

YANG, KAI

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OBJECTIVE

Pursuing a career in the area of quantitative finance: risk management / derivatives / asset management / financial analyst
Very open to relocation and travel

EDUCATION

Ph.D. Purdue University , West Lafayette	08/2008 expected
Major: Applied Mathematics specialized in Biological Mathematics	
Applied Statistics Certificate, Purdue University , West Lafayette	05/2007 expected
M.S. Purdue University , West Lafayette, IN	05/2006
Major: Applied Mathematics specialized in Computational Finance	
M.S. University of Science and Technology of China (USTC) Hefei, China	06/2002
Major: Applied Mathematics specialized in Combinatorics	
B.S. University of Science and Technology of China (USTC) , Hefei, China	06/1999
Major: Applied Mathematics	
B.S. University of Science and Technology of China (USTC) , Hefei, China	06/1999
Major: Business Management	

RELATED COURSEWORK

Financial Engineering I, II; Financial Algorithm; Mathematical Finance I, II; Simulation Design and Analysis; Options, Futures and Other Derivatives; Stochastic Process I
Mathematical Statistics; Applied Regression Analysis; Applied Multivariate Analysis; Design of Experiment; Statistical Methodology II, III; Time Series and Applications

COURSE PROJECTS

Multi-factor Generalization of Arbitrage Pricing Theory

Use multivariate regression to choose assets and factors to build the model fitting Arbitrage Pricing Theory and to getting to know the power and limitation of Arbitrage Pricing Theory.

Quadrinomial Tree for Pricing European Option

Base on a paper admitting stochastic volatility, understand and explain the algorithm using a quadrinomial tree to approximate the volatility, then use C++ to implement the algorithm with real market data to see the power of the model.

Credit Derivative and Its Pricing Models

Overview the growth of credit derivatives and two typical types of its pricing models.

Binomial Tree for Short Rate

Understand Black-Derman-Toy (BDT) model of the binomial tree for short rate, and use Matlab to implement algorithms for binomial trees under different situations to compute short rate and values of several derivatives afterwards.

Prediction of the Yield of Tomato

Practice the multi-regression method with data from biological field completely, including predictor selecting, hypotheses testing, data transforming, regression fitting and output analyzing.

Analysis on Salaries of Baseball Players in Major Leagues

Apply regression and ANOVA to analyze the relationship between salaries of major league baseball players and their performance, with several different techniques for remedies and data diagnostics.

Data Mining on Characteristics of Cars

Data analysis on 26 characteristic attributes of cars with statistical methods such as MANOVA test, Data Classification and Discrimination, Principal Component Analysis, Factor Analysis, Canonical Correlation Analysis and Data Clustering.

EXPERIENCE

Teaching Assistant

Department. of Mathematics **Purdue University** 08/2002 till now

Instructed recitation and lecture classes for undergraduates in Algebra and Trigonometry, Engineering Calculus, and Business Calculus.

Teaching Assistant

Department. of Mathematics **USTC** 09/1999-06/2002

Instructed recitation classes for undergraduates in Algebra, Calculus and Differential Equation

Network Administrator

Department. of Mathematics **USTC** 09/1996-06/2002

Adminstrated Windows NT LAN and Novell LAN. Answered questions and solved coding problems raised by student.

SKILLS

Languages: Native Mandarin Chinese
Fluent English

Computer: MS Windows 2000/XP, Unix, Linux
MS Office, SAS, C & Matlab, Mathematica