Stanford

David Donoho

Anne T. and Robert M. Bass Professor in the School of Humanities and Sciences

Statistics

Bio

BIO

David Donoho is a mathematician who has made fundamental contributions to theoretical and computational statistics, as well as to signal processing and harmonic analysis. His algorithms have contributed significantly to our understanding of the maximum entropy principle, of the structure of robust procedures, and of sparse data description.

Research Statement:

My theoretical research interests have focused on the mathematics of statistical inference and on theoretical questions arising in applying harmonic analysis to various applied problems. My applied research interests have ranged from data visualization to various problems in scientific signal processing, image processing, and inverse problems.

ACADEMIC APPOINTMENTS

- Professor, Statistics
- Member, Bio-X
- Member, Institute for Computational and Mathematical Engineering (ICME)

LINKS

- Stanford Department of Statistics: https://statistics.stanford.edu/people/david-donoho

Teaching

COURSES

2025-26

- Statistical Models of Text and Language: STATS 292 (Spr)
- Driving Innovation: Benchmarks, Competitions, and Challenge Problems in Machine Learning and Beyond: DATASCI 194C, DATASCI 294C (Win)
- Time Series Analysis: STATS 207, STATS 307 (Spr)

2024-25

- Multivariate Analysis and Random Matrices in Statistics: STATS 325 (Spr)
- Resampling Methods: Bootstrap, Cross Validation and Beyond: STATS 208 (Spr)
- The Data Science of Disinformation: DATASCI 194D, DATASCI 294D (Aut)

2023-24

- Bootstrap, Cross-Validation, and Sample Re-use: STATS 208 (Win)
- Massive Computational Experiments, Painlessly: STATS 285 (Aut)
- The Challenge Problems Paradigm in Empirical Machine Learning and Beyond: STATS 335 (Aut)

2022-23

- Function Estimation in White Noise: STATS 322 (Spr)
- Introduction to Statistical Learning: STATS 216 (Win)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Thomas Allard, Apratim Dey, Siamak Sorooshyari

Doctoral Dissertation Advisor (AC)

Jack Krew

Doctoral Dissertation Co-Advisor (AC)

Josh Kazdan