

# SCOTT POWERS

saberpowers.github.io

## ACADEMIC EXPERIENCE

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**Rice University** 2023-  
Assistant Professor of Sport Analytics and (by courtesy) of Statistics

## SPORT EXPERIENCE

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### FULL-TIME

**Houston Astros** 2022  
Assistant General Manager

**Los Angeles Dodgers** 2017-2021  
Director, Quantitative Analysis 2019-2021  
Senior Analyst, Research & Development 2017-2018

### CONSULTING

**Zelus Analytics** 2020, 2023-  
Staff Data Scientist 2023-  
Senior Data Scientist 2020

**AZ Alkmaar** 2015-2020  
Data Analyst

**Oakland Athletics** 2015-2016  
Analytics Consultant

## EDUCATION

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**Stanford University** 2017  
Ph.D. Statistics  
Advisor: Rob Tibshirani

**University of Chicago** 2013  
M.S. Statistics

**University of North Carolina at Chapel Hill** 2011  
B.S. Mathematical Decision Sciences and Mathematics  
*Highest Honors from the Department and Highest Distinction from the University*

## RESEARCH

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### PRE-PRINTS

**Powers S, Stancil L, Consiglio N**  
“Estimating individual contributions to team success in women’s college volleyball”  
<https://arxiv.org/abs/2402.01083>

## PUBLICATIONS

- Burton T, **Powers S**, Burns C, Conway G, Leach F, Senecal K (2023)  
“A data-driven greenhouse gas emission rate analysis for vehicle comparisons”  
*SAE International Journal of Electrified Vehicles* **12**(1)
- Powers S**, McGuire V, Bernstein L, Canchola AJ, Whittemore AS (2019)  
“Evaluating disease prediction models using a cohort whose covariate distribution differs from that of the target population”  
*Statistical Methods in Medical Research* **28**(1) 309-320
- Powers S**, Hastie T, Tibshirani R (2018)  
“Nuclear penalized multinomial regression with an application to predicting at bat outcomes in baseball”  
*Statistical Modelling* **18**(5-6) 388-410
- Powers S**, Qian J, Jung K, Schuler A, Shah NH, Hastie T, Tibshirani R (2018)  
“Some methods for heterogeneous treatment effect estimation in high dimensions”  
*Statistics in Medicine* **37**(11) 1767-1787
- McGinnis L, **Powers S**, Bangs D, Cherry A, Tibshirani R, Natkunam Y (2016)  
“Double-hit diffuse large B-cell lymphomas with MYC gene rearrangements more commonly involve BCL2 than BCL6 gene rearrangements as the second hit: A large scale single institution study”  
*Laboratory Investigation* **96** 362A
- Burton T, **Powers S** (2015)  
“A linear model for estimating optimal service fraction in volleyball”  
*Journal of Quantitative Analysis in Sports* **11** 117-129
- Powers S**, Hastie T, Tibshirani R (2015)  
“Customized training with an application to mass spectrometric imaging of cancer tissue”  
*The Annals of Applied Statistics* **9** 1709-1725
- Powers S**, DeJongh M, Best AA, Tintle NL (2015)  
“Cautions about the reliability of pairwise gene correlations based on expression data”  
*Frontiers in Microbiology* **6** 650
- Powers S**, Gopalakrishnan S, Tintle NL (2011)  
“Assessing the impact of non-differential genotyping errors on rare variant tests of association”  
*Human Heredity* **72** 153-160
- Luedtke A, **Powers S**, Petersen A, Sitarik A, Bekmetjev A, Tintle NL (2011)  
“Evaluating methods for the analysis of rare variants in sequence data”  
*BMC Proceedings* **5** S119
- Petersen A, Sitarik A, Luedtke A, **Powers S**, Bekmetjev A, Tintle NL (2011)  
“Evaluating methods for combining rare variant data in pathway-based tests of genetic association”  
*BMC Proceedings* **5** S48
- Saavedra S, **Powers S**, McCotter T, Porter MA, Mucha PJ (2010)  
“Mutually-antagonistic interactions in baseball networks”  
*Physica A: Statistical Mechanics and its Applications* **389** 1131-1141

## CONFERENCE PRESENTATIONS

### Conference of Texas Statisticians

“Baseball pitch trajectory density estimation for predicting future pitcher outcomes” Houston 2024

### MIT Sloan Sports Analytics Conference

“Spotlighting under-the-radar performers in women’s college volleyball” Boston 2024

### New England Symposium on Statistics in Sports

“Estimating individual contributions to team success in women’s college volleyball” Boston 2023

### Saberseminar

“Pitch trajectory density estimation for predicting future outcomes” Chicago 2023

“Jointly predicting exit velocity and launch angle for batter-pitcher matchups” Boston 2016

“Rewarding batters for baserunner advancement: A ridge-regressed Rasch model” Boston 2015

### Joint Statistical Meetings

“Nuclear penalized multinomial regression for predicting at bat outcomes in baseball” Chicago 2016

### SABR Analytics Conference

“True wOBA: Estimation of true talent level for batters” Phoenix 2016

## STUDENT POSTER PRESENTATIONS

### Opta Forum

Andrew Kang: “Not All Features Are Created Equal: Player clustering and evaluation” London 2024

## FUNDING

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### Rice University Creative Ventures Conference and Workshop Development

“Rice Soccer Analytics Conference” PI: S Powers, \$10,000 2024-2025

## TEACHING

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\* indicates a course I designed

### Rice University

Instructor, \*SMGT 430: Introduction to Sport Analytics Spring 2024

Instructor, \*SMGT 432: Soccer Analytics Fall 2023

Instructor, \*SMGT 435: Baseball Analytics Spring 2024

### Stanford University

Instructor, \*STATS 50: Mathematics of Sports Spring 2016

TA, STATS 305A: Applied Statistics I Fall 2016

TA, STATS 216: Introduction to Statistical Learning Winter 2014, Summer 2015, Winter 2017

TA, STATS 202: Data Mining and Analysis Fall 2013, Summer 2014

TA, STATS 50: Mathematics of Sports Fall 2014

### University of Chicago

Instructor, STAT 23400: Statistical Models and Methods Spring 2013

TA, STAT 22000: Statistical Methods and Applications Fall 2011, Spring 2012, Fall 2012

## STUDENT MENTORSHIP

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### Rice University

Principal Investigator, Sport Analytics Undergraduate Research Lab	2024-
<i>Students/Alumni: Jeff Brover, Naomi Consiglio, Jacob Hahn, Rahul Herrero, Elisabeth Millington, Elizabeth Sepulveda, Luke Stancil, Lou Zhou, Judy Zhu</i>	
Coordinator, Sport Analytics Graduate Reading Group	2023-2024
Coordinator, Big Data Bowl Support Group	2023

## UNIVERSITY SERVICE

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### Rice University

Faculty Associate, Wiess College	2024-
Instructor, Owl Days Classroom Sampler (Office of Admission)	2024
Speaker, Special Occasion Dinner (Friends of Fondren Library)	2024
Speaker, Brains in a Bar (Association of Rice Alumni)	2024

### Sport Analytics Club Program

Faculty Advisor, Rio Rico High School (Rio Rico, AZ)	2023-2024
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## PROFESSIONAL DEVELOPMENT

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### Rice Center for Teaching Excellence

INSTILL Mini-Grant Program	2023-2024
Reading Group	2023-2024
Symposium on Teaching and Learning	2024
Workshop on Inclusive Teaching Strategies	2023

### Conferences Attended

Women in Sports Data Symposium	Philadelphia 2023
Minority Trailblazers in Sports Conference	Houston 2023

## AWARDS

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Graduate Research Fellowship, National Science Foundation	2011
McCormick Fellowship, University of Chicago	2011
Mathematical Decision Sciences Award, UNC Department of Statistics & Operations Research	2011
Student Speaker Award, Pi Mu Epsilon National Meetings	2010
National Merit Scholarship, National Merit Scholarship Corporation	2007
Jack Kavanagh Memorial Youth Baseball Research Award, SABR	2005, 2006, 2007

## ACTIVITIES

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Sports Analytics Club, Stanford University	2014-2017
Co-President	2015-2016
Intercollegiate Club Baseball, Stanford University	2013-2015
Intercollegiate Club Volleyball, Stanford University	2013-2016
Intercollegiate Club Volleyball, University of Chicago	2011-2013
Intercollegiate Club Volleyball, University of North Carolina at Chapel Hill	2007-2011
President	2008-2010