

# ***Curriculum Vitae (CV)***

April 6, 2020

## **John A. Dobelman**

Professor in the Practice in Statistics, and Director of Professional Master's Program

The Rice University

Department of Statistics, MS-138

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### **Education**

The Rice University, Statistics, Ph.D. 2004

The Rice University, Master's of Business and Public Management, MBPM 1985

The Rice University, Electrical Engineering, BSEE 1979

### **Work Experience**

Associate Director, Center for Computational Finance and Economic Systems (CoFES)	2011 - Present
Professor in the Practice in Statistics, and Director of Professional Master's Program	2010 - Present
Lecturer in Statistics and Director of Professional Master's Program, The Rice University	2008-2010
Scientist, PROS Revenue Management, Houston, TX	2006-2008
Adjunct Professor, Cameron School of Business, University of St. Thomas, Houston, Texas	2004-2006
Research Analyst, Jesse H. Jones Graduate School of Management, Rice University	2004-2006
Lecturer of Statistics, Rice University	2004-2005
Principal, FFT Group, Houston, Texas (Montgomery County)	1997-2006
General Engineer, DOT/Federal Aviation Administration, Washington, DC	1998 (Jan-Jul Detail)
General Engineer, DOT/Federal Aviation Administration, Washington, DC	1995 (Jan-Jun detail)
Supervisory General Engineer GM-801-14, DOT/Federal Aviation Administration, Southwest Region, Fort Worth, Texas	1992-1998
Supervisory Electronics Engineer, DOT/FAA/ASW, Fort Worth, Texas	1990-1992
Electronics Engineer, DOT/FAA/ASW, Fort Worth, Texas	1986-1990
Research Engineer, Space Physics & Astronomy Department, Rice University	1981-1986

### **Research Interests**

Investments analysis

Stochastic modeling for markets and finance

Simulation-based and quantitative portfolio selection and management

Deception in patterns of noise

Optimal display of quantitative information

Improved communication

Applications of statistics to engineering models, and engineering models to statistical problem

## Awards and Honors

2017 Nancy Moore and J. Thomas Eubank Prize in Computational Statistics	4/24/17
Brown Teaching Grant for "Virtual Learning Environment for the Statistical Software".	6/5/13
Academy of International Business Distinguished Paper Award	May 2008
George R. Brown Fellowship in Computational Engineering	8/02
Superior Accomplishment Award from AAF-1	10/15/97
PMRS/PMS Meritorious (Exceptional) Performance Award	7/9/95
Certificate of Appreciation, AND-310, for Outstanding support of the Aeronautical Datalink Integrated Product Team, AND-310	7/1/95
Letter of Appreciation, MIT Lincoln Laboratory and AF Division Manager	2/7/95
Letter of Appreciation, Airports and AF Division	1/23/95
Letter of Appreciation, AF Division Manager	6/06/94
Letter of Appreciation, Public Affairs Officer	5/16/94
Letter of Appreciation, Civil Rights Staff	3/18/94
Letter of Appreciation, AF Division Manager	3/16/94
Certificate of Recognition, 1994 Black History Month	2/18/94
AXO Honorary Award Nomination-Vision of Tomorrow in Productivity for Project DFW GPS	10/30/93
Letter of Appreciation, Regional Administrator	10/93
PMRS Meritorious Performance Award	10/3/93
Facilitator Certification, Quality Action Teams	9/18/92
PMRS Exceptional Performance Award	10/6/91
Special Service Award from ANR-100	2/11/91
PMS Exceptional Performance Award	7/15/90
PMS Outstanding Performance Award	7/16/89
Letter of Appreciation, ABQ GNAS AFS Manager	10/22/88
PMS Outstanding Performance Award	8/28/88
PMS Exceptional Performance Award	8/25/87
Team Cash Award, Best Acquisition Proposal	5/85
International Youth in Achievement	10/79

## Grants and Other Funding

2019 q-bio Summer School, National Science Foundation (\$30,000), co-PI with Professor Marek Kimmel, awarded May 2019.

2019 q-bio Summer School, Rice University Creative Ventures Conference Fund (\$20,000), co-Pi with Professor Marek Kimmel, awarded April 2019.

2018 q-bio Summer School, National Science Foundation (\$32,500), co-PI with Professor Marek Kimmel, awarded April 2018.

2018 q-bio Summer School and Conference, Rice University Creative Ventures Conference Fund (\$20,000), co-Pi with Professor Marek Kimmel, awarded December 2017.

## **Symposia Organized**

"Sports Analytics and Gaming Risk Management," *Ninth Eubank Conference on Real World Markets*, Rice University, Houston, Texas, April 27, 2020.

"Intelligent Investment Advising in the Fintech Era," *Eighth Eubank Conference on Real World Markets*, Rice University, Houston, Texas, April 23, 2018.

"High Frequency Trading - Its Impact on Trading and Investing," *Seventh Eubank Conference on Real World Markets*, Rice University, Houston, Texas, April 24, 2017.

"Risk and Opportunity, The Way Forward," *Sixth Eubank Conference on Real World Markets*, Rice University, Houston, Texas, April 25-26, 2016.

"Modeling Financial Markets in a World of Fiat Money," *Second Eubank Conference*, Rice University, Houston, Texas, October 18-19, 2010.

"Modeling Real-World Markets," *First Eubank Conference*, Rice University, Houston, Texas, March 24, 2009.

Organized numerous national and regional symposia and conferences for program managers and stakeholders for budget planning, formulation and execution, and final construction/implementation of complex electronics/civil/structural CNS (communication, navigation and surveillance) systems and facilities programs.

## **Professional Activities**

### ***Editorial Boards***

MEI 2009 General Chair; Paper reviewer for Organizing Committee of the 5th International Symposium on Management, Engineering and Informatics: MEI 2009

### ***Committees and Service***

Committee member, Rice University Committee for Graduate Council, AY 2017-2019

Panel Moderator. "Department of Treasury OCC Exploration Workshop Exploring Statistical Issues in Financial Risk Modeling and Regulation Focusing on Success in Modeling of Operational Risk and Credit Risk." NISS, (February 2009)

Co-Chair, FAA Southwest Region GPS Implementation Team (GRIT), 1995-1997

Served on the Institute of Navigation's GPS/GLONASS Interoperability Panel; and in this capacity was only FAA person (out of 45,000 employees) actively involved in NSF/USAF's National Space Weather Program initiative seeking greater DOT involvement as a requirements-setting member of the consortium.

### ***Societies***

Member, American Finance Association (AFA), Institute of Mathematical Statistics (IMS), Institute of Electrical and Electronics Engineers (IEEE), the Institute of Navigation (ION), and Air Traffic Control Association (ATCA).

Life Member, American Geophysical Union (AGU), American Statistical Association (ASA)

Member, Houston Philosophical Society (HPS)

## **Directorships and Corporate Affiliations**

Houston Achievement Place (Director, 2015-present)

Topl LLC (Advisory Director, 2017-present)

Dayspring Counseling Services (Advisory Director, 2010 - present)

Friends of Fondren Library (Director, 2011-2018)

## **Theses/Dissertations Supervised**

Ahra Wu, Ph.D. Dissertation in Political Science, committee member, *"Causes and Consequences of Consultation Pacts: A Multiple-Equation Model of Alliance Formation and Interstate Conflicts"* Rice University, (August 2018).

Iliya Atanasov, Ph.D. Dissertation in Political Science, committee member, *"Delegation, Agency and Competitive Representation."* Rice University, (August 4, 2015).

Nikita Kozin, Ph.D. Dissertation in Mathematics, committee member, *"Toric fibrations and models of universal torsors"*, Rice University (April 20, 2015).

Giora Hadar, Ph.D. Dissertation in Business and Economics, committee member, *"The Dynamics of Intergenerational Knowledge Transfer; Case study of Air Traffic Controllers in the FAA."* University of Groningen, the Netherlands (December 2012 - February 12, 2015).

Sarah M. Tooth, Ph.D. Dissertation in Statistics, thesis director: *"TBD."* Rice University (Jan 2013, in progress until candidate deceased 10/28/14).

Sarah M. Tooth, MA Thesis in Statistics, thesis director: *"Design and Validation of Ranking Statistical Families for Momentum-Based Portfolio Selection."* Rice University (November 20, 2012).

## **Consulting, Alliance and External Relations**

Quantitative Strategies Model Risk Management Documentation and Program for Salient Partners, LP, June-August 2019

Third-Party Crude Oil Hauling, HST v. FHR Litigation; Statistical Consulting for Edison, McDowell & Hetherington L.L.P. (EMH), June-August 2014

Modal Transportation, Statistical Consulting for ARUP, Inc., Feb-May 2013

Quantitative Portfolio Management for Start-up Equity Hedge Fund, Houston, Texas, 2009-2011

Investor Relations for Vericenter private placement, 2003

Excellent collaborative relationship with the Rice Alliance for Technology and Entrepreneurship (Rice Alliance), since inception; first with Prof S. Currall, and after his departure, with Mr. B. Burke. Opportunities for enhance academic cooperation include building better relationships with Profs. Gorry (JGSB) and Barron (GRB-Mechanical Engineering).

Qualified Investor Guidance and Participation in Start-up Hedge Fund, Montgomery County, Texas 2001-2003

Quality Assurance for Bayesian Networks, 2000, for Dr. Red Duke, Inc., Houston, Texas (2000-2001)

## **Publications**

Dobelman, J., Sampling James R. Thompson's Inspired Non-Parametric Portfolio Approaches, *WIRES Comp. Stat.*, (forthcoming 2019)

Tooth, S. and Dobelman, J. The MaxPercentile Strategies for Portfolio Selection, In J.A. Dobelman (ed.), *Models and Reality: Festschrift for James Robert Thompson*, Chicago, IL: T&NO Company, 2017.

S.M. Tooth and J.A. Dobelman. A New Look at Generalized Means, *Applied Mathematics*, 7, 468-472 (2016)

Anne S. Davis, Penny A. Leas, and John A. Dobelman. Did You Get My E-mail? An Exploratory Look at Intercultural Business Communication by E-mail. *Multinational Business Review* 17(1): 73-98

Dobelman, J.A., *Market Outperformance by Nonparametric, Simugram-Based Portfolio Selection*, Ph.D. Dissertation, UMI Dissertation Services, Inc., 2004

## Books

Williams, Edward E. and John A. Dobelman, *A Random Walk to Nowhere: How the Professors Caused a Real "Fraud-on-the-Market"*, New Jersey: World Scientific (in press, 2020).

Williams, Edward E. and John A. Dobelman, *Quantitative Financial Analytics: The Path to Investment Profits*, London: World Scientific, 2017.

Dobelman, John A., ed. *Models and Reality: Festschrift for James Robert Thompson*, Chicago, IL: T&NO Company, 2017.

Williams, E.E. and Dobelman, J.A., *Investing for Profit: A Data Based Approach (Revised Edition)*. Chicago, IL: T&NO Book Company, 2015

Williams, E.E. and Dobelman, J.A., *Investing for Profit: A Data Based Approach*. Chicago, IL: T&NO Book Company, 2014

## Manuscript Peer Review

Kikuni, Matendo, Kanyama and Mukendi, "On the Contribution of the Stochastic Integrals to Econometrics," appearing in *Applied Mathematics*, fall 2019

Ginley, Scott and Ensor, Simulation of Leveraged ETF Volatility Using Nonparametric Density Estimation, appearing in *Journal of Mathematical Finance (JMF)*, fall 2015.

Giovanni Girone, Fabio Manca, "The Mean Difference for Lognormal Distribution", *Technology and Investments*, 2016

## Proceedings and Book/Chapter Reviews

Dobelman, J.A., Book Review, "Algorithmic Finance: An Introduction to Applied Data Science," for World Scientific Publisher, 12/1/19 (Chapter 4)

Dobelman, J.A., Book Review. "Statistical Theory: A Concise Introduction," by Felix Abramovich and Ya'acov Ritov. (2014) *Reviews of Books and Teaching Materials, The American Statistician*, 68:2, 117-124, DOI: 10.1080/00031305.2014.899842

Dobelman, J.A., Book Review, "Statistics, Data Analysis, and Financial Engineering," by David Ruppert, for Springer Texts in Statistics, 1/16/10 (Chapters 6, 7, 9, 15, 19, and a new chapter on Cointegration).

Proceedings of the Eubank Conferences, 2009-2016 (in progress)

## Invited Presentations

Dobelman, J.A., "Some Inspired Non-Parametric Portfolio Approaches of James R. Thompson," Rice University Department of Statistics Colloquium, August 27, 2018.

Dobelman, J.A., "Some Inspired Non-Parametric Portfolio Approaches of James R. Thompson," 2018 Joint Statistical Meetings (JSM), Papers in Honor of Professor James R Thompson (1938-2017), Vancouver, BC, July 30, 2018

Dobelman, J.A., "The Trader's '2% Rule' for Money Management," A Symposium on Optimal Stopping, Rice University, Houston, TX, June 25-29, 2018

Dobelman, J.A., "Big Math." *Richard Tapia Center for Excellence & Equity Math-Science Scholars Program*, Rice University, Houston, TX. (July 16, 2015)

Dobelman, J.A., "Model Specification Error with High-Speed Computational Propagation Seen in the Subprime Meltdown", *Future of Statistical Computing: Internet Scale Data, Flexible Modeling, and Visualization, 43rd Symposium on the Interface (Interface 2012)* Rice University, Houston, Texas (May 16-18, 2012)

Dobelman, J.A., "Quant Gaffes," *Third Eubank Conference: Real World Markets - Investing During Troubled Times*, Rice University, Houston, TX. (October 17, 2011)

Dobelman, J.A., "Historical Backtesting vs. Real-World Positions." *Second Eubank Conference: Modeling Financial Markets in a World of Fiat Money*, Rice University, Houston, TX. (October 19, 2010)

Dobelman, J.A., "Rags or Riches: Short Options Trading Program," *First Eubank Conference: Modeling Real-World Markets*, Rice University, Houston, TX. (March 24, 2009)

Dobelman, J.A., "A New Anecdote of Antiquity in the History of Computational Finance", invited talk at the *2004 CoFES Symposium on Advancements in Quantitative Finance*, Rice University, Houston, Texas, 9/20/2004

## Courses Taught

INDE 572/STAT 572, Stochastic Processes and Simulation	Spring 2020 - present
INDE 571/STAT 571, Probability and Statistics	Fall 2019-present
STAT 411/616, Advanced Statistical Methods	Spring 2019
Short Course, "Investing for Profit: A Data Based Approach", in conjunction with the 5th Eubank Conference on Real World Markets: A Focus on Energy, March 26-27, 2015.	
STAT 499/699, Mathematical Sciences - Computational Finance	Fall 2014-present
STAT 449/649, Financial Engineering	Spring 2012
STAT 482/682, Quantitative Financial Analytics	Fall 2010 - present
ECON 382/STAT 310, Probability and Statistics	Summer 2010
ECON 307/STAT 310, Probability and Statistics	Summer 2012-13, 2015, Fall 2015-17
ECON 504/STAT 604, Advanced Economic Statistics	Fall 2008-Fall 2011
STAT 431, Overview of Mathematical Statistics	Fall 2008-Fall 2014
STAT 385, Methods of Data Analysis and System Optimization	Spring 2009-Fall 2018
STAT 486/686, Computational Finance I: Market Models	Spring 2009-present
STAT 280, Elementary Applied Statistics	Spring 2004-Fall 2006
STAT 100, Data, Models, and Reality	Spring 2004
MGMT 927/627, Enterprise Exchange (Teaching Assistant)	Spring 2004-2006
MBA/MIB 5315, Statistical Methods for Management Decisions	Spring 2005-Summer 2006

## Presentations and Posters

Davis, A. S., Leas, P. and Dobelman, J. (2006). "More Than Words: A Study of Precedents and Antecedents to Intercultural Business Communications Problems Using Email," presented to *Hawaii International Conference on Business*, May, 2006.

Dobelman, J.A., "Position Model with Ranking for Risk and Profit Management", *Center for Computational Finance and Economic Systems (CoFES) 2002 Symposium*, November 7, 2002; Rice University

## Working Papers and Technical Reports

Dobelman, J.A., Kang H.B., and Park S.W., *WRDS Index Data Extraction Methodology*, The Rice University, Statistics Department Technical Report TR2014-01 (January 2014)

McMahon, Ethan K. and Dobelman, John A., *A Market for Water: Constructing a Custom Weighted Water Index*, The Rice University, Statistics Department Technical Report TR2014-02 (January 2014).

McMahon, Ethan K. and Dobelman, John A., *The State of Water: Today and Tomorrow*, The Rice University, Statistics Department Technical Report TR2013-01 (December 2013)

Thomas, Drayton M. and Dobelman, John A., *Pricing Credit Default Swaps on Mortgage Backed Securities*, The Rice University, Statistics Department Technical Report TR2013-02 (December 2013)

*Notes on Tulip Mania*, STAT 686 Market Models monograph, spring 2012

Building Political Relationships: An Empirical Investigation of Corporate Choices (provided additional research support to Rehbein and Schuler), for publication in *Proceedings of the 2006 Academy of Management Annual Meeting* (submitted 1/9/06).

*Building Political Capital* (provided research support to Rehbein and Schuler), a report submitted to the Board of Directors, Foundation for Public Affairs, Washington, DC 3/5/05.

*On the Distribution of Market Returns*, STAT-550 Non-Parametric Function Estimation Project Report, December 2001

*Models for Electricity Risk Management*, Ph.D. proposal, June 2001

Exploratory Analysis Project-"Spikey" *Commodity Price Time Series*, STAT 551 Advanced Time Series, May 2001

*Path Analysis of Variables Affecting Price/Earnings Ratio (PE)*, presentation and monograph for Rice University faculty and graduate students, 2000

*Options Portfolio*, presentation and monograph for Rice University faculty and graduate students, 2000

*Bayesian Analysis and Portfolio Simulation*, presentation and monograph for Rice University faculty and graduate students, 2000

*Portfolio Simulation and Confidence Interval*, presentation and monograph for Rice University faculty and graduate students, 2000

*Stochastic Modeling, Estimation and Simulation for Equity Stock*, presentation and monograph for Rice University faculty and graduate students, 2000

*Analysis and Comparison of Daily S&P 500 Cash Index with Comparable-Length Data for Intraday Time Series*, presentation and monograph for Rice University faculty and graduate students, 1999.

*Correlation study between Cash S&P 500 index and 46 Futures Contracts*, presentation and monograph for Rice University faculty and graduate students, 1999.

*Review of Classical Derivation, and Reconciliation with a Post-Keynesian Analysis of the Black-Scholes' Options Pricing Model*, presentation for Rice University faculty and graduate students, 1999.

*A Multidisciplined Approach to Hedging Products Lacking a Primary Derivatives Market*, presentation and monograph for Rice University faculty and graduate students, 1999.

Dobelman, J.A. (1998). "Holbrook Working: Review of Major Research Contributions in the Field of Commodity Futures Prices, 1928-1970+", *Research Report*, Statistics Department, Rice University, 11/16/98

*Global Positioning System (GPS), A Program Summary for FAA Employees and Users in the Southwest Region*, Federal Aviation Administration, Fort Worth, Texas, c.1994

W.E. Gordon and J.A. Dobelman, "*Comparison of measured and calculated antenna patterns for the Isote heater*," Rice University, 1982.

Research for other publications was performed while as Dr. W.E. Gordon's Research Assistant in the Space Physics & Astronomy Department, 1981-1986, for articles that were published in peer-reviewed radio science journals.