

# SARA REED

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## ACADEMIC EXPERIENCE

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**University of Kansas**, School of Business, Lawrence, KS August 2021 - Present  
Assistant Professor in Analytics, Information, & Operations Management

## EDUCATION

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**University of Iowa**, Iowa City, IA August 2021  
PhD in Applied Mathematical and Computational Sciences (AMCS)  
Interdisciplinary Graduate College Program with research in Tippie College of Business  
Dissertation: [Value of Autonomous Vehicles and Parking in Last-Mile Delivery](#)  
Advisors: Dr. Ann Campbell and Dr. Barrett Thomas  
Comprehensive Examination Date: February 2019  
Defense Date: June 25, 2021

**University of Iowa**, Iowa City, IA May 2020  
Graduate Certificate in College Teaching

**University of Iowa**, Iowa City, IA May 2018  
MS in Mathematics  
Passed qualifying exams in Analysis, Differential Equations and Numerical Analysis

**Simpson College**, Indianola, IA April 2016  
BA in Mathematics and Economics/Finance  
Minor in Computer Science

## PUBLICATIONS

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**Reed, S.**, Campbell, A., & Thomas, B. (2024) [“Does Parking Matter? The Impact of Parking Time on Last-Mile Delivery Optimization.”](#) *Transportation Research Part E: Logistics and Transportation Review*, 181: 103391.

**Reed, S.**, Campbell, A., & Thomas, B. (2022) [“Impact of Autonomous Vehicle Assisted Last-Mile Delivery in Urban to Rural Settings.”](#) *Transportation Science*, 56(6):1530-1548.

**Reed, S.**, Campbell, A., & Thomas, B. (2022). [“The Value of Autonomous Vehicles for Last-Mile Deliveries in Urban Environments.”](#) *Management Science*, 68(1):280-299.

Croson, C., Joslyn, L. & **Reed, S.** (2014). [“Determining Critical Locations in a Road Network.”](#) *SIAM Undergraduate Research Online (SIURO)*, Volume 7, DOI: 10.1137/13S012595.

*Under Review*

Lash, M. and **Reed, S.** “Smart Parking in Last-Mile Delivery.” Under review.

Soffker, N., **Reed, S.**, Campbell, A., & Thomas, B. “Policies for Dynamic Same-Day Delivery with Walking and Parking.” Under review.

## *Working Papers*

**Reed, S.**, Campbell, A., & Thomas, B. “Value of Reserved Parking for Commercial Last-Mile Delivery in Urban Environments.”

Amaya, J. and **Reed, S.** “Differentiated Reservation Policies based on Delivery Features.”

## **HONORS**

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<b>INFORMS Transportation Science and Logistics (TSL) Best Paper Award</b> “The Value of Autonomous Vehicles for Last-Mile Deliveries in Urban Environments.” Honorable Mention	2023
<b>INFORMS TSL Dissertation Award</b> Honorable Mention	2022
<b>VeRoLog Doctoral Dissertation Prize</b> Top 3 for 2021 Doctoral Dissertations	2021
<b>Graduate Research Excellence Award (Mathematical Sciences)</b> University of Iowa Office of the Vice President of Research	2021
<b>Bayer Women in Operations Research Scholarship</b> , First place Analytics Society of The Institute for Operations Research and the Management Sciences (INFORMS)	2020
<b>INFORMS 2020 Student Chapter Annual Award</b> , Cum laude President of University of Iowa Student Chapter	2020
<b>Hawkeye Caucus Day</b> , Student Representative of Graduate College, Des Moines, IA Discussions with state legislators regarding research accomplishments at the University of Iowa	April 2019
<b>Dare to Discover Banner Campaign</b> , Iowa City, IA Featured as a researcher and scholar from the University of Iowa with a banner in downtown Iowa City	January-March 2019
<b>Doctoral Student Colloquium Participant</b> INFORMS Annual Conference	2018
<b>Catharine Wegner Outstanding Mathematics Teaching Assistant Award</b> University of Iowa Department of Mathematics	2018

## **PRESENTATIONS**

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### *Upcoming Presentations*

Reed, S. (October 21, 2024 at 8 AM). Smart Parking in Last-Mile Delivery. INFORMS Annual Meeting, Seattle, WA.

### *Conference Oral Presentations*

Reed, S. (October 2023). The Value of Autonomous Vehicles for Last-Mile Deliveries in Urban Environments. TSL Best Paper, Honorable Mention. INFORMS Annual Meeting, Phoenix, AZ.

Reed, S. (October 2023). Optimal Parking and Reservation Decisions for Last-Mile Delivery. INFORMS Annual Meeting, Phoenix, AZ.

Reed, S. (October 2022). Optimal Parking Strategies for Last-Mile Delivery. INFORMS Annual Meeting, Indianapolis, IN.

Reed, S. (October 2022). Value of Parking and Autonomous Vehicles for Last-Mile Delivery. TSL Best Dissertation Award Session. INFORMS Annual Meeting, Indianapolis, IN.

Reed, S. (October 2021). Does Parking Matter in Routing Last-Mile Deliveries? INFORMS Annual Meeting, Anaheim, CA.

Reed, S. (October 2021). Does Parking Matter in Routing Last-Mile Deliveries? 6th Annual Meeting of SIAM Central States Section, Virtual.

Reed, S. (November 2020). Value of Autonomous Vehicles on the Urban-Rural Continuum. INFORMS Annual Meeting, Virtual.

Reed, S. (October 2019). Last Mile Delivery using Autonomous Vehicles. INFORMS Annual Meeting, Seattle, WA.

Reed, S. (November 2018). The Impact of Parking on the Use of Autonomous Vehicles. INFORMS Annual Meeting, Phoenix, AZ.

Boxell, L. & Reed, S. (January 2015). Finding NAIRU: Estimating Non-accelerating Inflationary Rate of Unemployment. Joint Mathematics Meeting, San Antonio, TX.

Reed, S. (September 2014). Finding NAIRU: Estimating Non-accelerating Inflationary Rate of Unemployment. Simpson College Undergraduate Research Symposium, Indianola, IA.

#### *Invited Oral Presentations*

Reed, S. (May 2024). Value of Real-Time Parking Information for Routing Last-Mile Delivery. Odyssey 2024, Carmona, Spain.

Reed, S. (April 2024). Challenges and Opportunities in Routing Last-Mile Deliveries. Guest Lecture in Transportation and Logistics Course, Clemson University, Virtual.

Reed, S. (October 2023). Impact of Parking on Last-Mile Delivery Operations. Dean's Advisory Board Meeting, University of Kansas School of Business, Lawrence, KS.

Reed, S. (July 2023). Optimal Parking Strategies for Last-Mile Delivery. TSL Conference 2023, Loyola University, Chicago, IL.

Reed, S. (April 2023). Does Parking Matter? The Impact of Parking Time on Last-Mile Delivery Optimization. Alumni Keynote Speaker for the Midwest Undergraduate Mathematics Symposium, Simpson College.

Reed, S. (February 2023). Does Parking Matter? The Impact of Parking Time on Last-Mile Delivery Optimization. University of Indianapolis, Virtual.

Reed, S. (July 2021). Does Parking Matter in Routing Last-Mile Deliveries? INFORMS Transportation Science and Logistics Workshop, Virtual.

Reed, S. (October 2019). Last Mile Delivery using Autonomous Vehicles. EMC Insurance, Innovation Lab Seminar, Des Moines, Iowa.

Reed, S. (October 2019). Autonomous Vehicles: Future of Delivery? Heartland Talk, Truman State University.

Reed, S. (October 2019). Autonomous Vehicles: Future of Delivery? Heartland Talk, Simpson College.

Reed, S. (May 2019). Benefits of Autonomous Vehicles in Urban Delivery. PhD Workshop on Advances in Operations Research Applied to Transportation and Logistics, Loyola University.

Reed, S. (April 2019). Optimization of Package Delivery. Heartland Talk, Grinnell College.

Reed, S. (March 2019). Optimization of Package Delivery. Heartland Talk, Cornell College.

#### *Conference Poster Presentations*

Reed, S. (October 2019). Last Mile Delivery using Autonomous Vehicles. INFORMS Annual Meeting, Seattle, WA.

Croson, C., Joslyn, L. & Reed, S. (April 2014). Determining Critical Locations in a Road Network. Midwest Undergraduate Mathematics Symposium, Indianola, IA.

Croson, C., Joslyn, L. & Reed, S. (January 2014). Determining Critical Locations in a Road Network. Joint Mathematics Meeting, Baltimore, MD.

#### *Seminar Oral Presentations*

Reed, S. (April 2023). Should I Stay or Go? Or Reserve? A Stochastic Parking Problem for Last-Mile Deliveries Continuum. Center for Business Analytics Research (CBAR) Seminar, University of Kansas School of Business.

Reed, S. (October 2020). Value of Autonomous Vehicles in Last-Mile Delivery on the Urban-Rural Continuum. Guest Lecturer Seminar Series, Department of Business Analytics, University of Iowa.

Reed, S. (June 2020). The Value of Autonomous Vehicles in Last-Mile Delivery. Applied Mathematical and Computational Sciences (AMCS) Day, University of Iowa.

Reed, S. (April 2020). Linear Programming in Excel. Applied Math Student Seminar, University of Iowa.

Reed, S. (March 2019). Optimization of Package Delivery. Graduate and Undergraduate Student Seminar (GAUSS), University of Iowa.

Reed, S. (February 2019). An Optimal Solution to Autonomous Vehicle Delivery in Urban Environments. Applied Math Student Seminar, University of Iowa.

Reed, S. (November 2018). The Impact of Parking on the Use of Autonomous Vehicles. Applied Math Student Seminar, University of Iowa.

## TEACHING EXPERIENCE

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### **University of Kansas School of Business, *Primary Instructor***

Data Mining & Predictive Analytics

Fall 2021, Fall 2022, Fall 2023, Fall 2024

Data Analysis & Forecasting

Spring 2022, Spring 2023, Spring 2024

### **University of Kansas, *Kansas Data Science Consortium***

Faculty mentor for undergraduate project in the Community Data Lab

Spring 2023

### **University of Iowa Tippie College of Business**

*Head Teaching Assistant*

Foundations of Business Analytics

Spring 2020, Fall 2020

*Teaching Assistant*

Foundations of Business Analytics

Fall 2018, Spring 2019

### **University of Iowa, Department of Mathematics**

*Head Teaching Assistant*

Math Engineering I

Fall 2017

*Teaching Assistant*

Math for Biological Sciences

Spring 2017, Spring 2018

Math Engineering I

Fall 2016

### **University of Iowa, *Teaching Practicum***

Linear Programming

Spring 2020

Educational Psychology and Measurement

Fall 2019

**University of Iowa, Graduate Mentor in Directed Reading Program**

Mathematical Programming

Fall 2019

**University of Iowa, Math Tutorial Lab**

Fall 2016, Spring 2017, Fall 2017, Spring 2018

**Simpson College, Economics Undergraduate Teaching Assistant**

Principles of Economics

2014-2016

## GRANTS

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**Ballard and Seashore Dissertation Fellowship**

Spring 2021

University of Iowa Graduate College

**Student Impact Grant**

Fall 2020

University of Iowa Office of the President and University of Iowa Center for Advancement  
Project: INFORMS Iowa Student Chapter Knowledge Cafe

**Graduate College Post-Comprehensive Research Fellowship**

Fall 2019

University of Iowa

**Outreach and Engagement Micro Grant**

2019

University of Iowa Office of Outreach and Engagement

Project: Sonia Kovalevsky High School Mathematics Day

**Graduate College Presentation Travel Funds**

2018, 2019

Graduate Student Senate (GSS)

**Math Graduate Board Travel Fund**

2018, 2019

**Graduate College Iowa Recruitment Fellowship**

2016-2020

University of Iowa

## PROFESSIONAL AFFILIATIONS

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**INFORMS**, Member

**INFORMS Transportation Science and Logistics (TSL) Society**, Member

**INFORMS Women in OR/MS**, Member

## SERVICE

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### Reviewer

Reviewer for *Computers & Industrial Engineering*

Reviewer for *European Transport Research Review*

Reviewer for *IIE Transactions*

Reviewer for *INFORMS Journal on Computing*

Reviewer for *International Transactions in Operational Research*

Reviewer for *Management Science*

Reviewer for *Production and Operations Management*

Reviewer for *Service Science*

Reviewer for *Transport Policy*

Reviewer for *Transportation Business & Management*

Reviewer for *Transportation Research Part C*

Reviewer for *Transportation Research Part E*

Reviewer for *Transportation Science*

Reviewer for *Transportmetrica A: Transport Science*

Reviewer for *Utilities Policy*

## University of Kansas School of Business

Chair of Business Analytics Major Curriculum Committee	2023 - 2024
Judge in Analytics and Information Systems Data Science Competition	2023
Speaker in KU Summer Venture in Business	2022, 2023, 2024
Faculty Mentor in the Multicultural Business Scholars Program	2022-2024

## Simpson College

Career panelist at the Midwest Undergraduate Mathematics Symposium	2023
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## INFORMS

Judge in poster competition	INFORMS Annual Conference 2023
Mentor in Amazon SCOT Program	INFORMS Annual Conference 2021

## INFORMS Transportation Science and Logistics (TSL) Society

Session Chair: Challenges from Parking in Last-Mile Delivery	INFORMS Annual Conference 2023
Scientific Community Member	TSL Conference 2023
TSL PhD Student Coordinator	TSL Conference 2023
TSL Cluster Chair	2023
Session Chair: Transportation Logistics for Social Good	INFORMS Annual Conference 2022
Session Chair: TSL Flash Sessions II	INFORMS Annual Conference 2022
TSL Cluster Vice-Chair	2022
Session Chair: Innovations in Urban Delivery	INFORMS Annual Conference 2019

## INFORMS Student Chapter, University of Iowa Tippie College of Business

President	Fall 2019, Spring 2020
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## Math Graduate Board, University of Iowa

Vice Chair	2019
Heartland Chair	2018
Joint Mathematics Meeting Funding Committee	2017, 2018

## Sonia Kovalsky High School Mathematics Day, University of Iowa

Co-Organizer	2019
Volunteer	2017, 2018

## Society for Industrial and Applied Mathematics (SIAM) Chapter, University of Iowa

Secretary	2018-2019
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## PRESS COVERAGE

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April 2, 2024. When Experts Attack! Podcast: [The self-driving future of deliveries.](#)

February 5, 2024. KU News: [Study examines strategies to improve effect of parking time on last-mile deliveries.](#)

April 13, 2022. KU News: [Autonomous Vehicles Could Prove to be Future Model for Delivery Services, Study Finds.](#)

August 2, 2021. INFORMS Press Release: [New Research Finds Autonomous Vehicles Can Reduce Delivery Times by 50%, Increase Public Parking in Urban Environments.](#)

November, 17 2020. University of Iowa Tippie College of Business Press Release: [Doctoral student wins Bayer Women in Operations Research Scholarship.](#)

July 9, 2020. University of Iowa *Tippie Magazine*: [Pairing autonomous delivery trucks with human delivery could save transportation companies millions.](#)

March 28, 2019. University of Iowa Graduate College: [Exploring Autonomous Deliveries.](#)

## INDUSTRY EXPERIENCE

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<b>Table to Table</b> , Iowa City, IA Routing of Food Rescue Operations	January 2019-July 2021
<b>Wellmark Blue Cross Blue Shield</b> , Des Moines, IA IT Training and Development Intern	Summer 2015
<b>Sammons Financial Group</b> , West Des Moines, IA Actuarial Science Intern, Product Development	October 2013-April 2014
<b>Simpson College</b> , Indianola, IA Information Technology Services Work Study	June 2012-October 2013

## OTHER UNDERGRADUATE EXPERIENCES

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<b>Study Abroad Experience</b> , Northern Italy Studied the challenges and opportunities of enterprises in Northern Italy	May 2015
<b>Lafayette College</b> , Easton, PA Research Experience for Undergraduates (REU) Project: Finding the Natural Rate of Unemployment	Summer 2014
<b>Simpson College</b> , Indianola, IA Research Experience for Undergraduates (REU) Project: Determining Critical Locations in a Road Network	Summer 2013