

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
Senior Analyst, Research & Development 2019–2021
2017–2018

PART-TIME/CONSULTING

Teamworks (formerly Zelus Analytics) 2020, 2023–2024
Staff Data Scientist 2023–2024
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

WORKING PAPERS

Powers, Yurko R
“Swinging, Fast and Slow: Interpreting variation in baseball swing tracking metrics”
arXiv:2507.01238

Powers, Ramani S, Hahn J, Schaefer AJ
“Lead distance under a pickoff limit in Major League Baseball: A sequential game model”
arXiv:2601.15608

Zhu R, Love D, **Powers**
“Ball path curvature and in-game free throw shooting proficiency in the National Basketball Association”
arXiv:2507.01238

Millington E, **Powers**
“A comps-based approach for interpreting tree-based predictions with an application to the NFL draft”

Powers, Iglesias V
“Pitch trajectory density estimation for predicting future outcomes”

JOURNAL ARTICLES

Powers, Stancil L, Consiglio N (2025)
“Estimating individual contributions to team success in women’s college volleyball”
Journal of Quantitative Analysis in Sports **21**(2) 117–135

Burton T, **Powers**, 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, 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, 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, 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**, 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** (2015)
“A linear model for estimating optimal service fraction in volleyball”
Journal of Quantitative Analysis in Sports **11** 117–129

Powers, 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, 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, Gopalakrishnan S, Tintle NL (2011)
“Assessing the impact of non-differential genotyping errors on rare variant tests of association”
Human Heredity **72** 153–160

Saavedra S, **Powers**, McCotter T, Porter MA, Mucha PJ (2010)
“Mutually-antagonistic interactions in baseball networks”
Physica A: Statistical Mechanics and its Applications **389** 1131–1141

INVITED CONFERENCE TALKS

“Winning baseball games by solving statistics puzzles” International Conference on Statistics and Data Science	Vancouver 2025
“Estimating individual contributions to team success in women’s college volleyball” MIT Sloan Sports Analytics Conference	Boston 2024
New England Symposium on Statistics in Sports	Boston 2023

INVITED DEPARTMENT SEMINARS

“Winning baseball games by solving statistics puzzles” Southern Methodist University, Department of Statistics and Data Science	Sep 2025
Johns Hopkins University, Department of Electrical and Computer Engineering	Sep 2025
“Player evaluation based on game performance” New York Knicks (National Basketball Association)	Nov 2024
TSG 1899 Hoffenheim (Bundesliga)	Apr 2024
“Nuclear penalized multinomial regression” Rice University, Department of Statistics	Apr 2023

INVITED CONFERENCE PANELS

“The Past, Present, and Future of Sports Analytics in Industry and the Academy” Joint Statistical Meetings	Nashville 2025
“Data Science and Analytics in Sports Performance and Management” Columbia Symposium on AI and Sports	New York 2024

CONTRIBUTED CONFERENCE TALKS

“Swinging, Fast and Slow: Untangling intention and timing error from bat speed and swing length” Cascadia Symposium on Statistics in Sports	Vancouver 2024
Saberseminar	Chicago 2024
“Pitch trajectory density estimation for predicting future outcomes” Conference of Texas Statisticians	Houston 2024
Saberseminar	Chicago 2023
“Jointly predicting exit velocity and launch angle for batter-pitcher matchups” Saberseminar	Boston 2016
“Nuclear penalized multinomial regression for predicting at bat outcomes in baseball” Joint Statistical Meetings	Chicago 2016

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

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

STUDENT CONFERENCE TALKS

“A comps-based approach for interpreting tree-based predictions with an application to the NFL draft”
Elisabeth Millington @ Carnegie Mellon Sports Analytics Conference Pittsburgh 2025

“Ball path curvature and in-game free throw shooting proficiency in the National Basketball Association”
Ruoqian (Judy) Zhu @ New England Symposium on Statistics in Sports Boston 2025

“The Two-Foot Rule: A game theoretic analysis of the pickoff limit in Major League Baseball”
Jacob Hahn @ Cascadia Symposium on Statistics in Sports Vancouver 2024
Jacob Hahn @ Saberseminar Chicago 2024

“Modifying k -means clustering to optimize positioning in volleyball”
Naomi Consiglio @ Women in Sports Data Symposium Philadelphia 2024

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

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

STUDENT CONFERENCE POSTERS

“A comps-based approach for interpreting tree-based predictions with an application to the NFL draft”
Elisabeth Millington @ New England Symposium on Statistics in Sports Boston 2025

“A statistical approach to sport climbing difficulty and progression”
Elizabeth Sepúvelda @ Cascadia Symposium on Statistics in Sports Vancouver 2024

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

FUNDING

EXTERNAL

Major League Baseball Research Gift
“Identifying biomechanical risk factors for pitching injuries” PI: S Powers, \$100,000 2024–2026

INTERNAL

Houston Methodist-Rice University Center for Human Performance Seed Grant Program
“Utilizing Ultrasound-Based Shear Wave Elastography to Assess UCL Changes in Collegiate Pitchers”
PIs: S Powers, R Jack, \$46,483 2026

Rice University Creative Ventures Conference and Workshop Development
“Rice Soccer Analytics Conference” PI: S Powers, \$10,000 2024–2025

TEACHING

Rice University

Instructor, *SMGT 430: Introduction to Sport Analytics
Instructor, *SMGT 435: Baseball Analytics
Instructor, STAT 699: Topics in Statistical Sciences
Instructor, *SMGT 432: Soccer Analytics
Instructor, *SMGT 434: Football Analytics
Instructor, SMGT 373: Sport Analytics Internship

* indicates a course I designed

Spring 2024, 2026; Fall 2024, 2025
Spring 2024; Fall 2024, 2025
Spring 2026; Fall 2024, 2025
Fall 2023
Fall 2025
Spring 2026

Stanford University

Instructor, *STATS 50: Mathematics of Sports
TA, STATS 305A: Applied Statistics I
TA, STATS 216: Introduction to Statistical Learning
TA, STATS 202: Data Mining and Analysis
TA, STATS 50: Mathematics of Sports

Spring 2016
Fall 2016
Winter 2014, Summer 2015, Winter 2017
Fall 2013, Summer 2014
Fall 2014

University of Chicago

Instructor, STAT 23400: Statistical Models and Methods
TA, STAT 22000: Statistical Methods and Applications

Spring 2013
Fall 2011, Spring 2012, Fall 2012

MENTORSHIP

Rice University

Principal Investigator, Sport Analytics Undergraduate Research Lab
Students/Alumni: Jeff Brover, Naomi Consiglio, Lucca Ferraz, Jacob Hahn, Rahul Herrero, Elisabeth Millington, Zach Pool, Elizabeth Sepúlveda, Luke Stancil, Lou Zhou, Ruqian (Judy) Zhu
Coordinator, Sport Analytics Graduate Reading Group
Coordinator, Big Data Bowl Support Group

2024–
2023–2024
2023

SERVICE

To the Profession

Lead Organizer, American Soccer Insights Summit
Sports Column Co-Editor, *CHANCE*
Associate Editor, SCORE Network
Organizer, ASA Virtual Sports Analytics Conference

2024–
2026–
2024–
2026

Rice University

Faculty Associate, Wiess College
Instructor, STaRT@Rice (School of Social Sciences)
Instructor, Owl Days Classroom Sampler (Office of Admission)
Speaker, Special Occasion Dinner (Friends of Fondren Library)
Speaker, Brains in a Bar (Association of Rice Alumni)
Member, University Committee for Faculty and Staff Benefits

2024–
2024, 2025
2024
2024
2024
2024

Peer Review

Journal of Quantitative Analysis in Sports x7, *Journal of Sports Analytics* x2, *International Journal of Sports Science & Coaching* x1, *Journal of Sports Sciences* x1, *Experimental Physiology* x1, *Computer Methods in Biomechanics and Biomedical Engineering* x1, *Proceedings of the National Academy of Sciences* x1

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