YANHAN (SAVANNAH) TANG

Last update: July 1, 2023

4765 Forbes Avenue, Ph.D. Office 4136, Pittsburgh, PA 15213

(+1) 412-339-3595 ⋄ yanhanta@andrew.cmu.edu ⋄ https://savytang.github.io/

EDUCATION

Carnegie Mellon University (Tepper School of Business) Pittsburgh, USA
PhD in Operations Management, minor in Machine Learning & Statistics (expected) *2018.8 - 2024.5*
MS in Operations Management, minor in Optimization *2018.8 - 2021.5*
Carnegie Mellon University (School of Computer Science) Pittsburgh, USA
MS in Machine Learning *2022.1 - 2023.5*
Tsinghua University (School of Economics and Management) Beijing, China
BS in Information Management and Information Systems *2014.9 - 2018.7*

RESEARCH INTERESTS

Application: Recommender systems, personalized marketing, organ transplantation, child welfare
Methodology: Machine learning, optimization, reinforcement learning, deep learning

RESEARCH PAPERS ON MACHINE LEARNING AND MARKETING

1. Multi-Armed Bandits with Endogenous Learning Curves: Applications to Split Liver Transplantation and Personalized Marketing, 2023. [Link to paper]
   Yanhan (Savannah) Tang, Andrew Li, Alan Scheller-Wolf, Sridhar Tayur.
   Major revision at ***Manufacturing & Service Operations Management***.
   - *Runner-up*, 2023 POMS CSOM Best Student Paper Competition
   - *Second place*, POMS-HK 2023 Best Student Paper Competition
   - *Finalist*, 2022 INFORMS Service Science Best Cluster Paper Award
   - Presented at *MSOM SIG 2023, POMS 2023, AIML 2022, INFORMS 2022, MSOM 2022, INFORMS 2022, ICSS 2022, IHC 2021, MSOM 2021*
2. A Nested Bayesian Model for Inferring Customer Life-Changing Events Based on Financial Transaction Data, 2023. *Work in progress.*
   Yanhan (Savannah) Tang, Alan Montgomery.
   - Presented at the *ISMS Marketing Science Conference 2023*
3. The Next Best Offer Algorithm, 2023. *Work in progress.*
   Yanhan (Savannah) Tang, Alan Montgomery.
4. System Load and Human-AI Teaming in Child Welfare Screening, 2023. *Work in progress.*
   Yanhan (Savannah) Tang, Zoey Jiang, Alan Scheller-Wolf, Justine Galbraith, Lindsey Lacey.
   - Presented at the *POMS 2023*
5. Efficiency, Fairness and Stability in Peer-to-Peer Ridesharing, 2020. [Link to paper]
   Hoon Oh*, **Yanhan (Savannah) Tang***, Zong Zhang, Alexander Jacquilet, Fei Fang.
6. When Is It Permissible For Artificial Intelligence To Lie? A Trust-Based Approach, 2022. [Link to paper]

Joy Lu, Tae Wan Kim, Zhaoqi Cheng, **Yanhan (Savannah) Tang**, Kyusong Lee, John Hooker. *Reject & Resubmit at* ***Mind & Machines.***

- *Winner*, Society for Business Ethics (SBE) Annual Meeting 2021 Best Paper Award
- *Finalist*, 2021 SBE Best Practical Solutions Award

RESEARCH PAPERS ON OPTIMIZATION AND ORGAN TRANSPLANTATION

7. **Split Liver Transplantation: An Analytical Decision Support Model**, 2023. [Link to paper]
   Yanhan (Savannah) Tang, Alan Scheller-Wolf, Sridhar Tayur, Emily R. Perito, John P. Roberts. *Major revision at* ***Operations Research.***
   - *First place*, 2022 INFORMS DEI Best Student Paper Award
   - *Winner*, INFORMS Public Sector Operations Research 2022 Best Paper Award
   - *Finalist*, 2022 INFORMS IBM Best Student Paper Award Competition
   - Presented at *MSOM 2023, POMS 2023, INFORMS 2022, MSOM SIG 2022, CHITA 2022, INFORMS 2021, MSOM 2021, CORS 2021, IHC 2021, INFORMS 2020*
8. Split Liver Transplantation Reduces Total Patient Deaths and Improves Fairness, 2023. *Work in progress.*
   Yanhan (Savannah) Tang, Alan Scheller-Wolf, Sridhar Tayur, Emily R. Perito, John P. Roberts.

TEACHING AND EDUCATIONAL EXPERIENCE

2022 Summer	(Undergrad) Operations Management (Course rating: 4.33/5)		Instructor

- 100% response rate in faculty course evaluation with a class size of 21.
- Highest overall course rating for the 24 undergraduate *Operations Management* courses taught by nine different instructors at CMU between Fall 2019 and Spring 2023.

2021 Summer	(Undergrad) Operations Management	Neda Mirzaeian	Grader
2020 $\sim$ 2022 Fall	(MBA) Operations Management	Sridhar Tayur	TA
2020 Fall	(MBA) New Product Management	Peter Boatwright	Grader
2020 Fall	(MBA) Marketing Management	Peter Boatwright	Grader
2020 Summer	(Undergrad) Operations Management	Mehmet Aydemir	Grader
2020 Spring	(MBA) Strategies in Information Markets	Peter Stuttgen	Grader
2020 Spring	(MBA) Sustainable Operations	Alan Scheller-Wolf	TA

HONORS AND GRANTS

Runner-up, 2023 POMS CSOM Best Student Paper Competition	POMS, 2023
Second place, POMS-HK 2023 Best Student Paper Competition	POMS-HK, 2023
First place, Inaugural DEI Best Student Paper Award	INFORMS, 2022
Winner, Public Sector Operations Research 2022 Best Paper Award	INFORMS, 2022
Finalist, IBM Best Student Paper Award Competition	INFORMS, 2022
Finalist, Service Science Best Cluster Paper Award	INFORMS, 2022
Litzenberger Family Fund	Tepper, 2022
PNC Presidential Fellowship	Tepper, 2022
PNC Center for Financial Services Innovation Fellowship	CMU, 2021 $\sim$ 2023
Dean's Research Funding	Tepper, 2021
Winner, Society for Business Ethics Annual Meeting Best Paper Award	SBE, 2021

Finalist, Society for Business Ethics Best Practical Solutions Award	SBE, 2021
Health Care Initiative Funding	Tepper, 2020 $\sim$ 2021
Graduate Student Assembly/Provost Conference Funds	CMU, 2020 & 2022
Graduate Crosswalk GuSH Grant (Co-PI)	CMU, 2019 $\sim$ 2020
William Larimer Mellon Fellowship	CMU, 2018 $\sim$ 2023

PROFESSIONAL SERVICE

Co-chair, 2023 INFORMS PSOR Best Paper Award	2023
Judge, 2023 INFORMS Service Science Section Best DEIJ Paper Award	2023
Session co-chair, 2023 INFORMS Healthcare Conference & 2023 INFORMS Annual Meeting	2023
Advisor, MBA/MSBA capstone projects	2021 $\sim$ 2023
Student liaison, Health Analysis Society (HAS) of INFORMS	2021 $\sim$ 2022
Treasurer, CMU-INFORMS Student Chapter, Tepper School of Business	2019 $\sim$ 2020
Co-organizer, CMU INFORMS YinzOR Student Conferences	2019 $\sim$ 2022

GRADUATE COURSEWORK

Economics:	Microeconomics, General equilibrium, Game theory, Structural models
Optimization:	Linear programming, Dynamic programming, Integer programming, Graph theory, Convex optimization theory, Convex polyhedra, Advanced graph theory, Networks
Operations:	OM foundations, Healthcare ops, Empirical OM research, Energy merchant ops
Probability:	Queueing theory, Adv. stochastic models, Strategic queueing models
ML & Stats:	Introduction to ML, Adv. deep learning, Deep reinforcement learning, Intermediate stats, Bayesian statistics, Probability graphical models, ML in practice, Convex optimization

SKILLS AND OTHERS

Programming Language: Python, Julia, SAS, SQL, R

Language: Mandarin (native), English (fluent)

Hobby: Badminton, pool, squash, table tennis, piano