

# Mathematical Finance People

## MF Faculty



Dr. Svetlozar (Zari) Rachev, MF program co-director, holds the rank of Professor in the Department of Mathematics and Statistics at Texas Tech University. Dr. Rachev is one of the world's foremost authorities in the application of heavy-tailed distributions in finance. He was a co-founder and President of Bravo Risk Management Group, originator of the Cognity methodology. Bravo was acquired by FinAnalytica, where Zari served as Chief Scientist. He served as the Frey Family Foundation Professor in Quantitative Finance in the Department of Applied Mathematics and Statistics at Stony Brook University; Chair-Professor at Karlsruhe Institute of Technology; and Professor Emeritus of Statistics and Applied Probability at the University of California, Santa Barbara. Dr. Rachev is the author of 14 books and over 300 published articles on finance, econometrics, probability, statistics and actuarial science, supervising over 50 PhD and MS students in his career.



Dr. W. Brent Lindquist, MF program co-director, holds the rank of Professor in the Department of Mathematics and Statistics at Texas Tech University. He received his PhD in theoretical physics from Cornell. His involvement with computation methods lead him to the Courant Institute for Mathematical Sciences at New York University, finalizing his transition to a research career in computational mathematics. Prior to joining Texas Tech, Dr. Lindquist served as Professor in the Department of Applied Mathematics and Statistics at Stony Brook University where he helped lead the transition of that department to one of the top 10 applied math programs in the country.

As a computational mathematician, Brent has developed numerical methods for: PDEs; flow in porous media; automated 3D image analysis for porous media, neuron, and fiber analyses; Riemann problems in 2D; hierarchy formation in social animal groups; and numerical solution of Feynman diagrams. He is a co-recipient of the Lee Segal prize from the Society of Mathematical Biology. He was one of the founding developers of the Frontier package used to study reservoir flow at field scales and is the principal architect of the 3DMA-Rock code for studying flow at the pore-scale, founding the company that marketed Frontier, commercially licensing his 3DMA-Rock code. Dr. Lindquist has over 100 publications, has presented his research in 25 countries on five continents, and participated as PI or co-PI in \$20M of grant funding. He has supervised over 35 PhD students.



A. Alexandre Trindade holds the rank of Professor in the Department of Mathematics and Statistics at Texas Tech University. He received his Ph.D. in Statistics from Colorado State University and was an assistant professor in the Department of Statistics at the University of Florida prior to joining Texas Tech's Department of Mathematics and Statistics. His main research interests include: time series; multivariate volatility modeling; state-space models and longitudinal data; saddle point-based bootstrap methodology and applications; asymptotic theory and higher-order approximations. His work on saddle point-based bootstrap has been funded by the National Security Agency. Dr. Trindade has extensive consulting experience; in 2003-04 he was the primary statistical consultant on a reliability project with The Boeing Company funded by DARPA, and in 2005 was contracted by Encision, Inc., for a reliability study on medical devices.

### **Current MF Postdoc**



Davide Lauria earned his Ph.D. in Applied Mathematics from the University of Bergamo in 2017, and then he worked in the same institution as a postdoctoral researcher for a year. Davide joined Texas Tech as a postdoctoral teaching and research scholar in fall 2018. His research interests include financial mathematics, applied probability and stochastic programming.

### **Current MF PhD Students**



**Yuan Hu**



**Abootaleb Shirvani**