

Thomas Bryant Cassidey

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RESEARCH INTERESTS

- Supply Chain Optimization, Transportation and Logistics, Vehicle Routing

EDUCATION

- **The University of Alabama** Tuscaloosa, AL
Operations Management, Ph.D. May 2023
Dissertation: "Concurrent Sourcing: Theory and Behavior"
Advisors: Dr. Sharif Melouk and Dr. Nickolas Freeman
Operations Management, M.S.
Philosophy, B.A. with honors, Presidential Scholar

ACADEMIC APPOINTMENTS

- **Assistant Professor** California State University, East Bay
Management Department 2023 - Present

PUBLICATIONS

- Cassidey, T.B., N. Freeman, and S. Melouk. Leveraging concurrent sourcing for risk mitigation and pricing. *Omega*, 113, 2022.

Formulates and analyzes a non-linear model for concurrent sourcing decisions under all-or-nothing supplier disruptions. Investigates the effect of concurrent sourcing ability on the supplier's optimal pricing strategy.

SUBMITTED MANUSCRIPTS

- Cassidey, T.B. and I. Dayarian. The k traveling repairman problem with stochastic service request times. *Transportation Science*. Under revision after one round of review.

Presents a novel branch-and-price algorithm to incorporate randomly occurring service request times of customers in a multiple service agent routing problem.

- Cassidey, T.B., N. Freeman, S. Melouk, A. Narayanan. Concurrent Sourcing and Bounded Rationality under Capacity Constraints. *European Journal of Operational Research*. Under review.

Develops a probabilistic characterization of capacitated and multi-variate sourcing decisions, using a discrete choice model. Motivates and examines a laboratory experiment to measure human subject performance against theoretical performance in a concurrent sourcing task.

WORKING PAPERS

- Cassidey, T.B., E. Barbee, O. Satici, and B. Keskin. The integrated sourcing and virtual node location problem. To be submitted fall 2024.

Develops and solves the inventory availability and customer expectation problem for a retailer subject to carrier network uncertainty.

- Cassidey, T.B., N. Freeman, and S. Melouk. Concurrent sourcing under stochastic lead time risk. To be submitted spring 2025.

Analyzes the optimal concurrent sourcing and expediting strategy under supply disruptions manifested as delayed lead times.

- Cassidey, T.B., E. Barbee, and B. Keskin. On-line supplier selection of a drop-shipping retailer. To be submitted fall 2025.

Develops online algorithms for supplier selection of an e-retailer to maximize a multi-criteria objective.

RESEARCH PRESENTATIONS

- Upcoming. *On-line supplier selection for drop-shipping*, DSI Annual Meeting 2024, Phoenix, AZ
- Upcoming. *The integrated sourcing and virtual node location problem*, INFORMS Annual Meeting 2024, Seattle, WA
- *Concurrent Sourcing under Stochastic Lead Time Risk*, Production and Operations Management Society Annual Conference 2024, Minneapolis, MN
- *The k traveling repairman problem with stochastic service request times*, INFORMS Annual Meeting 2023, Phoenix, AZ
- *The k traveling repairman problem with stochastic service request times*, Transportation Science and Logistics Society Conference 2023, Chicago, IL
- *Concurrent sourcing with random lead times*, Production and Operations Management Society Annual Conference 2023, Tampa, FL
- *Bounded rationality in capacitated and multi-variate newsvendor decisions*, INFORMS Annual Meeting 2022, Indianapolis, IN
- *Concurrent sourcing behavior under supply uncertainty and demand risk*, Production and Operations Management Society Annual Conference 2022, Virtual
- *Leveraging concurrent sourcing for risk mitigation and pricing*, INFORMS Annual Meeting 2021, Anaheim, CA
- *Concurrent sourcing under supply and demand uncertainty*, INFORMS Annual Meeting 2020, Virtual
- *Winning the DOW Big Data Challenge*, UA Business Analytics Symposium 2016, Tuscaloosa, AL
- *Optimization using SQL, Python, and CPLEX*, INFORMS Student Chapter – 2018, Tuscaloosa, AL.
- *Data Analysis with R*, INFORMS Student Chapter – 2017, Tuscaloosa, AL.

TEACHING EXPERIENCE

- **Assistant Professor** California State University, East Bay
MGMT 350: Decision Science 2023 - 2024
 - 8 Undergraduate sections in Hybrid, Synchronous Online, and Synchronous Online formats
- *MGMT 455: Supply Chain and Logistics Analytics* 2024
 - Undergraduate self study section with two students
- *BAN 602: Quantitative Fundamentals for Analytics* 2024
 - Graduate section in a Hybrid format
- *BAN 630: Optimization Methods for Analytics* 2024
 - 3 Graduate sections in a Hybrid format
- **Instructor** The University of Alabama
OM 540: Systems Simulation 2022
 - Graduate section in Asynchronous Online format
- *OM 300: Intro to Operations Management* 2021

- Undergraduate section taught in person

- **Teaching Assistant**

The University of Alabama

OM 500/506: MGMT Science & Spreadsheet Modeling

2017 - 2020

OM 517: Supply Chain Modeling & Analysis

2020

OM 540: Systems Simulation

2016-2017

ADDITIONAL RESEARCH/CONSULTING/INDUSTRY EXPERIENCE

- **Independent**

Oakland, CA

Consultant

2024 - Present

- Lead development of software and optimization methods for a financial planning firm.

- **The University of Alabama**

Tuscaloosa, AL

Graduate Research Assistant

2016 - 2018, 2019 - 2021

Industry Collaboration - SimpleTire

- Developed algorithms and production software to automate sourcing and goods distribution decisions for a large internet retailer. Developed a supervised learning model and pipeline to predict supplier and transportation performance.
- Formulated and solved a facility location model to mitigate customer expectation deterioration from shipping network disruptions, balancing profit considerations.
- Formulated and solved a model to determine the location of product return centers, considering future expected return sources, transportation costs, and future expected demand.

Culverhouse College of Business

- Developed an integer optimization model and software package to solve the College's course scheduling problem.

- **FI Consulting**

Washington, DC

Consultant, Analyst

2018-2019

Capital One Financial Corporation, Credit Review – Models

- Worked with a team of engineers and statisticians to create a prediction model health tool.

U.S. Department of Education, Federal Student Aid Office (FSA)

- Oversaw the analysis of data from ED internal sources and external credit sources, to generate a loan portfolio valuation.

U.S. Department of the Treasury, Office of Financial Research (OFR)

- Performed end to end validation of models and resulting analyses that are published in OFR's Annual Report. The annual report seeks to identify systematic risk in the U.S. financial system.

U.S. Department of Housing and Urban Development (HUD)

- Acted as owner of the Home Equity Conversion Mortgages program audit. Identified and presented weaknesses and errors in modeling methodology, internal control processes, and model documentation.

- **Independent**

Washington, DC

Consultant

2018 - 2019

- Developed predictions and a loan life simulation model for the U.S. student loan portfolio.
- Developed a genetic algorithm to optimize a portfolio optimization problem. Created software to automate the optimization and forecasting process.

- **Kestra Financial**

Austin, TX

Intern

2016

- Developed software to capture and find patterns in employee production data.

HONORS, AWARDS, SERVICE

Group Leader, Student Success Analytics Certification Program	2024
Committee on Academic Planning and Review	Since 2024
General Education Overlay Committee	Since 2023
Reviewer, INFORMS Journal on Applied Analytics	Since 2023
CSUEB Preview Day College of Business and Economics Representative	2023
CSUEB General Education and Overlay Committee Member	2023-2024
CSUEB College of Business and Economics Symposium, Session Co-Chair and Planning Board Member	2023
Reviewer, Tutorials in Operations Research	2023
Graduate Council Fellow (\$32,904)	2022-2023
Summer Excellence in Research Fellow, highest award (\$10,200)	2022
Outstanding Operations Management Ph.D. Student	2021-2022
Outstanding Operations Management Graduate Teaching Assistant	2020-2021
Reviewer, <i>Omega</i>	Since 2021
Ad-hoc Reviewer, <i>Production & Operations Management</i>	Since 2018
College Admissions Made Possible, ACT exam instructor	2018
National Alumni Association Fellow (\$27,000)	2017-2018
INFORMS Student Chapter Treasurer	2017-2018
Tuscaloosa Emergency Management Association, Operations Consultant	2017
Haitian Economic Research and Development, Operations Consultant	2016-2017
1 st Place, INFORMS-Dow Big Data Challenge	2016

TECHNICAL EXPERIENCE

- Programming Languages: C++, Git, Julia, Python, R, SAS, SQL
- Softwares: Arena, CPLEX, Docker, Gurobi, Excel, Linux, PowerPoint, SAS Certified Predictive Modeler (2016), Spark, Tableau, Windows
- Cloud: AWS, Digital Ocean, Linode, Slurm, Snowflake

REFERENCES

- Dr. Sharif Melouk
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Additional references available upon request.