

SCOTT POWERS

saberpowers.github.io

ACADEMIC EXPERIENCE

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

SPORTS EXPERIENCE

FULL-TIME

Houston Astros 2022
Assistant General Manager

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

PART-TIME/CONSULTING

Teamworks (formerly 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

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

PRE-PRINTS

Powers S, Stancil L, Consiglio N
“Estimating individual contributions to team success in women’s college volleyball”
to appear in *Journal of Quantitative Analysis in Sports*

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

INVITED TALKS

Cascadia Symposium on Statistics in Sports

“Untangling intention and timing error from bat speed and swing length in MLB” Vancouver 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

CONTRIBUTED TALKS

Saberseminar

“Untangling intention and timing error from bat speed and swing length” Chicago 2024

“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

Conference of Texas Statisticians

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

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

INVITED PANELS

Columbia Symposium on AI and Sports

“Data Science and Analytics in Sports Performance and Management” New York 2024

STUDENT TALKS

Cascadia Symposium on Statistics in Sports

Jacob Hahn: “A game theoretic analysis of the pickoff limit in Major League Baseball” Vancouver 2024

Women in Sports Data Symposium

Naomi Consiglio: “Modifying k-means clustering to optimize positioning in volleyball” Philadelphia 2024

Saberseminar

Jeff Brover: “Do we learn more about AAA batters when they face better pitches?” Chicago 2024

Jacob Hahn: “A game theoretic analysis of the pickoff limit in Major League Baseball” Chicago 2024

Drew Haugen: “Time warping for clustering pitcher deliveries” Chicago 2024

STUDENT POSTERS

Cascadia Symposium on Statistics in Sports

Elizabeth Sepúlveda: “A statistical approach to sport climbing difficulty and progression” Vancouver 2024

Opta Forum

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

FUNDING

EXTERNAL

Major League Baseball Research Gift

PI: S Powers, \$35,000

2024-2025

INTERNAL

Rice University Creative Ventures Conference and Workshop Development

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

2024-2025

TEACHING

* indicates a course I designed

Rice University

Instructor, *SMGT 430: Introduction to Sport Analytics

Spring 2024, Fall 2024

Instructor, *SMGT 432: Soccer Analytics

Fall 2023

Instructor, *SMGT 435: Baseball Analytics

Spring 2024, Fall 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

MENTORSHIP

Rice University

Principal Investigator, Sport Analytics Undergraduate Research Lab

2024-

Students/Alumni: Jeff Brover, Naomi Consiglio, Lucca Ferraz, Jacob Hahn, Rahul Herrero, Elisabeth Millington, Zach Pool, Elizabeth Sepúlveda, Luke Stancil, Lou Zhou, Judy Zhu

Coordinator, Sport Analytics Graduate Reading Group

2023-2024

Coordinator, Big Data Bowl Support Group

2023

SERVICE

Rice University

Faculty Associate, Wiess College

2024-

Instructor, Statistical Training and Research Techniques at Rice University (School of Social Sciences)

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

Member, University Committee for Faculty and Staff Benefits

2024

SCORE Network

Associate Editor

2024-

Sports Analytics Club Program

Faculty Advisor, Rio Rico High School (Rio Rico, AZ)

2023-2024

Peer Review*Journal of Quantitative Analysis in Sports, Experimental Physiology***PROFESSIONAL DEVELOPMENT**

Rice Center for Teaching Excellence

INSTILL Mini-Grant Program

2023-2025

Reading Group

2023-2025

Symposium on Teaching and Learning

2024

Workshop on Inclusive Teaching Strategies

2023

Conferences Attended

Women in Sports Data Symposium

Philadelphia 2023, 2024

Minority Trailblazers in Sports Conference

Houston 2023

AWARDS

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

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