

## RESEARCH INTERESTS

Analytics for social good, public sector operations

## ACADEMIC POSITIONS

**Harvard Business School**, Boston, MA  
Technology and Operations Management Unit

2022 – Assistant Professor  
2021 – 2022 Visiting Postdoctoral Fellow

**Stanford University**, Stanford, CA  
2021 – 2022 Postdoctoral Fellow, Immigration Policy Lab

## EDUCATION

2016 – 2021 **Massachusetts Institute of Technology**, Cambridge, MA  
PhD in Operations Research  
Advisors: Prof. Retsef Levi and Prof. Georgia Perakis  
Thesis: *Healthy Food Access and Consumption: Informing Interventions Through Analytics*  
Supported by the NSF Graduate Research Fellowship (2016-2019)

**The Pennsylvania State University**, Schreyer Honors College, University Park, PA  
2013 – 2015 M.A. in Mathematics  
2011 – 2015 B.A. in Mathematics  
2011 – 2015 B.A. in Statistics

## PRE-PRINT PAPERS

**Heterogeneous Treatment Effects in Panel Data.** R. Levi, E. Paulson, G. Perakis, and E. Zhang. Under preparation.

**Public Attitudes on Performance for Algorithmic and Human Decision-Makers.** K. Bansak and E. Paulson. Under revision.

**Dynamic Matching with Post-Allocation Service and its Application to Refugee Resettlement.** K. Bansak, S. Lee, V. Manshadi, E. Paulson, and R. Niazadeh. Submitted.  
◇ Accepted to the *25th ACM Conference on Economics and Computation* (EC '24)  
◇ Accepted to the *5th Annual Symposium on Foundations of Responsible Computing* (FORC '24)  
◇ Accepted for Presentation at *9th Marketplace Innovation Workshop* (MIW '24)

**Group Fairness in Dynamic Refugee Assignment.** D. Freund, T. Lykouris, E. Paulson, B. Sturt, and W. Weng. Under preparation.  
◇ Accepted to the *24th ACM Conference on Economics and Computation* (EC '23)

- ◇ Accepted to the *4th annual Symposium on Foundations of Responsible Computing* (FORC '23)

**Designing Inclusive Offerings.** R. Levi, E. Paulson, and G. Perakis. Major revision in *Management Science*.

**Optimal Interventions for Increasing Healthy Food Consumption Among Low Income Populations.** R. Levi, E. Paulson, and G. Perakis. Major revision in *Management Science*.

- ◇ Accepted for oral presentation, Workshop on Mechanism Design for Social Good (2020)

**Enhancing the benefits of dual sourcing with reverse information sharing.** A. Jagmohan, P. Harsha, R. Levi, E. Paulson, and G. Perakis. Major revision in *M&SOM*.

## PUBLISHED PAPERS

**Learning Under Random Distributional Shifts.** K. Bansak, E. Paulson, and D. Rothenhäusler. Proceedings of the *International Conference on Artificial Intelligence and Statistics* (2024) (AISTATS '24).

**Outcome-Driven Dynamic Refugee Assignment with Allocation Balancing.** K. Bansak and E. Paulson. *Operations Research, Articles in Advance* (2024).

- ◇ Extended abstract appeared in the *23rd ACM Conference on Economics and Computation* (EC '22)

**Public Health Risks Arising from Food Supply Chains: Challenges and Opportunities.** L. Chen, D. Guttieres, R. Levi, E. Paulson, G. Perakis, N. Renegar, S. Springs. *Naval Research Logistics*, Special Issue on OR Models for Developmental Studies (2021).

**Cooperation Can Emerge in Prisoner's Dilemma from a Multi-Species Predator Prey Replicator Dynamic.** E. Paulson and C. Griffin. *Mathematical Biosciences* (2016), 178 p.56-62.

**A Game Theoretic Model for Resource Allocation Among Countermeasures with Multiple Attributes.** E. Paulson, I. Linkov, and J. Keisler. *European Journal of Operations Research* (2016), 252 p.610-622. DOI: 10.1016/j.ejor.2016.01.026.

**Deriving and Optimally Deceptive Policy in Two-Player Iterated Games.** E. Paulson and C. Griffin. Proceedings of the *American Control Conference* (2016).

**Optimal Process Control of Symbolic Transfer Functions.** C. Griffin and E. Paulson. Proceedings of *Feedback Computing* (2015).

**Better Timing of Cyber Conflict.** E. Paulson and C. Griffin. *Third ASE Conference on Cyber Security* (2014).

## TEACHING MATERIALS

E. Paulson and M. Toffel. "Market by Met Council: Revolutionizing Food Pantries in the Digital Age." Harvard Business School Case 624-060, May 2024.

## TEACHING AT HBS

2022 – 2024 Technology and Operations Management (Core first-year MBA class)

- 2024 – Operations and Supply Chain Management, Harvard Business Analytics Program  
present (Executive education course, 9 sessions/year)
- 2023 Summer Venture in Management Program (2 sessions)
- 2023 Harvard Business Analytics Program (1 session)

## OTHER TEACHING

- 2023 Harvard University, SOCIOL 1186: Refugees in Global Perspective  
Guest lecture
- 2022 NYU Stern PhD Seminar Course  
Guest lecture
- 2020 MIT, 15.370 - Data, Models, and Decisions  
Teaching assistant for core Executive MBA class
- 2020 MIT, 15.S60 - Computing in Optimization and Statistics  
3-hour session on machine learning in R for PhD students
- 2020 MIT, 15.S41 - Software Tools for Business Analytics  
3-hour session on machine learning in R for MIT undergrads
- 2018 MIT, 15.734 - Intro to Operations Management  
Teaching assistant for core Executive MBA class
- 2018, 2019 MIT, Microsoft Excel Training for Executive MBA students  
Three 3-hour sessions each spring
- 2018 MIT, 15.731 - Risk Management  
Teaching assistant for Executive MBA elective, two full-day sessions

## AWARDS & HONORS

- 2024 Finalist, Finalist, MSOM Best Student Paper Prize, 2024, **Entrant: S. Lee**  
Finalist, Michael H. Rothkopf Junior Researcher Paper Prize (awarded by INFORMS  
Auctions and Market Design Section), 2024, **Entrant: S. Lee**  
*Dynamic Matching with Post-Allocation Service and its Application to Refugee  
Resettlement*
- 2021 2nd place, POMS College of Supply Chain Management Best Student Paper Competition  
*Enhancing the Benefits of Dual Sourcing with Reverse Information Sharing*
- 2021 Finalist, POMS College of Sustainable Operations Best Student Paper Competition  
*Optimal Interventions for Increasing Healthy Food Consumption Among Low Income  
Populations*
- 2019 Finalist, IBM Best Student Paper Award  
*Optimal Interventions for Increasing Healthy Food Consumption Among Low Income  
Populations*
- 2016 – 2019 NSF Graduate Fellowship

- 2011 – 2015 Gerard L. Bayles Memorial Scholarship
- 2014 Kermit C. Anderson Memorial Award in Mathematics
- 2013 Mary Lister McCammon Award in Mathematics
- 2012 Merit Scholarship, Mathematics Advanced Study Semester

## PRESENTATIONS

- Outcome-Driven Dynamic Refugee Assignment with Allocation Balancing*
  - 2024 Invited talk, TTIC Workshop on Data-Driven Decision Processes
  - 2024 Invited seminar, Wharton OI seminar
  - 2024 Invited seminar, Microsoft Research New England
  - 2024 Invited seminar, Northwestern Kellogg seminar
  - 2024 Invited seminar, Harvard Applied Statistics workshop
  - 2023 Invited seminar, Workshop on Migration and Forced Displacement
  - 2023 2nd Workshop on AI & Analytics for Social Good
  - 2023 Invited seminar, Northeastern, D'Amore-McKim School of Business
  - 2023 Invited seminar, Harvard EconCS seminar
  - 2022 EC '22
  - 2022 MSOM '22
  - 2021 Invited seminar, London Business School
- Group Fairness in Dynamic Refugee Assignment*
  - 2022 INFORMS Annual Meeting '22
- Short-term Outcomes for Long-term Goals in Dynamic Refugee Matching*
  - 2021 Invited seminar, Stanford Causal Science Conference
- Healthy Food Consumption: Empirical Analysis and Optimization Models of Government Interventions*
  - 2021 Invited seminar, Penn State College of Medicine
- Optimizing Group-level Food Policy Interventions*
  - 2021 Invited seminar, Stanford GSB
  - 2021 Invited seminar, USC Marshall Business School
  - 2021 Invited seminar, UCLA Anderson School of Business
  - 2021 Invited seminar, Georgia Tech ISyE
  - 2021 Invited seminar, Naval Postgraduate School
  - 2021 Invited seminar, Harvard Business School
  - 2021 Invited seminar, Columbia Business School
  - 2020 Invited seminar, UBC Sauder School of Business
  - 2020 Invited seminar, University of Minnesota ISyE
  - 2020 Invited seminar, Boston College Carroll School of Management
  - 2020 Invited seminar, UW Madison Wisconsin School of Business
  - 2020 Invited seminar, UC Berkeley Haas School of Business
  - 2020 Invited seminar, Dartmouth Tuck School of Business
  - 2020 Invited seminar, MIT Sloan School of Management

- Reverse Information Sharing: Reducing Waste and Costs in Supply Chains with Yield Uncertainty*
- 2021 POMS '21
- 2020 INFORMS Annual Meeting '20
- Fair Group-level Intervention Bundles*
- 2021 INFORMS Annual Meeting '21
- 2020 INFORMS Annual Meeting '20
- Optimal Interventions for Healthy Food Consumption Among Low Income Households*
- 2021 POMS '21
- 2020 Kellogg-Wharton OM Workshop
- 2020 Workshop on Mechanism Design for Social Good '20
- 2019 INFORMS Annual Meeting '19
- 2019 Invited seminar, MIT Sloan Health Systems Innovation Seminar Series
- 2018 INFORMS Annual Meeting '18
- Impact of Access and Value on Fresh Food Consumption: Policy Implications*
- 2018 MSOM '18
- 2017 INFORMS '17
- Choosing What to Protect, and How: Resource Allocation Among Countermeasures With Multiple Attributes*
- 2014 INFORMS '14

## INDUSTRY EXPERIENCE

- 2019 – 2019 **IBM Blockchain Solutions**, Yorktown Heights, NY  
Research Intern
- 2015 – 2016 **Booz Allen Hamilton**, Annapolis Junction, MD  
Data Scientist
- Summer **Bates White**, Washington, D.C.  
2014 Summer consultant
- Summer **U.S. Army Engineer Research and Development Center**, Concord, MA  
2013 Research intern, DHS HS-STEM Summer Internship program

## PROFESSIONAL SERVICE

- Ad-hoc Reviewer for *Management Science*, *MI&SOM*, *Operations Research*, *POM*
- 2024 Moderator for the 33<sup>rd</sup> Women in Business Conference at HBS
- 2024 Program Committee, ACM EC Conference
- 2022 – 2024 Area Chair, ACM EAAMO Conference
- 2023 Program Committee, AAAI/ACM AIES
- 2024 Judge for the POMS College of Sustainable Operations Student Paper Competition
- 2021 Program Committee, ACM EAAMO Conference

2021, 2024 Judge for the INFORMS Public Sector OR Best Paper Award