **16%** in the last 5 years).
 - Kurtic G., Tessier A. (*Undergraduates Student*), **G. Madraki**, “Leadership Style for Various Industries with High Rate of Turnover.” Submitted in *IIE Annual Conference. Proceedings*, May 2019, Orlando, FL, USA.
 - **Allison Tessier** (undergraduate E&M student) in the following project:

- Kurtic G., Tessier A. (*Undergraduate Students*), **G. Madraki**, “Leadership Style for Various Industries with High Rate of Turnover.” Submitted in *IIE Annual Conference Proceedings*, May 2019, Orlando, FL, USA.
- **Callie Lindsay, Katherine Blanchard, and William Mulhern** (undergraduate E&M students) in the following Project:
 - Lindsay, C., Blanchard, K., Mulhern, W., **Madraki, G.**, Finding Appropriate Leadership Styles to Reduce Employee Turnover in Healthcare. Abstract Accepted in *IIE Annual Conference*, Orlando, FL, USA, May 2019.

Graduate-level Research Personnel under My supervision Clarkson University

- **Jacqueline (Jackie) Otała** (Ph.D. in Engineering Science), **Esma Wali** (Ph.D. in Computer Science), **Gillian Kurtic** (MBA), **Bahareh Vahidpour** (Master of Applied Data Science), **Kimberly Van Exel** (Ph.D. in Engineering Science).
in the following project:
 - Matthews A., Otała J., Wali E. (graduate student), Millington L. (undergraduate student), Simpson M. (undergraduate student), Madraki G., Matthews J. Politicians, Pundits, and Platform Migration: A Comparison of Political Polarization on Parler and Twitter. In *Social media + Society* (Under Review).
 - Otała J. (**graduate student**), **Madraki G.**, Vahidpour B. (**graduate student**), Lukaszewski M. (**undergraduate student**), & Matthews J. Characterizing the Behavior of Individual Users in Polarized Social Media Network. (In Progress).
- **Abigail Matthews** (Ph.D. student in Computer Science at The University of Wisconsin–Madison, Part time employee) in the following project:
 - Matthews A., Otała J., Wali E. (**graduate student**), Millington L. (**undergraduate student**), Simpson M. (**undergraduate student**), Madraki G., Matthews J. Politicians, Pundits, and Platform Migration: A Comparison of Political Polarization on Parler and Twitter. In *Social media + Society* (Under Review).
- **Maedeh Mosayeb Motlagh** (MS. in Operations Management at Allameh Tabatabae'i University, Tehran, Iran) in the following project:
 - Motlagh, M. M., Azimi, P., Amiri, M., & **Madraki, G.** (2019). An efficient simulation optimization methodology to solve a multi-objective problem in unreliable unbalanced production lines. *Expert Systems with Applications*, 138, 112836. <https://doi.org/10.1016/j.eswa.2019.112836>.
- **Siavash Hekmat** (MS. in Industrial Management at Allameh Tabatabae'i University, Tehran, Iran) in the following project:
 - Hekmat, S., Amiri, M., & **Madraki, G.** (2021). Strategic Supplier Selection in Payment Industry: A Multi-Criteria Solution for Insufficient and Interrelated Data Sources. *International Journal of Information Technology & Decision Making*, 1-35. <https://doi.org/10.1142/S0219622021500474>.

Open houses & Prospective Students

- Faculty representative for Open house, Spring 2022.
- Faculty representative for Virtual Open house, Spring 2020.
- Meeting with prospective student: e.g., William Hubert , Allison Maureen Kallfelz visited my class EM/OM 380 in Fall 2018 and Spring 2020.

Hiring Process and Job Candidates

- Member of search committees for the position of VP for Strategic Enrollment Management, University service- Summer 2023.
- Member of search committees for Teaching-Track Honors Philosophy Position, University service-Summer 2023.
- Chair of the search committee for “Honors/STEM Ed Visiting Assistant Professor”, University service- Spring 2023.
- Member of search committees for Tenure- Track Positions- School Service
 - E&M in Fall 2021
 - E&M in Fall 2020
 - Marketing in Fall 2018
- Chair of the search committee for ‘Assistant Director of E&M’, school service- Fall 2021
- Involving in hiring process and job candidates:

Other Clarkson University Services

- Hosting Christian Newland from General Dynamics Missions Systems, as a part of Clarkson Recruitment service to students, in my Systems Engineering classes (EM 482), Fall 2021.
- Meeting with the Clarkson University Board of Trustees on shared governance, Spring 2021.
- Serving as faculty panelist for the *Young Scholars Program*, a guided problem-solving program on "The Promise, Pitfalls and Ethics of Genetic Technologies" with high school local students, organized by Dr. Jeanna Matthews, July 2020.
- Hosting Craig Ferris (Alumni,77), former Senior Vice President Synergy Innovations at KBC Advanced Technologies, a Yokogawa Company. Recently Transpara company. in Project Management Class (EM/OM 380-01), Spring 2020.
- Meeting with the **AACSB** Audit Committee. Working Lunch and meeting. Fall 2019.
- Co-Supervisor of Global Affairs Canada Trip, Lead Supervisor: Martin Heintzelman, Ottawa, Canada, Fall 2018.

List of References

- 1- Dr. John Milne
 - Associate Professor of Engineering & Management
 - Reh School of Business, Clarkson University, NY, USA.
 - Email: jmilne@clarkson.edu
 - 3152687919

- 2- Dr. Jeanna Matthews
 - Professor of Computer Science
 - Clarkson University, NY, USA.
 - Email: jmatthew@clarkson.edu
 - 3152686288

- 3- Dr. Robert Judd
 - Professor of Industrial and System Engineering
 - Ohio University, OH, USA.
 - Email: Judd@ohio.edu
 - 7405931539