

Andrew Daw

ACADEMIC POSITIONS

University of Southern California

Data Sciences and Operations, *Marshall School of Business*

- Assistant Professor

June 2020 - Pres.

CONTACT

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401B Bridge Hall, Los Angeles, CA 90089

EDUCATION

Cornell University, Ithaca, NY

- Ph.D. in Operations Research

August 2020

– *Thesis:* Batches, Bursts, and Service Systems

– *Advisor:* Prof. Jamol Pender

– *Minors:* Statistics (*Prof. Jim Dai*), Applied Mathematics (*Prof. Sid Resnick*)

- M.S. in Operations Research

August 2018

University of Florida, Gainesville, FL

- B.S. in Industrial and Systems Engineering

May 2015

WORKING PAPERS

Andrew Daw. **Conditional Uniformity and Hawkes Processes.** (*Submitted*). (2022).

Andrew Daw, Antonio Castellanos, Galit Yom-Tov, Jamol Pender, and Leor Gruendlinger. **The Co-Production of Service: Modeling Service Times in Contact Centers Using Hawkes Processes.** (*Submitted*). (2021).

- *Finalist for the biennial Production and Operations Management Society Applied Research Challenge (ARC) at POMS 2022*
- *Selected for presentation in the Service Management SIG Conference at MSOM 2021 (10 chosen from ~100 submissions)*

Andrew Daw, Robert C. Hampshire, and Jamol Pender. **How to Staff when Customers Arrive in Batches.** (*Submitted*). (2021).

- *Third Place in the 2019 IBM Best Student Paper Award Competition from INFORMS Service Science*

Andrew Daw, Brian Fralix, and Jamol Pender. **Non-Stationary Queues with Batch Arrivals.** (*Submitted*). (2020).

JOURNAL PUBLICATIONS

Andrew Daw and Jamol Pender. **Matrix Calculations for Moments of Markov Processes.** *Advances in Applied Probability.* (2023, to appear).

Andrew Daw. **Services Shaped by History.** *Queueing Systems.* 100.3-4 (2022, to appear)

- *Invited open problem note for the “100 Views on Queues” special issue celebrating the 100th volume of Queueing Systems*

Andrew Daw and Jamol Pender. **An Ephemeral Self-Exciting Point Process.** *Advances in Applied Probability.* (2022, to appear).

Andrew Daw and Jamol Pender. **On the Distributions of Infinite Server Queues with Batch Arrivals.** *Queueing Systems.* 91.3-4 (2019): 367-401.

- *Second Place in the 2019 INFORMS Minority Issues Forum Paper Competition (submitted by Jamol Pender)*

Andrew Daw and Jamol Pender. **New Perspectives on the Erlang-A Queue.** *Advances in Applied Probability.* 51.1 (2019): 268-299.

Andrew Daw and Jamol Pender. **Queues Driven by Hawkes Processes.** *Stochastic Systems.* 8.3 (2018): 192-229.

TEXTBOOK
CHAPTERS

Alec Dalton and Andrew Daw. **Managing Capacity and Waits.** In *Operations Management in the Hospitality Industry.* Edited by Peter Szende, Alec Dalton, and Michelle Yoo. Emerald Publishing Limited, Bingley, pp. 167-187. (2021).

MASTERS AND
UNDERGRADUATE
RESEARCH
ADVISING

Qi, Quan, Shayne Yang, and Andrew Daw. **Quantifying the Road to Transport Justice.** (*Work in progress.*) (2021).

Harris, Michelangelo, Brian Liu, Cean Park, Ravi Ramireddy, Gloria Ren, Max Ren, Shangdi Yu, Andrew Daw, and Jamol Pender. **Analyzing the Spotify Top 200 Through a Point Process Lens.** (2019).

Nirenberg, Samantha, Andrew Daw, and Jamol Pender. **Queue Length Rounding and Delayed Information in Disney World Queues.** *Proceedings of the 2018 Winter Simulation Conference (WSC).* IEEE (2018).

Undergraduate research advising roles:

- **Graduate Student Advisor**, Cornell Operations Research Applied Learning (CORAL), 2018 - 2020
- **Graduate Student Advisor**, Engineering Summer Mathematics Institute, Diversity Programs in Engineering, Cornell University, 2018

PRESENTATIONS

The Co-Production of Service: Modeling Service Times in Contact Centers using Hawkes Processes

- 2021 INFORMS Annual Meeting, Anaheim, CA. (Oct. 2021)
- 2021 Service Management SIG, MSOM Conference, Indiana University. (June 2021)
- 2020 INFORMS Annual Meeting, Online. (Nov. 2020)

Beyond Safety Drivers: Staffing a Teleoperations System for Autonomous Vehicles

- 2019 INFORMS Annual Meeting, Seattle, WA. (Oct. 2019)
- 2019 Young Researchers Workshop, Cornell University. (Oct. 2019)
- 2019 YinzOR Conference Poster Session, Carnegie Mellon University. (Aug. 2019)

The Queue-Hawkes Process: Ephemeral Self-Excitement

- 2019 INFORMS Annual Meeting, Seattle, WA. (Oct. 2019)
- 20th INFORMS Applied Probability Society Conference, Brisbane, Australia. (Jul. 2019)
- 2018 Young Researchers Workshop (Poster), Cornell University. (Oct. 2018)

Self-Exciting Processes in Queues

- Probability Seminar, Department of Mathematics, Cornell University. (Feb. 2019)
- Candidacy Exam, Cornell University. (Aug. 2018)

Queue Length Rounding and Delayed Information in Disney World Queues

- 2018 Winter Simulation Conference, Gothenburg, Sweden. (Dec. 2018)

Exact Simulation of the Queue-Hawkes Process

- 2018 Winter Simulation Conference (Poster), Gothenburg, Sweden. (Dec. 2018)

New Perspectives on the Erlang-A

- 2018 INFORMS Annual Meeting, Phoenix, AZ. (Oct. 2018)

Queues Driven by Hawkes Processes

- 2017 INFORMS Annual Meeting, Houston, TX. (Oct. 2017)

Club Queues

- 2016 Young Researchers Workshop (Poster), Cornell University. (Oct. 2016)

What is Operations Research?

- 2016 Engineering Summer Mathematics Institute, Cornell University. (Aug. 2016)

TEACHING

Instructor and Co-Core Coordinator	BUAD 311: Operations Management, <i>Fall 2021 - USC Marshall</i>
Instructor	BUAD 311: Operations Management, <i>Fall 2020 - USC Marshall</i>
Co-Instructor	MATH 112: Contemporary Mathematics, <i>Fall 2019 - Cornell Prison Education Program</i>
Instructor	MATH 112: Contemporary Mathematics, <i>Spring 2019 - Cornell Prison Education Program</i>
Instructor	ORIE 3510 / ORIE 5510 / STSCI 3510: Introduction to Stochastic Processes, <i>Summer 2017 - Cornell Engineering</i>
Teaching Assistant	ORIE 4130: Service System Modeling and Design, <i>Spring 2017 - Cornell Engineering</i>
Instructor	ORIE 3510 / ORIE 5510 / STSCI 3510: Introduction to Stochastic Processes, <i>Summer 2016 - Cornell Engineering</i>

THESIS
COMMITTEES

Doctoral committee member:

- *Shobhit Jain*, June 2021, advised by Kimon Drakopoulos and Raman Randhawa

AWARDS

2019	Cornell University Graduate School Research Travel Grant In support of travel to visit the Service Enterprise Engineering (SEE) Lab at Technion – Israel Institute of Technology in Haifa, Israel to initiate research and access proprietary industry data. <i>Value: \$2,000</i>
2017–2020	National Science Foundation Graduate Research Fellowship Research Proposal Title: <i>Systems of Unknown Service Quality: Hawkes Processes and Queueing Theory</i>
2015–2016	First Year Fellowship , School of Operations Research & Information Engineering, Cornell University

SERVICE

In USC Marshall:

- *Faculty Recruiting Committee*, Operations Management Group within DSO, *2021 - 2022*
- *Co-Core Course Coordinator*, BUAD 311: Operations Management, *Fall 2021*
- *Seminar Co-Organizer*, Operations Management Group within DSO, *2020 - Pres.*
- *Faculty Adviser*, Operations Management Association, *2020 - Pres.*

- *Faculty Marshal*, USC New Student Convocation, *Fall 2021*

In Professional Organizations:

- *Webmaster*, INFORMS Applied Probability Society, *2020 - Pres.*
- *Reviewer*, MSOM Service Management SIG, *2022*
- *Reviewer*, INFORMS BOM Best Working Paper Award, *2021*

In Conferences:

- *Session Chair*, 2022 INFORMS Annual Meeting: Applied Probability Cluster, Indianapolis, IN *2022*
- *Session Chair*, 2022 INFORMS Annual Meeting: Service Science Cluster, Indianapolis, IN *2022*
- *Session Chair*, The 20th INFORMS Applied Probability Society Conference, Brisbane, Australia, *2019*

In Journals:

- *Referee*: Operations Research, Manufacturing and Service Operations Management, Queuing Systems, Operations Research Letters, Production and Operations Management, Journal of Applied Probability, SIAM Journal on Control and Optimization, Probability in the Engineering and Informational Sciences

In Outreach:

- *Computer Science Week Guest Speaker*, STEM Prep Elementary, South Central LA, *2021*
- *Business Faculty*, USC Summer Programs, *2021*
- *Math Faculty*, Cornell Prison Education Program, *2019*
- *Founder*, PhD Mentor/Mentee Program - Operations Research Graduation Association, Cornell University, *2018*
- *Running Buddy*, Girls on the Run, Smith Elementary School, Cortland, NY, *2018*
- *Volunteer*, Girls' Adventures in Math (GAIM), Cornell University, *2018*
- *Mentor*, CUEmpower Mentoring Program, Diversity Programs in Engineering, Cornell University, *2017-2020*

INDUSTRY EXPERIENCE

*Consultant to **Trophy Point LLC**, providing modeling and analysis on housing options for a large university, *2019**
*Intern, Management Engineering & Consulting Services, **University of Florida Health - Shands Hospital**, *2014-2015**
*Intern, Information Analytics & Innovation, **Sears Holdings Corporation**, *2013**
*Intern, Workforce Management, **Walt Disney World Resort**, *2012**

PROFESSIONAL DEVELOPMENT

Completed courses and workshops at USC:

- **CET Accelerated Online Teaching Intensive**, *2020*

Completed courses and workshops at Cornell:

- **Teaching and Learning in the Diverse Classroom**, *2019*
- **Research from Start to Publish Workshop**, *2019*
- **Fostering Critical Thinking Skills Teaching Workshop**, *2018*
- **Theater Techniques for Enhancing Teaching & Public Speaking**, *2016*
- **The Practice of Inclusive Teaching in STEM**, *2016*

Organized sessions and panels at Cornell:

- **Concrete Steps to Prepare for an Academic Career Panel**, *2018*

- **Research Techniques Workshop, 2017**
- **Steps for Academic Success Panel, 2017**
- **Fellowship Application Workshop, 2017**