

# Kevin O'Connor

🌐 kevinocconnor.co

✉ oconnor.kevin.ant@gmail.com

🌐 oconnor-kevin

## EDUCATION

---

**University of North Carolina, Chapel Hill**  
*Ph.D. in Statistics and Operations Research*  
Advised by Andrew B. Nobel and Kevin McGoff

**Chapel Hill, NC**  
2017 – 2021

**University of North Carolina, Chapel Hill**  
*M.S. in Statistics and Operations Research*

**Chapel Hill, NC**  
2017 – 2020

**University of Chicago**  
*B.A. in Physics and Statistics*

**Chicago, IL**  
2012 – 2016

## RESEARCH INTERESTS

---

optimal transport, mathematical finance, stochastic processes, statistical machine learning

## PUBLICATIONS

---

**Kevin O'Connor** and Vlasdas Pipiras. Sampling low-fidelity outputs for high-fidelity density estimation. *In preparation*.

**Kevin O'Connor**, Bongsoo Yi, Kevin McGoff, and Andrew B. Nobel. Graph optimal transport with transition couplings of random walks. *In preparation*.

**Kevin O'Connor**, Kevin McGoff, and Andrew B. Nobel. Estimation of stationary optimal transport plans. *Submitted*.

**Kevin O'Connor**, Kevin McGoff, and Andrew B. Nobel. Optimal transport for stationary Markov chains via policy iteration. *Journal of Machine Learning Research*, 2021+.

Christopher Bender<sup>†</sup>, **Kevin O'Connor**<sup>†</sup>, Yang Li, Juan Jose Garcia, Manzil Zaheer, and Junier Oliva. Exchangeable generative modeling with flow scans. *AAAI Conference on Artificial Intelligence*, 2020.

<sup>†</sup>denotes equal contribution

## PROFESSIONAL EXPERIENCE

---

**Quantitative Researcher**  
*Optiver*

**Chicago, IL**  
Starting in 2022

**Quantitative Research Intern**  
*Optiver*

**Chicago, IL**  
2021

**Data and Policy Analyst**  
*Acumen, LLC*

**Burlingame, CA**  
2016 – 2017

## PROGRAMMING LANGUAGES

---

Proficient: R, Python, Matlab,  $\LaTeX$

Competent: Tensorflow

Familiar: Java

## SOFTWARE PACKAGES

---

Primary developer: OTC (Matlab), GraphOTC (Matlab)

Contributed: flowscan (Python/Tensorflow), Differential-Correlation-Mining (R)

## AWARDS and FUNDING

---

SAMSI Research Fellow ( <i>Declined</i> )	2022
Funded Participant at MSRI Workshop on Optimal Transport	2020
Raj Chandra Bose Graduate Student Travel Award	2020
BD2K Funded Fellow	2018 – 2019
Odyssey Scholar	2012 – 2016
Dean's List	2012 – 2016
Dean's Fund for Student Life Grant Recipient	2013

## FUNDED GRANT APPLICATIONS

---

<b>Inference for Stationary Processes: Optimal Transport and Generalized Bayes</b>	<b>2021</b>
<i>NSF Mathematical Sciences</i>	<i>Co-author</i>
Co-PIs: Andrew B Nobel, Sayan Mukherjee, Kevin McGoff	

## PRESENTATIONS

---

<b>Computation and Consistent Estimation of Stationary OT Plans</b>	<b>Contributed Talk</b>
<i>Dissertation Defense</i>	<i>November 2021</i>
<b>Stationary OT for Markov Chains with Applications to Graph Alignment</b>	<b>Contributed Talk</b>
<i>UNC STOR Graduate Student Seminar</i>	<i>October 2021</i>
<b>Comparison and Alignment of Weighted Networks</b>	<b>Contributed Talk</b>
<i>UNC Computational Medicine, Research in Progress</i>	<i>October 2021</i>
<b>Stationary OT for Markov Chains with Applications to Graph Alignment</b>	<b>Invited Poster</b>
<i>Joint Statistical Meetings, 2021</i>	<i>August 2021</i>
<b>Optimal Transport for Stationary Markov Chains via Policy Iteration</b>	<b>Contributed Talk</b>
<i>UNC Charlotte October Math Day Symposium, 2020</i>	<i>October 2020</i>
<b>Optimal Transport for Stationary Markov Chains via Policy Iteration</b>	<b>Contributed Talk</b>
<i>UNC STOR Graduate Student Seminar</i>	<i>September 2020</i>
<b>Optimal Transport for Stationary Markov Chains</b>	<b>Contributed Poster</b>
<i>Joint Statistical Meetings, 2020</i>	<i>August 2020</i>
<b>Optimal Transport for Stationary Markov Chains</b>	<b>Invited Talk</b>
<i>SIAM Annual Meeting, 2020</i>	<i>July 2020</i>

## WORKSHOP PUBLICATIONS

---

Christopher Bender<sup>†</sup>, Kevin O'Connor<sup>†</sup>, Yang Li, Juan Jose Garcia, Manzil Zaheer, and Junier Oliva. Exchangeable generative modeling with flow scans. *NeurIPS Workshop on Sets and Partitions*, 2019.

<sup>†</sup>denotes equal contribution

## TEACHING EXPERIENCE

---

**STOR 565: Machine Learning (Instructional Assistant)** Chapel Hill, NC  
*University of North Carolina, Chapel Hill* 2021

**STOR 320: Introduction to Data Science (Instructional Assistant)** Chapel Hill, NC  
*University of North Carolina, Chapel Hill* 2020

**STOR 155: Data Models and Inference (Instructional Assistant)** Chapel Hill, NC  
*University of North Carolina, Chapel Hill* 2017 – 2018

## PROFESSIONAL ACTIVITIES

---

Editorial board reviewer for *Journal of Machine Learning Research* 2020-Present  
Referee for *Journal of Machine Learning Research* 2 times

## PROFESSIONAL MEMBERSHIPS

---

American Statistical Association, Student Member 2019 – Present  
Institute of Mathematical Statistics, Student Member 2018 – Present