

# Carlos Carvalho

**Professor of Statistics, Department of Information, Risk, and Operations Management at The University of Texas at Austin, McCombs School of Business**

Austin, TX, US

Using Bayesian statistics to solve problems in finance, genetics and other complex fields

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## Description

Carlos M. Carvalho is a statistician, researcher, and educator who uses Bayesian statistics to address high-dimensional problems from a variety of fields, including finance and capital markets, genetics, health care, and political campaigns.

Carvalho is an associate professor of statistics in the department of Information, Risk, and Operations Management at the McCombs School of Business, The University of Texas at Austin.

Carvalho was previously on the faculty at The University of Chicago Booth School of Business, Duke University, and IBMEC in Rio de Janeiro, Brazil.

He is a CBA Foundation Advisory Council Centennial Fellow, since 2012, and he was awarded The Donald D. Harrington Fellowship by UT Austin in 2009. He has been an analytics consultant with Dell, Inc. since 2013.

His current research includes:

- 1) Advanced statistics and econometrics in asset pricing problems;
  - 2) Causal inference in high dimensional settings;
  - 3) Dimensionality reduction in large-scale multivariate problems;
  - 4) Sparse models for high-dimensional covariance matrices;
  - 5) Graphical models and sparse factor models;
  - 6) Model search/selection in linear models and graphical models;
  - 7) Dynamic graphical models in multivariate financial time series and portfolio analysis;
  - 8) Conditional variance models and multivariate stochastic volatility;
  - 9) Sequential estimation and particle filtering; and
  - 10) Parallel statistical computation.
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## Industry Expertise

Financial Services, Capital Markets, Research, Business Services

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## Topics

Bayesian Statistics, Advanced Statistics, Econometrics, Statistical Computation, Graphical Models, Parallel Statistical Computation, Computer Modeling, Stock Market and Investments, Stock Volatility, Pricing Models, Statistical Research, Dynamic Estimation, Multivariate Problems

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## Affiliations

International Society for Bayesian Analysis (ISBA) : Board Member, Journal of the American Statistical Association : Associate Editor, Electronic Journal of Statistics : Associate Editor, Savage Award-ISBA: Reviewing Committee, UT Austin Evaluations and Outcomes Committee: Members

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## **Past Talks**

**On The Long Run Volatility of Stocks**  
CFE-ERCIM Conference

**Decoupled Shrinkage and Selection in Linear Models**  
Harvard University

**Testing Asset Pricing Models**  
SPIES 2014

**Dynamic Matrix-Variate Graphical Models**  
Oxford-Man Institute of Quantitative Finance Vast Data Conference

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## **Education**

**Duke University**  
Ph.D. Statistics

**Federal University of Rio de Janeiro**  
M.Sc. Statistics

**IBMEC Business School**  
B.Sc. Economics

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## **Accomplishments**

**CBA Foundation Advisory Council Centennial Fellow**  
Awarded by the University of Texas at Austin.

**Donald D. Harrington Faculty Fellow**  
Awarded by the University of Texas at Austin.

**IBM Corporation Scholar**  
Awarded by The University of Chicago.

**Dennis V. Lindley Prize**  
Awarded for innovative research in Bayesian Statistics by the International Society for Bayesian Analysis.  
Honorable Mention for "Dynamic Matrix-Variate Graphical Models".

### **Leonard J. Savage Award**

For outstanding doctoral dissertation in Bayesian econometrics and statistics, by the International Society for Bayesian Analysis. Honorable Mention.

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### **Testimonials**

#### **David Wenger**

Carlos Carvalho studies complex topics using leading edge analytical models, in the pursuit of "truth seeking." His discoveries are directly applicable to the real world in which we make decisions, manage risks, and invest our resources.

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