Nina Kajiji, PhD, pstat®

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SUMMARY OF QUALIFICATIONS

Consulting

Nina is the Principal of The NKD Group, Inc. The firm produces web-enabled analytical and decision-making software. The main product, WinORS$_{e\text{-}AI}$, is a full-featured pc-based computational system designed to bring principles of financial engineering, statistics, operations research, and econometrics with real-time data to foster experiential learning in the academic classroom or to your business. The software has proven adaptable to specific vertical industry needs and either has been or is currently installed for both faculty and student use in the computer labs of University of Rhode Island, Johnson and Wales University, University of Detroit, ISIDA (IT), and Stellenbosch University (SA). Researchers and Fortune 500 companies that require support in the fields of optimal portfolio modeling, neural network modeling, derivatives and hedge fund analysis, constrained optimization, and global currency valuation actively use WinORS$_{e\text{-}AI}$.

Since the summer of 2007, Nina has been actively involved in the development of a new product, WINKS. WINKS is a web-based application that provides high-frequency real-time trade forecasts and supporting statistics for over 3000+ stocks, indices, and ETFs. (Click ***Online NOW!*** on The NKD-Group homepage). The target audience for WINKS is the small investor. Concurrently with the development of WINKS, Nina is also involved in "big data" statistics as it pertains to the development of a product to manage approximately 2 million municipal bonds using real-time streaming data and estimate an hourly yield curve. The product is being developed for Thomson Reuters, Boston, MA.

Research & Publishing

Current research focuses on multi-disciplinary but traditional research productivity. The focal point in the research is to apply advanced statistical and constrained optimization models to a variety of topics. The primary neural network topology, radial basis function, utilized in the research was developed as part of Nina's dissertation. It has now been enhanced to handle additional transfer functions, different time frequencies, and multiple target variables. The network has been incorporated in the product WinORS$_{e\text{-}AI.}$ Research models using WinORS$_{e\text{-}AI}$ have been presented to capital market professionals in Italy, India, Thailand, South Africa, UK, Turkey, Lithuania, and USA. Recently, Dr. Kajiji presented classification and prediction models that can be used for formulating education policy using the proprietary Neural Network (K4 model) to both researchers and practitioners in the field of education in Tunisia, Germany, Canada, and Turkey. In the field of optimization, Nina has co-developed a new algorithm to solve mixed-integer nonlinear goal programming problems using branch-and-bond and separable programming methods.

Dr. Kajiji's research has been published in: *Canadian Journal of Operational Research and Information Processing (INFOR), Operational Research, The African Finance Journal*, *The Journal of Multi-Criteria Decision Analysis, Journal of Computing and e-Systems, Journal of Applied Operational Research, and recently in the International Transactions on Operational Research.* Dr. Kajiji has also published analytical software in financial engineering, statistics, and operations research (with Dr. Dash). The two-volume set is entitled: Operations Research Software, Volumes I and II (Richard D. Irwin, Inc.). Other publications include 9 years of Information Works! the official State Report Card that measures Rhode Island schools for change. This was a yearly publication that was jointly produced by the University of Rhode Island and Rhode Island Department of Elementary and Secondary Education. Currently, Dr. Kajiji is co-authoring an e-book titled, Applied Risk Management: Fundamentals of Derivatives and Automated Trading and has also contributed two chapters in the book, Recent Advances in Computational Finance.

Teaching Curriculum

Although teaching has not been Nina's primary assignment, the professional history reflects full-semester courses, executive-in-training sessions, short courses, as well as invited speaker sessions. The subject matter taught is interdisciplinary and covers the areas of statistics, mathematical finance, and management science / operations research. The classes were taught to undergraduate-, graduate-students, and executives. International experience is also recorded at the graduate level in Italy, with similar high-level teaching in Thailand to high-ranking investment portfolio managers. Since 2009 Nina has developed two new courses. One in *Time-Series analysis* and the other is *Elementary Stochastic Calculus for Computational Finance*. Both courses develop the theory and are supplemented with experiential learning.

With regards to undergraduate and graduate teaching most of the courses Nina has taught are technical and require that the students have some level of mathematical / statistical sophistication. However, since these are generally listed as

interdisciplinary courses the students are from very diverse educational interests and thus their technical skill levels vary greatly. Nina personally likes the challenge of teaching technical material by not only presenting the facts and concepts as clearly as she can but by also bringing in recent developments in various fields either in the form of examples, case-studies, or small projects. Having an active research and consulting program in the use of statistics in finance, operations research, education, and to some degree in pharmacy allows Nina to encourage class discussion and conceptual understanding. Nina's goal is to enhance a student's understanding of the technical subject matter and most importantly have them see its relevance and application in their particular field of study.

EDUCATION

Ph.D. Applied Mathematics, University of Rhode Island, Kingston, RI — May, 2001
Specialization: Multivariate Statistics & Nonlinear Modeling
Dissertation: Adaptation of Closed Form Regularization Parameters with Prior Information to the Radial Basis Function Neural Network for High Frequency Financial Time Series.

MS Statistics, University of Rhode Island, Kingston, RI — December 1991
Specialization: Multivariate Statistics & Econometric Modeling

MBA Business Administration, University of Rhode Island, Kingston, RI — December 1982
Specialization: Finance

BCom University of Bombay, India — May 1980
Business Administration & Accounting

PROFESSIONAL CERTIFICATIONS

pstat, Accredited Professional Statistician™, American Statistical Association, 2013-2018
Group 1 (Social Behavioral), Human Subject Research Curriculum Completion, University of Rhode Island, 2014-2017
Group 2 (IRB Members), Human Subject Research Curriculum Completion, University of Rhode Island, 2014-2017

PROFESSIONAL HISTORY

Principal (January 1983 - Present)
The NKD Group, Providence, RI
http://www.nkd-group.com

Adjunct Associate Research Professor (July 2009 – present)
Computer Science and Statistics, University of Rhode Island, Kingston, RI

Visiting Professor (August, 2011)
Middle Eastern Technical University, Ankara, Turkey

Associate Research Professor (July 2007 – June 2009)
Centre for School Improvement and Educational Policy (formerly NCPESP), University of Rhode Island, Kingston, RI.
Primary Responsibility: Project Manager and Research Coordinator, for Information Works! the official School Report Card for the State of Rhode Island's Elementary and Secondary Schools

Assistant Research Professor (Aug 2000 – June 2007)
National Center on Public Education and Social Policy (NCPESP), University of Rhode Island, Kingston, RI

Visiting Professor (Summer 1999)
Istituto Superiore per Imprenditori e Dirigenti di Azienda (ISIDA), Palermo, Italy

Lecturer
Computer Science & Statistics, Univ. of Rhode Island, Kingston, RI (Spring: 2006, 2004, 2002, 1994)
Computer Science & Statistics, Univ. of Rhode Island, Kingston, RI (Summer: 1998, 1993, 1992)
Math Department, Rhode Island College, Providence, RI (Spring: 1996)
International Business, Johnson & Wales University, Providence, RI (Winter: 1994)

RESEARCH, ARTISTIC, CREATIVE AND SCHOLARLY ACTIVITY

E- BOOK

Dash Jr., Gordon H., and Kajiji, Nina. Applied Risk Management: Fundamentals of Derivatives and Automated Trading, An e-book. The NKD Group, Inc. First Edition, 2010. Second Edition, 2013.

REFEREED JOURNAL ARTICLES

Notes: Most research papers listed are available online at**: http://www.nkd-group.com/nina/researchpdf.pdf**

Dash Jr., Gordon H., and Kajiji, N. "On Multiobjective Combinatorial Optimization and Dynamic Interim Hedging of Efficient Portfolios." International Transactions in Operational Research, Vol 21(6), Nov 2014.

Kajiji, Nina and Dash, Jr., Gordon H. "On the Behavioral Specification and Multivariate Neural Network Estimation of Cognitive Scale Economies." Journal of Applied Operational Research, Vol 5(1), 2013.

Kajiji, Nina and Dash, Jr., Gordon H. "On the Behavioral Specification and Multivariate Neural Network Estimation of Cognitive Scale Economies." Lecture Notes in Management Science, Vol 4. July 2012.

Dash Jr., Gordon H., and Kajiji, N. "Efficient Multivariate Modeling of Cross Border Effects in the European Bond Volatility Spillover: A Multiple Objective Artificial Neural Network Approach." Lecture Notes in Management Science, Vol 4. July 2012.

Kajiji, Nina and Dash, Jr., Gordon H. "Efficient Multiple Objective Neural Network Mapping of State-Wide High School Achievement." Journal of Applied Operational Research, Vol 4(3), 2012.

Kajiji, Nina and Dash, Jr., Gordon H. "Efficient Multiple Objective Neural Network Mapping of State-Wide High School Achievement." Lecture Notes in Management Science, Vol 3. August 2011.

Kajiji, Nina; Dash, Jr., Gordon H.; Felner, Robert; Brand, Stephen; and, Seitsinger, Anne. "Evaluating Learning Performance: Applying Nonlinear Artificial Intelligence to Learning Support Indicators." The Journal of Computing and e-Systems, 1(1), Jan 2008.

Dash Jr., Gordon H., and Kajiji, Nina. *A Nonlinear Goal Programming Model For Efficient Asset-Liability Management of Property-Liability Insurers*, INFOR, Vol. 43(2), 135-156, May 2005.

Dash Jr., Gordon H., Hanumara, Choudary R., and Kajiji, Nina. *Neural Network Architectures for Modeling FX Futures Options Volatility*, Operational Research: An International Journal, Vol. 3(1), 2003. Reprinted in Operational Research, Vol. 3(1), 2003. http://www.springerlink.com/content/12874px07v772227/

Dash Jr., Gordon H., and Kajiji, Nina. *New Evidence on the Predictability of South African FX Volatility in Heterogeneous Bi-lateral Markets*, African Finance Journal, Vol 5(1), 2003

Dash Jr., Gordon H., and Kajiji, Nina. *Evolving Economy Bank Asset-Liability and Risk Management Under Uncertainty with Hierarchical Objectives and Nonlinear Pricing,* Journal of Multi-Criteria Decision Analysis, Special Issue: MCDA Methodologies in Finance, Vol 11(4/5), 247-260, 2002.

EDITED WORKS AND BOOK CHAPTERS

Gordon H Dash and Kajiji, Nina, *Combinatorial Nonlinear Goal Programming for ESG Portfolio Optimization and Dynamic Hedge Management*, Chapter 18 in Mathematical and Statistical Methods for Actuarial Sciences and Finance, Edited by: C. Perna, and M. Sibillo, Springer International Publishing, Switzerland, 2014

Kajiji, Nina and Dash Jr., Gordon H. *Computational Practice: Multivariate Parametric or Nonparametric Modeling of European Bond Volatility Spillover*? Recent Advances in Computational Finance, Edited by: N. Thomaidis, and G. Dash. Nova Science Publishers, Inc., 2013.

Kajiji, Nina and Forman, John. *Production of Efficient Wealth Maximization Using Neuroeconomic Behavioral Drivers and Continuous Automated Trading*, Recent Advances in Computational Finance, Edited by: N. Thomaidis, and G. Dash. Nova Science Publishers, Inc., 2013.

Dash Jr., Gordon H., and Kajiji, Nina. *Engineering a Generalized Neural Network Mapping of Volatility Spillovers in European Government Bond Markets,* Handbook of Financial Engineering, Series: Springer Optimization and Its Applications, Vol. 18, Edited By: C. Zopounidis, M. Doumpos, and P. Pardalos, Springer, 2008

Dash, Jr., Gordon H., and Kajiji, Nina. *A Re-examination of Volatility Spillovers in European Government Bond Markets Using a Multi-objective Artificial Neural Network,* Data Mining VIII: Data, Text and Web Mining and Their Business Applications. Edited By: A Zanasi, C.A Brebbia, and N.F.F. Ebecken, Wessex Institute of Technology Press: South Hampton, UK, 2007

Dash Jr., Gordon H., and Kajiji, Nina. *Forecasting Worldwide Internet Subscribers 1998-2019: An Interactive Excel Spreadsheet Model*, Electronic Commerce: Behaviors of Suppliers, Producers, Intermediaries & Consumers, Volume 3, Editors: Ruby Roy Dholakia & Solveig Wikstrom, RITIM, University of Rhode Island, Kingston, RI, September 1999.

Dash Jr., Gordon H., and Kajiji, Nina. *Stochastic Nonlinear Multiple Objective Optimization for Bank Portfolios in India: A Case for Punjab National Bank, India*, Economic Liberalization: Its Impact on Indian Economy, Business, & Society, Edited by: Varkey K. Titus, Association of Indian Economic Studies, Emporia State University, Kansas, August 1997.

PUBLICATIONS AND STATISTICAL REPORTS

Dash, G., Kajiji, N., Forman, J. Trade Leader Performance: Evolving a Risk Warning System with Predictive Mitigation, Prepared for: Currensee, Boston, MA, June 2011.

McWalters, P., and Seitsinger, A. (Directors), Kajiji, N. and Krieger, E. (Project Managers), Information Works! Measuring Rhode Island Schools for Change. A joint publication from the Rhode Island Department of Education, Providence, RI. and The National Center on Public Education and Social Policy, University of Rhode Island, Kingston, RI. 2009. Online at: http://www.infoworks.ride.uri.edu. Annual Report (2009)

Kajiji, N., Technical Brief on the Statistical Model Used in the 2008 Rhode Island School and District Reports. Rhode Island Department of Education, University of Rhode Island, National Center on Education and Social Policy. 2008. Online Annual Report (2009) ,

McWalters, P., Felner, R.D., and Seitsinger, A. (Directors), Krieger, E. and Steiny, J. (Project Managers), Kajiji, N. (Research Coordinator). Information Works! Measuring Rhode Island Schools for Change. A joint publication from the Rhode Island Department of Education, Providence, RI. and The National Center on Public Education and Social Policy, University of Rhode Island, Kingston, RI. 2009. Online at: http://www.infoworks.ride.uri.edu. (***Winner of the Outstanding Publications Competition, American Education Research Association, 2008***). Annual Report (2008, 2007, 2006, 2005, 2004)

Kajiji, N., Technical Brief on the Statistical Model Used in the 2008 Rhode Island School and District Reports. Rhode Island Department of Education, University of Rhode Island, National Center on Education and Social Policy. 2008. Online Annual Report (2008, 2007, 2006, 2005, 2004, 2003).

Felner, R.D., Krieger, E., Brand, S., Kajiji, N., Kellogg, L., and Steiny, J. Information Works! 2003 Measuring Rhode Island Schools for Change. Joint Publication from the Rhode Island Department of Education, Providence, RI., and The National Center on Public Education and Social Policy, University of Rhode Island, Kingston, RI. 2003. Online at: http://www.infoworks.ride.uri.edu/2003

Felner, R.D., Cheek, D.W., Bergner, T., Brand, S., Gu, K., Kajiji, N., Kellogg, L., Shim, M., and Steiny, J. Information Works! 2002 Measuring Rhode Island Schools for Change. Joint Publication from the Rhode Island Department of Education, Providence, RI., and The National Center on Public Education and Social Policy, University of Rhode Island, Kingston, RI. Annual Report: 2002, and 2001.

Cheek, D.W., Kajiji, N., and Shim, M., Technical Brief on the Statistical Model Used in the 2002 Rhode Island School and District Reports. Rhode Island Department of Education, University of Rhode Island, National Center on Education and Social Policy. Online Annual Report: 2002 and 2001.

Forecasting Worldwide Internet Subscribers 1998-2019: An Excel Spreadsheet System, Dash, Jr., Gordon H., and Kajiji, Nina. for KMI Corporation, Newport, RI, Fall 1998.

GRANTS – URI Internal Grants

Title: *Distinguished Visiting Artist Program*

Artist: Dhanashree Pandit-Rai

Sponsors:
Joseph Parillo, Department of Music, University of Rhode Island
Nina Kajiji, Computer Science and Statistics, University of Rhode Island

Program / Organization:
Office of the Provost, University of Rhode Island

Award: $15,000

Date Awarded: Fall 2015
Date Completed: Fall 2015

Title: *Left-handedness as a Potential Cause for Visual Misalignment*

Investigators:
Natalie M. Taylor (Student)
Nina Kajiji, Computer Science and Statistics, University of Rhode Island (Co-Faculty Sponsor)
Joan Peckham, Computer Science and Statistics, University of Rhode Island (Co-Faculty Sponsor)

Program / Organization:
Undergraduate Research Initiative Grant Committee, University of Rhode Island

Award: $500

Date Awarded: Summer, 2014

Title: *Introductory Course in Data Science*

Course Developer
Nina Kajiji, Computer Science and Statistics, University of Rhode Island

Program / Organization:
Development and Implementation of Innovations in STEM Course Design and Instruction, Culture of Engagement in Math and Science, University of Rhode Island

Award: $4,000

Date Awarded: Summer, 2014
Completed: Fall, 2014

Title: *On Artificial Intelligence and Modeling the Impact of High Frequency Trades on US Municipal Creditworthiness*

Investigators:
Gordon H. Dash, Jr. College of Business, University of Rhode Island
Lutz Hamel, Computer Science and Statistics, University of Rhode Island (withdrew 22-July-2013)
Nina Kajiji, Computer Science and Statistics, University of Rhode Island

Program / Organization:
Interdisciplinary Research Grant Program, College of Business, University of Rhode Island

Award: $8,000

Date Awarded: May 25, 2012
Completed: July 25, 2014

GRANTS – Federal & Foundation Grants

Title: *Investigations of Genomic Variants and Drug Vulnerability in Outbred Lines of Trait Anxiety Long Evans Rats*

Investigators:
S. Tiffany Donaldson, Development and Brain Sciences, Psychology Dept., UMass, Boston
Richard Hunter, Psychology Dept, College of Liberal Arts, UMass, Boston

Consultant:
Nina Kajiji, Computer Science and Statistics, University of Rhode Island

Program / Organization:
National Institute of Health.

Submitted: July, 2015

Title: *Adolescence and Anxiety Vulnerability: Behavioral and Hippocampal Neuron Responses to Stress*

Investigator:
S. Tiffany Donaldson, Development and Brain Sciences, Psychology Dept., UMass, Boston

Consultant:
Nina Kajiji, Computer Science and Statistics, University of Rhode Island

Program / Organization:
National Institute on Minority Health and Heath Disparities, National Institute of Health.

Submitted: January, 2015

Title: *Environment Enrichment and its Influence on Trait Anxiety*

Investigator:
S. Tiffany Donaldson, Development and Brain Sciences, Psychology Dept., UMass, Boston

Consultant:
Nina Kajiji, Computer Science and Statistics, University of Rhode Island

Program / Organization:
Brain & Behavior Foundation, NARSAD Independent Investigator Grants

Submitted: November, 2014

Title: *Epigenetic regulation of the human APP and MAPT promoters in a mouse model of Alzheimer's Disease*

Investigators:
Nassar Zaiwa, College of Pharmacy, University of Rhode Island
William E. Renehan, College of Pharmacy, University of Rhode Island

Consultant:
Nina Kajiji, Computer Science and Statistics, University of Rhode Island

Program / Organization:
National Institute of Health

Submitted: October, 2014
Not Funded

GRANTS – Corporate Grants

Dash Jr., Gordon H., and Kajiji, Nina, Investigators. "*Trading Tail Volatility Efficiently. A Preliminary Comparative Analysis of Two Portfolios: The TSB200 and the S&P500*". Thomson Reuters, IFR Division, Boston, MA. July 2008.

Dash Jr., Gordon H., and Nina Kajiji, Investigators. "*Efficient Modeling and Classification of Chemical Descriptors of Psychotherapeutic Compounds: Application of a Simulation Enhanced Closed Form Bayesian Radial Basis Function Neural Network*." Pfizer Global Research and Development, the Pfizer Corporation, Groton, CT. August, 2003. A second report that focused on a reengineering of the solution methods first presented as contracted in July, 2002. Pfizer evaluation of the performance showed the Dash-Kajiji application to be superior in performance to both the Pfizer in-house modeling and the models developed by an international scientific team of chemical engineers from Erlanger, Germany. Pfizer evaluations of the Dash-Kajiji modeling effort report, in part: *"…the 'Normalized Method 1' did very well…your best was better than the recursive portioning - something I haven't been able to say for most methods."* Additional comments stated: *"Pfizer would be interested in continuing/expanding the…collaboration to address multivariate problems. Congratulations ...a great job."*

Dash Jr., Gordon H., and Nina Kajiji, Investigators. *Application of A Closed Form Bayesian Enhanced Stratification Radial Basis Function Neural Network to the Classification of Chemical Descriptors of Psychotherapeutic Compounds*. Pfizer Global Research and Development, the Pfizer Corporation, Groton, CT. July 2002.

ACADEMIC CONFERENCE PROCEEDINGS – REFEREED RESEARCH INVITATIONS

Dash, G.H. and Kajiji. N., "ESG Portfolio Optimization Based on the Latent Dimensions within Thomson Reuters Corporate Responsibility Indices", XXVII European Conference on Operational Research, Financial Mathematics and OR, Glasgow, UK, July 12-14, 2015.

Dash, Gordon H. and Kajiji, Nina. "Hierarchical Neuro-Cybernetic Systemic Risk Factors for Multiobjective ESG Portfolio Optimization." 20th Conference of the International Federation of Operational Research Societies. Barcelona, Spain, July 13-18, 2014.

Dash, Jr., Gordon H., and Kajiji, N., "An Adaptive Multivariate Supervised Learning Network to Fit the US Municipal Bond Term Structure," Presented at XXVI European Conference on Operational Research, Learning: Methods and Algorithms II in stream Information and Intelligent Systems, Rome, Italy, July 1-4, 2013.

Kajiji, Nina, and Dash, Jr., Gordon H. "*Dynamic Hedging with Nonlinear Multicriteria Combinatorial Optimization for VaR Control and Adaptive Sharpe Ratios,"* Presented at XXVI European Conference on Operational Research, Multi-Criteria Decision Making and its Applications IV in stream Multicriteria Decision Making, Rome, Italy, July 1-4, 2013.

Dash, Jr., Gordon H., and Kajiji, N., "*Nonlinear Combinatorial Optimization for High Frequency Hedging and Mean-Variance Optimization in Automated Neuro Stock Trading*," 25th Conference of European Chapter on Combinatorial Optimization (ECCO'12), Antalya, Turkey, April 26-28, 2012.

Dash, Jr., Gordon H., and Kajiji, N., "*Multivariate Neural Network Estimation of Bidirectional Volatility Spillover between US and European Government Bond Markets*," 4th International Conference of the European Research Consortium for Informatics and Mathematics: Computing and Statistics (ERCIM'11), London, UK, Dec 17-19, 2011.

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. "*Optimizing Automated Share Trading Using WinORSe-AI: Cognitive Decision Theory and High Frequency Artificial Neural Networks*," 24th European Conference on Operational Research, Lisbon, Portugal, July 11-14, 2010.

Kajiji, Nina, Dash, Jr., Gordon H., Krieger, Elliot. *On Artificial Intelligence and Multicriteria Decision Analytics to Engineer a Predictive School Classification System*. Presented at Euro XXIII (European Conference on Operational Research) Multi-Criteria Decision Analytics applications in Business and Management Session, Germany, July 5-8, 2009.

Dash Jr., Gordon H. and Kajiji, Nina. *Systematic Economic Modeling for Extreme Hedge Fund Forecasting*. Presented at The Sixth Africa Development Finance Conference & Africa SMME Awards, Grand West Conference Centre, Cape Town, South Africa, October 20-21, 2004.

Dash Jr., Gordon H. and Kajiji, Nina. *Nonlinear Hierarchical Modeling for Efficient Asset-Liability Management of Property-Liability Insurers*. Presented at Euro XX (European Conference on Operational Research) Multi-Criteria Decision Session, Rhodes - Greece, 4-7 July 2004.

Dash Jr., Gordon H. and Kajiji, Nina. *Forecasting Hedge Fund Index Returns by Level and Classification: A Comparative Analysis of Neural Network Topologies*. Euro XX (European Conference on Operational Research) Financial Engineering Session, Rhodes - Greece, 4-7 July 2004.

ACADEMIC CONFERENCE PROCEEDING – REFEREED (2009 – present)

Dash, G.H. and Kajiji. N., "Near High Frequency Production Economics for Global Wealth Creation: Automated Trading, Neuroeconomics, and Trading Fundamentals", 7th Annual Meeting of the Academy of Behavioral Finance and Economics, Philadelphia, PA, September 16-18, 2015.

Dash, G.H. and Kajiji. N., "ESG Portfolio Optimization: Integrating Combinatorial Goal Programming and Corporate Responsibility Ratings", 7th International Conference on Applied Operational Research, Vienna, Austria, July 15-17, 2015.

Kajiji, N., Dash, G.H., and Donaldson, S. T., "Understanding the Effect of Housing on Long Evans Rats with Active Anxiety and Addiction: Planning for Well-Being in Urban Communities", For presentation at XXVII European Conference on Operational Research, Sustainable Living: Cognitive, Social, Economical, Ecological and World View, Glasgow, UK, July 12-14, 2015.

Kajiji, N., Dash, G.H., and Donaldson, S. T., "Neurobehavioral Responses of Long Evans Rats to Psychological Stress and Amphetamine Treatment: Implications for Urban Economic Development", For presentation at the Euro Working Group OR For Development Conference, OR: Uplifting Living Conditions, Glasgow, UK, July 9-10, 2015.

Dash, Gordon H. and Kajiji, Nina, Kajiji. "Integrating Big Data, Neuroeconomics, and Learning Neural Networks to Model the US Municipal Bond Term Structure." 2014 Municipal Finance Conference: Research in Practice sponsored by Brandeis International Business School and The Bond Buyer, July 31 - August 01, 2014, Boston, MA.

Dash, Gordon H. and Kajiji, Nina. "On Modeling Neuro-Cybernetic Systemic Liquidity Risk Factors and Multiple Objective ESG Portfolio Optimization." International Conference on OR for Development, ICORD 2014, Lleida, Spain, July 10-11, 2014

Gordon H Dash and Kajiji, Nina, "On the Multivariate Neural Network Modeling of Systemic Liquidity Risk Factors", Mathematical Finance Days, Institut de Finance Mathematique de Montreal, Montreal, Canada, April 28-29, 2014.

Gordon H Dash and Kajiji, Nina, *Combinatorial Nonlinear Goal Programming for ESG Portfolio Optimization and Dynamic Hedge Management*, 6th International Conference on Mathematical and Statistical Methods for Actuarial Sciences and Finance, Salerno, Italy, April 22-24, 2014

Nina Kajiji and Gordon H. Dash, *The Evolution of Big Data Learning Networks to Model the Regulatory-Inspired Trade-Weighted U.S. Municipal Bond Term Structure*, 7th Financial Risks International Forum, Big Data in Finance and Insurance, Paris, March 20-21, 2014

Dash, Jr., Gordon H., and Kajiji, N. **"**Supervised Learning Networks to Fit the Daily and Near-High Frequency US Municipal Bond Term Structure," The 5th Annual Modeling High Frequency Data in Finance Conference, Hoboken, New Jersey, October 24-26, 2013.

Dash, Jr., Gordon H., and Kajiji, N., "On Combinatorial Multiple Objective Optimization to Hedge Cognitive High Frequency Trading" CORS / MOPGP ' 2012, Niagara Falls, Canada, June 11-13, 2012.

Kajiji, N., and Dash, Jr., Gordon H., "Statistical Methods to Measure the Efficiency of Alternative Multifactor Single Index Portfolios," 5th CSDA International Conference on Computational and Financial Econometrics (CFE'11), London, UK, Dec 17-19, 2011.

Kajiji, N., and Dash, Jr., Gordon H. "Alternative Specifications for Estimating State-Wide High School Achievement Elasticity," International Conference of Education, Research, and Innovation – iCERi 2011, Madrid, Spain, Nov14th-16th, 2011.

Kajiji, N., and Dash, Jr., Gordon H. "Economic Development and Multivariate Neural Network Modeling of Education Scale Economies," 2011 Global Development Conference, Dubai, UAE, Nov 8-10, 2011.

Kajiji, N., and Dash, Jr., Gordon H. "Efficient Multiple Objective Neural Network Mapping of State-Wide High School Achievement," 3rd International Conference on Applied Operational Research – ICAOR'11, Istanbul, Turkey, Aug 24-26, 2011.

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. "Efficient High Frequency Trading for Wealth Production Using a Nonlinear Specification of the Fama-French Framework," Computational Finance and Microstructure Models – Modeling High Frequency Data in Finance 3 Conference, Hoboken, New Jersey, July 28-31, 2011. ***FUNDED BY ORGANIZERS***

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. "Neutralizing Systemic Risk to Optimize International Wealth Maximization by Neuroeconomic Automated Trading," International Conference on Decision Sciences in Managing Global Services (ISDSI 2010), Gurgaon, India, Dec 28-30, 2010.

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. "Global Wealth Maximization Using Neuroeconomic Behaviorial Drivers and Continuous Automated Trading," 2010 Global Development Finance Conference, Cape Town, South Africa, Nov 24-26, 2010.

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. "Stochastic Multicriteria Decision Analytics and Artificial Intelligence in Continuous Automated Trading for Wealth Maximization," 24th Mini Euro Conference on Continuous Optimization and Information-Based Technologies in the Financial Sector, Izmir, Turkey, June 23-26, 2010.

Dash, Jr., Gordon H., Kajiji, Nina, Krieger, Elliot. "Comparative Mapping of High School Mathematics Achievement by Neural Network Modeling of a State-Wide Production Function." 40th Annual Meetings of the Decision Sciences Institute, New Orleans, Louisiana, November 14-17. 2009.

Kajiji, Nina, Dash, Jr., Gordon H., Krieger, Elliot. "Integration of Artificial Intelligence and Rough Set Methodology to Engineer a Predictive School Classification System." 70th Annual Meetings of the European Working Group Multiple Criteria Decision Aiding, Moncton, Canada, September 24-25, 2009.

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. "On Stochastic Multicriteria Decision Analytics and Artificial Intelligences for Efficient Stock Trading," 13th International Conference on Applied Stochastic Models and Data Analysis, Vilnius, Lithuania, June 30-July 3, 2009.

Kajiji, Nina, Dash, Jr., Gordon H., Krieger, Elliot. "On Data Mining by Artificial Intelligence to Engineer Predictive NCLB High School Classifications." 74th Annual Meetings of the Association of Social and Behavioral Scientists, Inc., Macon, Georgia, March 18-21, 2009.

Conference Proceeding Pre-2009: http://www.nkd-group.com/nina/conference%20proceedings%20attachment.pdf

RESEARCH SEMINARS - INVITED

Kajiji, N., "*Design, Data, and Decision: Considerations for the Neuroscientist*", Presentation to the Journal Club, Interdisciplinary Neuroscience Program, University of Rhode Island, October 27, 2014

Dash, Jr., Gordon H., and Kajiji, N. "*An Adaptive Multivariate Supervised Learning Network to Fit the US Municipal Bond Term Structure*," Research Seminar, Dipartimento Di Metodi E Modelli per l'Economia il Territorio E La Finanza Memotef, Sapienza University of Rome, Italy, June 26, 2013.

Dash, Jr., Gordon H., and Kajiji, N. "*Dynamic Hedging with Nonlinear Multicriteria Combinatorial Optimization for VaR Control and Adaptive Sharpe Ratios*," Research Round-Table Discussion, Dipartimento Di Metodi E Modelli per l'Economia il Territorio E La Finanza Memotef, Sapienza University of Rome, Italy, June 26, 2013.

Dash, Jr., Gordon H., and Kajiji, N. "*Efficient High Frequency Trading for Wealth Production Using a Nonlinear Specification of the Fama-French Framework*," Research Round-Table Discussion, Dipartimento Di Metodi E Modelli per l'Economia il Territorio E La Finanza Memotef, Sapienza University of Rome, Italy, June 26, 2013.

Dash, Jr., Gordon H., and Kajiji, N. *Neuroeconomics at URI: The CBA Student Directed Hedge Fund with "Big Data" Informatics*, Neuroscience Colloquium, The University of Rhode Island, Kingston, RI., Feb 2013.

Dash, Jr., Gordon H., Hamel, Lutz, and Kajiji, N. *Big Data and Neuroeconomics in the CBA: Research and Curriculum*, Informatics and Data Exploration Symposium, University of Rhode Island, Kingston, RI., Jan 2013.

Kajiji, N., and Dash, Jr., Gordon H. "On the Behavioral and Multivariate Neural Network Estimation of Cognitive Scale Economies," Statistics Research Seminar, Department of Information, Operations, and Management Science, Stern School of Business, New York University, New York, NY, Feb 3, 2012.

Kajiji, N., and Dash, Jr., Gordon H. "Efficient Multiple Objective Neural Network Mapping of State-Wide High School Achievement," Doctoral Research Seminar, Middle Eastern Technical University, Ankara, Turkey, Aug 26, 2011.

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. *Effective Real-Time Automated Trading for Academia: Stochastic Multi-Criteria Decision Analytics and Artificial Intelligence for Student Directed Portfolios and Hedge Funds*, Doctoral Research Seminar, Middle Eastern Technical University, Ankara, Turkey, Aug 26, 2011.

CONFERENCE ATTENDANCE and WORKSHOPS

Thirteenth Annual ASA CT Chapter Mini-Conference, Topic: *Using Statistical Models for Prediction*, University of Connecticut, Health Center, Farmington, CT, April 16, 2015.

2nd Applied Business Analytics Symposium, Advanced Applied Analytics Center, Bryant University, Apr 7, 2014, Keynote Speaker: Ren Cheng, Fidelity Management & Research, "Can Corporations Cheat Death: What Can We Learn from Mother Nature?" Featured Speakers: Amir Sadri, GTECH; Andre de Waal, SAS Institute; and Alison Torres, Teradata Labs.

Future of the Statistical Sciences Workshop, The Statistics2013 Corporate Event, London, UK, Nov 11-12, 2013.

2013 Municipal Finance Conference, Sponsored by: The Bond Buyer and Brandeis International Business School, Boston, MA, August, 2013.

1st Applied Business Analytics Symposium, Advanced Applied Analytics Center, Bryant University, Mar 20, 2013, Featured Speakers: J. Michael Hardin, University of Alabama, and Jennifer Serventi, National Endowment for the Humanities, Washington, D.C.

R for SAS / SPSS Users, Lion Data Systems, Feb 14, 2013.

2012 Econometrics Spring School, Timberlake Consultants, Mar 12-14, 2012, George Washington University, Washington, DC, Topic: *Modeling and Forecasting Volatility with G@ARCH – from Theory to Practice.* Instructor: Sébastien Laurent, Maastricht University, The Netherlands.

OptiRisk Systems / UNICOM Seminars, December 7-8, 2011, Birkbeck College, University of London, UK. Topic: *News Analytics Applied to Trading Fund Management and Risk Control.*

Boston Chapter American Statistical Association Colloquia, March 29, 2011, Emmanuel College, Boston, MA. Topic: *Applying Survival Analysis to Forecasting Subscriber Levels.*

9th Annual American Statistical Association Connecticut Chapter Mini Conference, March 8, 2011, R&D Symposium, Boehringer Ingelheim, CT. Topic: *Analysis of Time-to-Event Data.*

8th Annual American Statistical Association Connecticut Chapter Mini Conference, March 2, 2010, University of Connecticut, Storrs, CT. Topic: *The Analysis of Incomplete Data – From Past to Future*.

8th OxMetrics User Conference, Centre for Econometric Analysis, Case Business School, London, UK, September 14-15, 2009. Topics: *Computational and Financial Econometrics, Empirical Economics, Time-Series and Cross-Section Statistics and Applied Mathematics*.

Delphi Developer Days 2009. Chicago, April 2-3, 2009.

Boston Chapter American Statistical Association Short Course, November 15, 2008, The Mathworks, Natick, MA, Topic: *Bootstrap Methods and Permutation Tests.*

CHAIRPERSON / DISCUSSANT

Chairperson: Session: Sustainable Living 1, Stream: Sustainable Living: Cognitive, Social, Economical, Ecological and World View at the 27th European Conference on Operational Research, Glasgow, July 12-14, 2015.

Chairperson: Session: OR in Finance and Emerging Markets, Stream: Financial Mathematics and OR at the 27th European Conference on Operational Research, Glasgow, July 12-14, 2015.

Chairperson: Session: Multicriteria Decision Making and Its Applications IV, Stream: Multicriteria Decision Making at the 26th European Conference on Operational Research, Rome, Italy, July 1-4, 2013.

Chairperson: Session, Combinatorial Optimization in Finance 1. 25th Conference of European Chapter on Combinatorial Optimization, Antalya, Turkey, April 26-28, 2012.

Chairperson: Session, Environmental Sustainable Finance. 2011 Global Development Finance Conference, Dubai, UAE, November 8-10, 2011.

Chairperson: Session, Environmental Sustainable Finance. 2010 Global Development Finance Conference, Cape Town, South Africa, November 24-26, 2010.

Chairperson: Session, Artificial Intelligence. 24th Mini Euro Conference on Continuous Optimization and Information-Based Technologies in the Financial Sector, Izmir, Turkey, June 23-26, 2010 .

Chairperson: Session, Multiobjective Optimization. The International Conference on Computing and e-Systems, Hammamet Beach, Tunisia, March 12-14, 2007.

Discussant: *The Bias in Delta as an Indicator of the Likelihood of Option Exercise* discussed at the Annual Meetings of the Eastern Finance Association, Charlotte, North Carolina, April 1996.

Discussant: *A Model Predicting Bankruptcy of Corporations* discussed at the Twenty-Fourth Annual Northeast Regional Meeting of the Northeast Decisions Sciences Institute, Providence, Rhode Island, March 1995.

WORKING PAPERS (Since 2009)

Dash Jr., Gordon H., and Kajiji, Nina*, Near High Frequency Production Economics for Global Wealth Creation: Automated Trading, Neuroeconomics, and Trading Fundamentals?* William A. Orme Working Paper Series, College of Business Administration, University of Rhode Island, Kingston, RI, Working Paper No: 1, 2015-2016 Series.

Dash Jr., Gordon H., and Kajiji, Nina*, On Multiobjective Combinatorial Optimization and Dynamic Interim Hedging of Efficient Portfolios?* William A. Orme Working Paper Series, College of Business Administration, University of Rhode Island, Kingston, RI, Working Paper No: 16, 2013 Series.

Kajiji, Nina, and Dash Jr., Gordon H.*, Computational Practice: Multivariate Parametric or Nonparametric Modeling of European Bond Volatility Spillover?* William A. Orme Working Paper Series, College of Business Administration, University of Rhode Island, Kingston, RI, Working Paper No: 1, 2013 Series.

Dash Jr., Gordon H., Kajiji, Nina, and Forman, John. *Global Wealth Maximization Using Neuroeconomic Behavioral Drivers and Continuous Automated Trading,* William A. Orme Working Paper Series, College of Business Administration, University of Rhode Island, Kingston, RI, Working Paper No: 1, 2011 Series.

Kajiji, Nina, Dash Jr., Gordon H., and Krieger, Elliot. *Integration of Artificial Intelligence and Rough Set Methodology to Engineer a Predictive School Classification System,* William A. Orme Working Paper Series, College of Business Administration, University of Rhode Island, Kingston, RI, Working Paper No: 1, 2010 Series.

Dash Jr., Gordon H., and Kajiji, Nina. *Efficient Neural Network Data Mining for Optimal Production of State-Wide Mathematics Achievement,* William A. Orme Working Paper Series, College of Business Administration, University of Rhode Island, Kingston, RI, Working Paper No: 3, 2009 Series.

SOFTWARE PUBLICATIONS & SEMINARS

Peer Reviewed Publications

Dash Jr., Gordon H. and Kajiji, Nina. Operations Research Software, Volume II (Richard D. Irwin, Inc.: Homewood, IL, 1990, 550 pages). *Completed and submitted. Publication restricted due to the coincidental demise of the DOS operating system after the release of the Microsoft Windows 3.1 operating system.

Dash Jr., Gordon H. and Kajiji, Nina. Operations Research Software, Volume I (Richard D. Irwin, Inc.: Homewood, IL. 1987, 340 pages).

New Algorithms Developed

K4: A Radial Basis Artificial Neural Network incorporating a Bayesian based closed form solution to the Tikhonov Regularization parameter (Developer: Kajiji, Nina), 2001

K7: A Multivariate version of K4 (Developer: Kajiji, Nina), 2012

MINLGP: Mixed Integer Non-linear Goal Programming with Convex Separable Programming (Developers: Dash Jr., Gordon H. and Kajiji, Nina), 2012

Presentations and Demonstrations

Dash, Jr., Gordon H., Kajiji, N., and Forman, J. *Effective Real-Time Automated Trading for Academia: Stochastic Multi-Criteria Decision Analytics and Artificial Intelligence for Student Directed Portfolios and Hedge Funds*, Special Session at the Annual Meeting of the Financial Management Association International, New York, New York, Oct 20-23, 2010.

Dash Jr., Gordon H. and Kajiji, Nina. *Simulated Trading and Risk Management of FX Contracts Using ETS from Dynamic Financial Resources*. Presented at the 28th Annual Conference of the Northeast Business and Economics Association, September 27-28, 2001, Windsor Locks, CT.

Dash Jr., Gordon H. and Kajiji, Nina. Technology Based Financial Analytics. Presented as part of the 1997 PACAP Financial Executive Training Program, Providence, RI, October 1997. **Seminar featured the use of the University of Rhode Island networked computer lab. The computational analytics featured the use of PACAP databases covering the countries of the participants (Japan, Malaysia, Indonesia, Korea and Taiwan). Seminar delivered in English*.

Dash Jr., Gordon H. and Kajiji, Nina. Application of Modern Security Analysis and Portfolio Building. Presented as a two-day invitation only conference to The Society of Investment Bankers and Portfolio Analysts. Bangkok, Thailand, June 1990. **Seminar featured 46-networked PCs on which local analysts were introduced to advanced computational analytics featuring the PACAP Thailand database. Seminar delivered in English with concurrent Thai-language translation. Manual available on request (limited copies)*.

ACADEMIC ACKNOWLEDGEMENT

Shanette M. Harris, *The Effect of Health Value and Ethnicity on the Relationship Between Hardiness and Health Behaviors,* Journal of Personality 72 (2), 379–412, 2004. doi:10.1111/j.0022-3506.2004.00266.x

Varki, Sajiv and Kumar, Pradeep, *The Augmented Latent Class Model: Incorporating Additional Heterogeneity in the Latent Class Model for Panel Data,* Journal of Marketing Research, June 2003.

Geiger, M.A., and Lloyd Spurrell, A.C., *Auditor Judgement Confidence: Direct Evidence for the Process View,* Accounting Enquiries, 7(1), August 1997.

ACADEMIC ~ Term Courses

Course Title	Program	Institution	Term	Online SETs
Managerial Statistics I	BUS210*+	University of Rhode Island, Kingston, RI	Fall 2014	
Statistical Methods for Research I	STA409*+	University of Rhode Island, Kingston, RI	Spring 2014	
Introductory Statistics	STA 308*+	University of Rhode Island, Kingston, RI	Spring 2013	
Introductory Statistics	STA 308*	University of Rhode Island, Kingston, RI	Spring 2012	
Elementary Stochastic Calculus for Computational Finance	BUS492*+ Offered as a Directed Study	University of Rhode Island, Kingston, RI	Fall 2010 & Spring 2011	
Introductory Statistics	STA 308*+	University of Rhode Island, Kingston, RI	Fall 2010	
Time Series Analysis	STA592*	University of Rhode Island, Kingston, RI	Fall 2009	
Introductory Statistics	STA 308*+	University of Rhode Island, Kingston, RI	Spring 2006	P1, P2
Introductory Statistics	STA 308*	University of Rhode Island, Kingston, RI	Spring 2004	Admin Error
Introductory Statistics	STA 308*	University of Rhode Island, Kingston, RI	Spring 2002	P1
Multivariate Statistics	MBA***	Istituto Superiore per Imprenditori e Dirigenti di Azienda (ISIDA), Palermo, Italy	Summer 1999	n/a
Introductory Statistics	STA 308*	University of Rhode Island, Kingston, RI	Summer 1998	n/a
Statistical Methods I	Undergraduate Math**	Rhode Island College, Providence, RI	Spring 1996	P1
Quantitative Business Analysis	Graduate Course in International Business*	Johnson & Wales University, Providence, RI	Winter 1994	n/a
Introductory Statistics	STA 308*	University of Rhode Island, Kingston, RI	Spring 1994	P1, P2
Introductory Statistics	STA 308*	University of Rhode Island, Kingston, RI	Summer 1993	n/a
Introductory Statistics	STA 308*	University of Rhode Island, Kingston, RI	Summer 1992	n/a
Security Analysis	FIN 322*	University of Rhode Island, Kingston, RI	Summer 1991	n/a
Security Analysis	FIN 322*	University of Rhode Island, Kingston, RI	Summer 1988	n/a

* Three credit course ** Four credit course *** Three credit equivalent
\+ Syllabus is online at: **http://www.nkd-group.com/nina/html/teaching.html**

ACADEMIC ~ Invited Speaker

Semester	*Subject*	*Parent Course*
Fall 2014	Design, Data, and Decision: Considerations for the Neuroscientist	NEU587: Computational Neuroscience
Summer 2014	Data Science: Key to Strategic Business Decision Making	MBA 555: Managerial Economics
Fall 2013	Big Data & Visualization	MBA 555 Managerial Economics
Fall 2004	Computing and Measuring Portfolio Risk	FIN 420 Speculative Markets
Summer 2004	Introduction to Forecasting Methods	MBA 570 Managerial Economics
Summer 2004	Regression Analysis for Econometric Model Building	MBA 570 Managerial Economics
Fall 2003	Introductions to Options Analysis Using WinORS$_{fx}$	FIN 420 Speculative Markets
Summer 2003	Neural Networks in Financial Forecasting	MBA 570 Managerial Economics
Spring 2003	Introductions to Options Analysis Using WinORS$_{fx}$	FIN 420 Speculative Markets (K)
Spring 2003	Introductions to Options Analysis Using WinORS$_{fx}$	FIN 420 Speculative Markets
Spring 2003	Introductions to Forecasting and Regression Using WinORS$_{fx}$	MBA570 Managerial Economics-EMBA
Fall 2002	Introductions to Forecasting and Regression Using WinORS$_{fx}$	MBA570 Managerial Economics

Following are some unsolicited comments on Nina's teaching.

- *Computer Science and Statistics*: STA308 Introductory Statistics

  Attached is our paper for the final project. It was really exciting to do… ~ JE (Spring, 2014)

  I really enjoyed taking your class and learned a lot about statistics ~ AH (Spring, 2013)

  Thank-you. This was one of the most valuable courses I've taken at URI! Do you have plans to be the instructor for STA412? ~ NM (Spring 2013)

  .. thank you for that interesting class , I really understood it at the last end while we were doing the project ,and thank you again , because today in our conference , 3 lectures was showing statistic results how ironic was that I was really thrilled when i saw one of the studies showing contingency table with CI and confident level results and seems no one has clue …. I might suggest doing in our conference for next year a statistic work shop , health care professional need to know how they can read results right ? ~ NS (Spring, 2013)

  I revealed my new found analytical skills at work today, which were promptly put to work. I helped solve a problem in a semi-crisis situation and got a big pat on the back. :) It felt pretty good to not be overwhelmed with the pile of numbers that they threw at me. Thank you for making statistics accessible to a math-phobe like me ~ CW (Spring, 2012)

  Thank you very much for this semester. You are an excellent statisics professor. Thank you. ~ GD (Spring, 2004)

  Thank you for a great semester and enjoy the summer ~ BC (Spring, 2004)

  Thank you for a wonderful semester. i learned a lot. ~ TA (Spring 2006)

- *Computer Science and Statistics*: Time Series Analysis (Fall 2009).

  Thank you for a great lecture with such an interesting topic. I would love to take another class if you offer in the future. ~ QZ

  I would like to let you know that it was a pleasure taking this course, and my knowledge on time series models have improved by your help ~ JS

  Thanks for everything you've done this semester. I'm definitely going to be in touch next semester about starting to work with the Department of Ed! ~ KR

  I really learn a lot from this Times Series class, and there are a lot of interactions inside our group each time we have projects to work with. This type of working styles is more efficient compared to the one I used to do when I was a Physics major graduate student.

  After all, I really appreciate this great class and hopefully to join your other classes if possible. ~ RQ

  Thank you for your help and kindness in this semester. I will keep in touch with you ~ GQ

  Finally, thank you for your time and dedication in the class.... The class took on a familiar and cordial sense and really began to feel like a close group. That added to my interest in that it seemed all questions would be answered. This overcame a challenge to me in that being in my first semester many of the models encountered were perhaps a bit advanced for my current understanding. I always felt like my questions were answered with respect and I appreciated that ~ JM

- *College of Business*: Invited Speaker Sessions

  I enjoyed Nina's teaching! ~ JT (Summer, 2002)

  I just wanted to say thanks for presenting a more in-depth background on the Neural Network. It was really nice of you to take personal time to present the material to us ~ DA (Summer, 2003)

CONSULTING

BIG DATA PROJECT

Efficient and Continuous Municipal Bond Term Structure (2009 – present), Thomson Reuters, Boston, MA

SYSTEM DEVELOPMENT PROJECTS

Personal Retirement View, (Phase I, 2011), Office of Finance and Treasury, District of Columbia, DC

Health Services Medical Records System (Phase II, 1994), University of Rhode Island, Kingston, RI

*Health Services Medical Records System (*Phase I, 1992-94), University of Rhode Island, Kingston, RI

WEBCT Consulting for Faculty, (1997–99), University of Rhode Island, Kingston, RI

SURVEY DEVLOPMENT AND ANALYSIS

"401(a) Customer Satisfaction Survey", Kajiji, Nina and Washington, Lenda, for ING and the District of Columbia, Washington, DC., 2011.

"457 Customer Satisfaction Survey", Kajiji, Nina and Washington, Lenda, for ING and the District of Columbia, Washington, DC., 2009-10. (http://www.nkd-group.com/research/DCPLUS/DCPLUS Survey Results Submission.pdf)

STATISTICAL CONSULTING

Trade Leader Performance: Evolving a Risk Warning System with Predictive Mitigation, Kajiji, Nina, Dash, Gordon, and Forman, John. for Currensee, Inc., Boston, MA, 2011.

Can we Determine Factors that Classify Diabetic Patients as Risk Takers or Risk Averters?, Kajiji, Nina, for Dayle Hunt Joseph, EdD, RN, College of Nursing, University of Rhode Island, Spring 1994.

Eating Disorders: An Examination of Paternal Pathology, Kajiji, Nina, for Dr. Kathleen T. Schwam, Groton, CT., Summer-Fall, 1993.

Factors Affecting the Budgetary Decision Making Process in the Rhode Island School System, Kajiji, Nina, for Mr. Frank Gamble, South County School System, Summer, 1990.

Factors Affecting Nurse Retention in the US Army, Kajiji, Nina, for Dr. Jean Miller, University of Rhode Island, Summer, 1989.

A Multivariate Data Analysis of the Taste Preferences for Three Variations of Seven Soup Categories, Dash, Jr., Gordon H., and Kajiji, Nina, for Abbotts' of New England, New London, Connecticut, December, 1985.

Tourist Trade in Rhode Island, Kajiji, Nina, for Dr. Nikhilesh Dholakia, University of Rhode Island, Fall 1984.

LARGE SCALE DATA CONSULTING

Provided statistical support to URI faculty to access and use in their research the data from:

- *PACAP – Databases supported by the Pacific-Basin Capital Markets Research Center (http://www.cba.uri.edu/pacap/index.html) (Support provided: 1990 – 1999)*
- *COMPUSTAT – Databases supported by Standard & Poor's (https://www.compustatresources.com/support/index.html) (Support provided: 1983 – 1999)*
- *CRSP – Databases supported by the Center for Research in Security Prices (http://www.crsp.com/documentation/) (Support provided: 1983 – 1999)*

SERVICE CONTRIBUTIONS

PROFESSIONAL SERVICE ACTIVITIES

- Program Chair, Big Data Analytics and Decision Science, ICAOR, 2016
- Member, ICAOR, Scientific Program Committee, 2013, 2014, 2015, 2016
- Reviewer, JAOR, 2013, 2014
- Reviewer, Journal of Applied Mathematics, 2013

SERVICE TO URI DEPARTMENT

- Member, G2C Faculty Support and Awards Subcommittee, 2014 - 2015
- CSIEP Computer Advisory Committee, 2000 - 2009
- CSIEP Research Committee, 2000 - 2009

MASTER'S THESIS COMMITTEE

- Defense Chair, Student: Craig M. Krebsbach, MA in Psychology, Fall 2013

SERVICE TO THE COMMUNITY

- Treasurer, Girl Scouts of Rhode Island, 2014 – 2016
- Member, Capital Campaign Committee, Girl Scouts of Rhode Island, 2013 – 2015
- Chair, Finance Committee, Girl Scouts of Rhode Island, 2013 – 2015
- Chair, Investment Committee, Girl Scouts of Rhode Island, 2013 – 2015
- Member-At-Large, Board of Directors, Girl Scouts of Rhode Island, 2011 - 2015
- STEM Task Force, Girl Scouts of Rhode Island, 2012 - 2013
- Judge, 2012 Gandhi Essay Contest, Center for Nonviolence & Peace Studies & URI Honors Program, University of Rhode Island, 2012
- Member, Finance Committee, Girl Scouts of Rhode Island, 2011 – 2013
- Service Unit Manager, Providence Area, Girl Scouts of Rhode Island, 2005 - 2009
- Advisor and chaperone to six teenage girls as they planned, raised $8000, and executed a trip to London, UK for 10 days to attend the 100year Celebration of Scouting. July 2007.
- Delegate for the Providence Area to the Girl Scouts of Rhode Island, 2004-2009
- Troop Leader, Girl Scouts of Rhode Island, 2001-2009
- Providence Chair for Project Undercover, RI Donation and Exchange Program & GSRI, 2003, 2004, 2005
- TV commercial to attract new members for Girl Scouts of Rhode Island, Spring 2004
- Member, Policy Review Committee, Girl Scouts of Rhode Island, 2003-04
- Volunteer, Girl Scouts of Rhode Island, AY1999-present

SERVICE TO URI STUDENTS (Advising)

Student advising is done on a voluntary basis. Here are some unsolicited student comments.

Good morning Nina! ... with regard to our project on projecting the demand for special education services in the state of Rhode Island ... it got me thinking about the expense of these services for the cities and the need to forecast the demand accurately so that there is adequate training of personnel, support services available, possibly a lower cost alternative for less effected children, and when it is forecasted appropriately - that the services can be delivered in the most efficient manner possible. ... My partners and I have done some preliminary searches on the internet and have found census information from the 2000 census and the Rhode Island Dept of Education (RIDE) website has an In$ite tab that gives some good information on education spending. Yet, when it comes to brain injury data by city, daycare enrollments, birth rates by city, Ritalin sales, and early intervention spending, we are coming up short. Any assistance that you could provide would be great! ~ KT (Nov 2002)

Hi Nina! Thank you very much for the email with regards to the kids count website - it had great information for our cross sectional econometric model. I am attaching our model for your review if you wouldn't mind. ~ KT (Nov 2002)

Good Morning Nina! Thank you very much for the substance abuse file. .... With the substance abuse data, we consolidated it accross Elementary, Middle, and High schools since we didn't break out our data in this manner. Each one was statistically significant at the 95% confidence interval, but when taken together, they became insignificant. I tried making a ratio of the data

such as tobacco/alcohol/and drug use in children as a percent of the population under 18, but since it appears that there is cross usage accross the three substances, this isn't working. Also, Vo-tech is a large number, but I am unsure of how to allocate these students to districts to utilize the data. Any thoughts? I am attaching a copy of our model. Thank you for your help! ~ KT (Nov 2002)

Nina - thanks again for all of your assistance! We reformulated the substance abuse data and found all of it to be insignificant - I appreciate you pointing us in the correct direction. We would be flattered if you would like to read our paper and critique our model. I'll email them to you after our presentation tomorrow ~ KT (Dec 2002)

Nina - thank you for all your help in finding the proper data and pointing us in the right direction! ~ AS, KT, & CZ (Dec, 2002)

Hi Nina. Regarding the MBA Neural Network Homework # 1 in Gordon's Global Currency Course, I'm at a point where I'm not sure how to proceed. Attached is my ORS file. As you can see, I get decent results in terms of R squared, but the out of sample forecast for 14 periods is simply no change for most of the last few models I ran. And I'm not sure how to interpret some of the other figures. I've tried a few things but nothing seems to help. Any suggestions. Your help would be greatly appreciated ~ MM (Summer, 2003)

SERVICE TO INTERNATIONAL STUDENTS

- **Advisor (2004-05):** Vanessa Sung, PhD Student, School of Management, University of Southhampton, UK.

ANALYTICAL SOFTWARE

Expert Knowledge: SAS (incl SAS/IML), SPSS, R, G@RCH, ETS, MATLAB, STATA, JMP, WEKA, Tableau

Expert Knowledge: Delphi, Fortran, Visual Basic, & C++

Knowledgeable: JAVA, JAVA Script, HTML5

PROFESSIONAL SOCIETY MEMBERSHIPS AND AFFILIATIONS

- American Statistical Association (www.amstat.org)
- The Association of European Operational Research Societies (www.euro-online.org)
- Operational Research Laboratory of Western Canada (orlabanalytics.ca)

HONORS AND AWARDS

ACADEMIC

- Winner of the Outstanding Publications Competition, American Education Research Association, 2008.
- Pearson Family Award for Best Theory Development Paper, Northeast Decision Sciences Institute March 2003.
- Babson College / CIMS Award for the Best MIS/DSS/Microcomputer Paper, Northeast Decision Sciences Institute March 2003.
- Pearson Family Award for Best Paper, Northeast Decision Sciences Institute, March 1995.

PROFESSIONAL

NAPW's Woman of the Year, 2013-14

SERVICE

- Recipient: Outstanding Leader Award, Girl Scouts of Rhode Island, 2006.
- Recipient: President's Volunteer Service Award (Gold Level) from the President's Council on Service and Civic Participation, 2003-04. http://www.presidentialserviceawards.gov/index.cfm