

ERIC VESTRUP
Manager

Cirque Analytics
Telephone: (415) 827-0152
E-Mail: vestrup@cirqueanalytics.com

Dr. Vestrup is a Manager at Cirque Analytics, a statistical, applied mathematics, and economic consulting firm based in Jackson Hole, WY. He received an undergraduate degree in Mathematics and Humanities from CSU Sacramento and both M.S. and Ph.D. degrees in Statistics from the University of California at Davis. Prior to joining Cirque Analytics, he was an assistant professor in Mathematical Sciences at DePaul University in Chicago, IL, where he taught mathematical statistics, probability, actuarial science, sampling theory, linear model theory, interest theory, reliability theory, and calculus to a mostly graduate-level audience. He has authored and co-authored papers in statistics and analytic philosophy, and was the sole author for the graduate-level textbook “The Theory of Measures and Integration” published by John Wiley & Sons. He has worked as a consultant on many litigation and business consulting engagements including automobile safety, asbestos litigation, tobacco litigation (U.S. and Canada), patent and intellectual property matters involving pharmaceutical drugs, and consumer product performance/safety issues. His expertise is in applied and mathematical statistics, SAS programming, and mathematics. This expertise includes damage analysis, survey analysis, econometric and statistical models, conjoint analysis, big data analysis, and probability theory.

EDUCATION

Ph.D. University of California, Davis. Statistics, 1997
M.S. University of California, Davis. Statistics, 1994
B.A. CSU Sacramento. Mathematics and Humanities, 1992

PROFESSIONAL EXPERIENCE

2021-Present Cirque Analytics, Manager

2006-2021 William E. Wecker Associates, Inc.
Manager: 2020 - 2021
Senior Consultant: 2006 – 2020

2005 UC Davis, Lecturer, Department of Statistics

1998-2005 DePaul University, Assistant Professor of the Mathematical Sciences

SELECTED CONSULTING AND TEACHING EXPERIENCE

Consulting Expertise

- Member of consulting teams in major litigation matters involving tobacco, automotive safety, pharmaceuticals, patent infringements, insurance allocation, and conjoint analysis.
- Analyze large, complicated data sets, such as cost accounting databases for various hospitals, the National Health and Nutrition Survey (NHANES), the Current Population Survey (CPS) and Tobacco Use Supplement (TUS), FARS and NHTSA automotive databases, the National Medical Expenditure Survey (NMES).
- Employ standard statistical concepts: linear models, regression (linear, probit, and logistic), parametric and non-parametric modeling, hypothesis testing, power calculation, experimental designs, Bayesian probability and inference, and survey sampling.
- Intensive SAS programming: SAS/BASE, SAS Macro Language, SAS/STAT, SAS/ETS, and SAS/GRAPH. Utilization of SAS/BASE for creation, maintenance, and preparation of (usually large) data sets. Utilization of SAS/STAT and SAS/ETS for statistical analysis of data. Utilization of SAS/GRAPH for preparation of exhibits and graphics to be used in depositions, courtroom testimony, and presentations to lawyers.
- Technical writing and presentations for technical and non-technical audiences: e.g., lawyers, other experts, juries, and judges.
- Development of code and mathematics for new applications of mathematics and statistics.

Teaching Experience

- Lectured seven courses per year, primarily graduate probability/statistics courses in both theory and application. Other courses lectured were reliability theory, actuarial mathematics, and all levels of calculus.
- Peer-reviewed research in statistics, reliability theory, sampling theory, and analytic philosophy.
- Published graduate-level textbook in mathematics: *The Theory of Measures and Integration* (2003), John Wiley & Sons.

PAPERS AND PUBLICATIONS

“On Constrained Estimation from Time-Use Survey Data” (with F. J. Samaniego and D. Bhattacharya), (2007), *Statistics and Probability Letters*, vol. 77, no. 2, pp. 204-210,

“Bayesian versus Frequentist Shrinkage in Multivariate Normal Problems” (with F. J. Samaniego), (2004) *Sankhya A* 66 109-139.

The Theory of Measures and Integration (2003), John Wiley and Sons, Hoboken, NJ.

“Probabilities and the Fine-Tuning Argument: A Skeptical View” (with T. McGrew and L. McGrew) (2003), 200-209, in *The Teleological Argument and Modern Science*, Neil Manson, Ed., Routledge Press, New York, New York.

“Linking Dominations and Signatures in Network Reliability Theory” (with F.J. Samaniego and P.J. Boland), (2003) in *Mathematical and Statistical Methods in Reliability* [Series on Quality, Reliability, and Engineering Statistics, Volume 7] 89-105, B. H. Lindqvist and K. A. Doksum, Eds., World Scientific, New Jersey. [Presented at Dublin Reliability Conference, 2002.]

“On Comparing Bayes Estimators to the Sample Mean in Multivariate Normal Problems” (with F. J. Samaniego) (2002) *American Statistical Association Proceedings for the Joint Statistical Meetings*, New York, New York. [Presented at the Joint Statistical Meetings, 2002.]

“On the Comparative Performance of Bayesian and Classical Point Estimators under Asymmetric Loss” (with F. J. Samaniego and D. Bhattacharya) (2002) *Sankhya B* 64, 239-267.

“Probabilities and the Fine-Tuning Argument: A Sceptical View” (with T. McGrew and L. McGrew) (2001) *Mind* 110, 1027-1037.

SKILLS

Statistical analysis of large data sets, SAS programming, STATA, Microsoft Excel, Mathematica, technical writing, public speaking at both the technical and non-technical level, preparation of graphics/exhibits for presentation, understanding and implementing the algorithms, code, and mathematics of statistical research, expert reports, and expert testimony. Long-term collaborative research, often in a litigation setting.

PERSONAL

I am a pianist, focusing on the solo piano works of Maurice Ravel, Sergei Rachmaninoff, and Claude Debussy. I am also a 3.5-level tennis player.