

Michael N. Katehakis

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Areas of Specialization

Applied Research: Service Systems, Supply-Chain Management, Supply-Chain Finance, Data Science, Sustainable Operations Management, Health Care Applications, Queueing

Basic Research: Markov Decision Process, Dynamic Programming, Stochastic Optimization, Simulation

Education

- 1980 Columbia University, Ph.D. in Operations Research, under Cyrus Derman
- 1978 University of South Florida, M.A. in Statistics
- 1976 Columbia University, M.Sc. in Mathematical Methods in Engineering and Operations Research
- 1974 National and Kapodistrian University of Athens, Greece, B.A. in Mathematics, minor in Physics

Professional Experience

- 1989-
Professor of Operations Research, Rutgers University
 - Department of Management Science and Information Systems (MSIS)
 - *Distinguished Professor* (2016-) · *Professor* (1997-2016) · *Associate Professor* (1989-1997)
 - ◊ *Chairman*, MSIS Department, Rutgers Business School, 2011 -
 - ◊ *Vice Chairman*, MSIS Department, Rutgers University, 1997-1998
 - *Courtesy Appointment*, Department of Supply Chain Management, Rutgers Business School
 - *Courtesy Appointment*, Department of Mathematics, New Brunswick
- 2016 (Jan) *Epstein Visitor*, Industrial and Systems Engineering Dept., University of Southern California, CA
- 2012-14 (Su) *Visitor, Mathematisch Instituut*, University of Leiden, The Netherlands
- 2000 (F) *Visiting Professor of Operations Research*, Division of Applied Mathematics, University of Crete, Greece
- 1995-05 Research Associate and V.P., Neotronics Corporation, NY
- 1994 (Jan.) *Visitor, School of Management*, Technion, Israel
- 1991,94 (F) *Visiting Associate Professor of Operations Research*, Division of Statistics and Operations Research, National and Kapodistrian University of Athens, Greece
- 1989-90 *Visiting Scholar*, Industrial Engineering and Operations Research, Columbia University
- 1987-88 (Su) *Senior Research Scientist*, Department of Mathematical Statistics, Columbia University
- 1985-89 *Associate Professor of Operations Research*, Technical University of Crete, Greece
- 1985 (F) *Guest Scientist*, Department of Applied Mathematics, Brookhaven National Laboratory, Upton, NY
- 1985 (Sp, Su) *Visiting Assistant Professor* Department of Operations Research, Stanford University
- 1984 (Su) *Visiting Assistant Professor*, Department of Operations Research, Stanford University
- 1983 (F) *Consultant*, Department of Nuclear Energy, Brookhaven National Laboratory, Upton, NY.
- 1981-84 *Assistant Professor*, Department of Applied Mathematics and Statistics SUNY at Stony Brook
- 1981-82 *Adjunct Assistant Professor*, Industrial Engineering and Operations Research, Columbia University
- 1980-81 *Member of Technical Staff*, Bell Telephone Laboratories, Operations Research Center
- 1977-80 *Graduate Assistant*, Department of Industrial Engineering and Operations Research, Columbia University

Other Professional Activities

Research Centers

- 2015 Founding Director, *Applied Probability and Data Analytics Laboratory* (APDA), Rutgers University.
- 1988 Founding Director, *Dynamic Systems and Simulation Laboratory* (DSSL), University of Crete.
- 2013 Primary Investigator, *Center for Dynamic Data Analytics* (CDDA) at Rutgers University.
- 2014 Member, *Center for Discrete Mathematics and Theoretical Computer Science* (DIMACS) at Rutgers University.
- 1992 Member, *Rutgers Center for Operations Research* (RUTCOR) at Rutgers University.

Distinctions

Fellow (2012) of the Institute for Operations Research and the Management Sciences (INFORMS)

For fundamental contributions to the theory and practice of operations research in the areas of dynamic programming and data-driven analytics

Elected Member (2012) of the International Statistical Institute (ISI)

Senior Member (2012) of the Institute of Electrical and Electronics Engineers (IEEE)

Wolfowitz Prize (1992)

For the introduction of dynamic sampling in surveys in the paper ‘Dynamic allocation in survey sampling’, (with Govindarajulu Z.) published in a special volume of the *American Journal of Mathematical and Management Sciences* in honor of Herbert E. Robbins

Dean’s Meritorious Award for Research (2014)

Rutgers Business School - Newark and New Brunswick

Beta Gamma Sigma the U.S. National Business School Honorary Society

Omega Rho the U.S. National Operations Research Honorary Society

Washington Academy of Sciences, *Elected Member*

Greek Government Fellowship 1972-1973

Featured in:

American Men & Women of Science: A Biographical Directory of Today’s Leaders in Physical, Biological and Related Sciences, v. 8, 4439-4439, 2015.

American Men & Women of Science: A Biographical Directory of Today’s Leaders in Physical, Biological and Related Sciences, v. 4, 298-298, 2014.

Grants

1. *Principal Investigator*: ‘Collaborative Research: Theoretical and Algorithmic Advances in Sequential Adaptive Decisions’ National Science Foundation grant CMMI-1662629, 2017-2020, \$428,293. Collaborator S.M. Ross with CMMI-1662442 (\$350,000) for a total project of \$778,293.
2. *Principal Investigator*: ‘EAGER: Event-Driven, Goal-Oriented Dynamic Resource Deployment’, National Science Foundation grant CMMI-1450743, 2014-2016, \$150,000.
3. *Principal Investigator*: ‘Support for Rutgers Applied Probability Conference Series’, Stony Brook University, & Rutgers Centers of CDDA, RUTCOR, and SCM, the Cardiovascular Institute of New Jersey, 2014-2015, \$65,000.
4. *Principal Investigator*: ‘Estimation of Demographic Attributes of Customers’, CPR | Strategic Marketing Communications, NJ., 2013-2014, \$3,000.
5. *Principal Investigator*: ‘Research on Adaptive Estimation and Control of Dynamical Systems’, (with H. Robbins, co-PI). National Science Foundation grant DMS 97-03812, 1997-2002, \$100,000.
6. *Principal Investigator*: E.E.C. - Greek government grant for Research and Development of a ‘*Simulation and Dynamical Systems Laboratory*’ at the Technical University of Crete, Greece. 1988, \$100,000.
7. *Principal Investigator*: ‘Studies in Reliability and Inference’ (with H. Robbins, co-PI), Air Force Office of Scientific Research contract AFOSR-87-0072, 1987-1988, \$52,000.

8. *Principal Investigator*: ‘Adaptive Sampling and Stochastic Scheduling’ (with E. Beltrami, co-PI), National Science Foundation grant ECCS 85-07671, 1985-1986, \$35,000.
9. *Principal Investigator*: ‘Inference and Maintenance of Reliability Systems’ (with L. Kuo and H. Robbins, co-PIs), Air Force Office of Scientific Research contract AFOSR-84-0136, 1984-1986, \$145,000.
10. *Co-Principal Investigator*: ‘Large Scale Data Analytics for Cardiovascular Diseases’ (with Xiaodong Lin (RBS), Jerry Cheng (RBHS), John Kostis (RBHS), Hemal Gada (RBHS), Minge Xie (RU-NB)), Chancellor’s Seed Grants, 2015-2016, \$70,000.
11. *Co-Principal Investigator*: ‘Developing and Implementing an Innovative Instruction Methodology for MSIS Courses’ (with B. Avi-Itzhak, R. Armstrong, V. Atluri, A. Ben-Israel, J. Eckstein, A. Gal, S. Herschkorn, B. Melamed, Z. Stoumbos), GE Fund Learning Excellence Project grant, 1998 - 1999, \$14,000.

Editorial

- *WSEAS Transactions on Business and Economics*, Editor in Chief, 1/2015 -
- *Annals of Operations Research*, Associate Editor, 2012 -
- *Mathematics of Operations Research*, Associate Editor, 2014 -
- *Naval Research and Logistics*, 2004 -
- *Operations Research Letters*, 2014 -
- *Probability in the Engineering and Informational Sciences*, Associate Editor, 1997 -
- *Journal of the Washington Academy of Sciences*, Board of Discipline Editors, 2015-
- *American Journal of Mathematical and Management Sciences*, 1995 - 2006
- *Advances in Operations Research*, Associate Editor, 2009 - 2014
- *Encyclopedia of Business Analytics and Optimization*, Associate Editor, 2012-2014
- *International Journal of Strategic Decision Sciences*, 2011 - 2014

Frequent Referee for Journals

- INFORMS: Operations Research, Management Science, M&SOM, Mathematics of Operations Research
- IMS: Annals of Applied Probability
- Other: Annals of Operations Research, Computers & Industrial Engineering, European Journal of Operations Research, IBM Journal of Research and Development, International Journal of Production Research, International Journal of Systems Science, International Journal of Environmental Science and Technology, Journal of Applied Probability, Advances in Applied Probability, Stochastic Processes and Applications, Journal of Applied Probability, Proceedings of the National Academy of Sciences, Naval Research Logistics, Telecommunication Systems Journal, QUESTA, Stochastic Processes and Applications, Systems & Control Letters

Judge

- Chair, Naval Research Logistics 2014 Harold W. Kuhn Award Panel
- 2014 INFORMS Innovative Applications in Analytics Award, at the Semi-Final: 10/2013 competition
- 2013 INFORMS Innovative Applications in Analytics Award at the Semi-Final: 10/2012 and at the Final 3/2013 competitions
- 2013 INFORMS Interactive Sessions Award
- IEEE Senior Member Panel, 2012
- The Jacob Wolfowitz Prize 1993-2009
- Member of Academic Program evaluation for several universities in Greece
- Reviewer for tenure and promotions for Columbia University, the University of South Florida, Stevens Institute of Technology NJ, Leiden University The Netherlands, National and Kapodistrian University, Greece, University of Crete, Greece, the Hellenic Military Academy, the University of the Aegean, Greece

Funding Agencies

- The National Science Foundation
- The National Research Council
- The Netherlands Organization for Scientific Research (NWO)
- The National Science Foundation of Greece
- The CRDF Global

Conference Organization

International Conference Organization

1. Member of the Program Committee, NIPS2017 Neural Information Processing Systems, Long Beach, CA, Dec 4 , 2017 - Dec 9 , 2017
2. Member of the Program Committee, *17th AAAI Conference on Artificial Intelligence (AAAI-2017)*, San Francisco, CA, February 4-9, 2017
3. Member of the Program Committee, NIPS2016 Neural Information Processing Systems, Barcelona Spain, Dec 5 , - Dec 10 , 2016
4. Chair *College of Service Operations Management Track*, Production and Operations Management Society (POMS) Annual Conference, Orlando, Florida, May 6-9, 2016
5. Member of the Program Committee, *5th International Conference on Operations Research and Enterprise Systems (ICORES 2016)*, Rome, Italy, February 23-25, 2016
6. Member of the Program Committee, *13th AAAI Conference on Artificial Intelligence (AAAI-2016)*, Phoenix, AZ, February 12-17, 2016
7. Member of the Program Committee for CCSI 2015 - *the 2015 International Conference on Systems, Control, Signal Processing and Informatics*, Barcelona, Spain, April 7-9, 2015
8. Member of the Program Committee for CSCC 2015 *the 19th International Conference on Circuits, Systems, Communications and Computers*, Zakynthos, Greece, July 16-20, 2015
9. Co-Chair for AEBD-2014, *6th International Conference on Applied Economics, Business and Development* October 30 - November 1, 2014, Lisbon, Portugal,
10. Member of the Program Committee for AIKED '14: *13th International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases*, Gdansk, Poland, May 15-17, 2014
11. Member of the Program Committee for CSCC 2014, *18th International Conference on Circuits, Systems, Communications and Computers*, Santorini , Greece, July 17-21, 2014
12. Co-Chair of the *Analytics Section* Cluster of the 2013 INFORMS Annual Meeting in Minneapolis, Minnesota, October 6-9 2013
13. Member of the Program Committee for EEED 2013 *The 2013 International Conference on Energy, Environment, Ecosystems, and Development*, Rhodes, Greece, July 16-19, 2013
14. Member of the Program Committee for the 7th WSEAS International Conference on Information Security & Privacy, 2008

Recent Invited Session Organization at International Conferences

15. Chair: 'Learning in Markov Decision Processes', INFORMS 19th Applied Probability Society Conference, Evanston, IL, 2017
16. Chair: 'Recent Developments in Markov Decision Processes', INFORMS 19th Applied Probability Society Conference, Evanston, IL, 2017
17. Chair: 'A Collection of State of the Art Analytics Models and Methods', INFORMS Section: Analytics, Philadelphia PA, 2015
18. Chair: 'Revenue Optimization and Related Methodologies', INFORMS - Section: Revenue Management and Pricing, Philadelphia PA, 2015
19. Chair: 'Business Analytics Methods for Demand and Supply Planning and Control', 20th Conference of the International Federation of Operational Research Societies, Barcelona Spain, 2014
20. Chair: 'Advances on Demand and Supply Planning in Consumer Goods and Retailing', 20th Conference of the International Federation of Operational Research Societies, Barcelona Spain, 2014

21. Chair: ‘Stochastic Analytics Models and Methods’, INFORMS - Section: Analytics, San Francisco CA, 2014
22. Chair: ‘Predictive Analytics Models and Methods’, INFORMS - Section: Analytics, San Francisco CA, 2014
23. Chair: ‘Bidding and Behavior in Procurement Markets’, INFORMS - Section: Auctions, San Francisco CA, 2014
24. Chair: ‘Methods and Models for Intelligence Operations’, 2013 INFORMS Computing Society Conference, 2013
25. Chair: ‘Optimization under Risk, Successive Lumping and Shape Constrained Estimation’, INFORMS - Computing Society Conference, 2013
26. Chair: ‘Problems and Models for Repeated Auctions’ INFORMS - Section: Analytics, Minneapolis MN, 2013
27. Co-Chair: ‘Quantitative Methods in Analytics’, INFORMS - Section: Analytics, Minneapolis MN, 2013
28. Chair: ‘Methods and Models for Supply Chain Analytics’, EURO - INFORMS Joint International Meeting, Rome, Italy, 2013
29. Chair: ‘Methods and Models for Supply Chain Analytics’, EURO - INFORMS Joint International Meeting, 26th European Conference on Operational Research, Rome, Italy, 2013
30. Chair: ‘Revenue Optimization and Related MDP Methodologies I’, INFORMS - Section: Revenue Management and Pricing, 2012
31. Chair: ‘Revenue Optimization and Related MDP Methodologies II’, INFORMS - Section: Revenue Management and Pricing, 2012

Conference Organization at Institutions I was affiliated with

32. Chair of the [Fourth Rutgers Applied Probability Conference](#): Analytic Methods in Health Care and in Clinical Trials, 2015, Rutgers University, *jointly with Drs. J. Kostis and D. Metaxas*
33. Chair of the [Third Rutgers Applied Probability Conference](#): Stochastic Models and Algorithms for Intelligent Business Systems, June 6-7, 2014, Rutgers University, *jointly with Drs. Lei Lei, D. Metaxas, J. Mitchell.*
34. Chair of the [First Electrical and Computer Engineering & Management Science and Information Systems Workshop](#), *jointly with Dr. A. Petropoulou*, April 2014
35. Chair of the [Second Rutgers Applied Probability Conference](#): Stochastic Methods in Information Technology, December 6-7, 2013, Rutgers University, *with INFORMS - NJ Chapter board members & MSIS faculty*
36. Chair of the [First Rutgers Applied Probability Conference](#): Computational Methods of Applied Probability in Business Analytics, November 30, 2012, Rutgers University, *jointly with Drs. Farid Alizadeh, Andrzej Ruszczyński, Hui Xiong.*
37. Chair of the ‘Statistical Reliability, Sequential Methods and Related Topics’ conference at Columbia University, 7/1987. Conference supported by the AFOSR
38. Co-Chair of the ‘Statistical Reliability’ (with Dr. S. Kao) conference at Brookhaven National Laboratory, 1986. Conference supported by the AFOSR

Service at Rutgers

- Current: Department Chair, member of the New Brunswick Faculty Council
- Past: Department and University Committee service, including Dean’s Cabinet, Appointment and Promotions Committee, Research Resources committee Chair, MSIS Department Vice Chair, SAS Dean advisory committee member, and other too numerous to itemize.

Memberships

- ASA, American Statistical Association
- IEEE, Institute of Electrical and Electronics Engineers, *Senior Member*
- IMS, Institute of Mathematical Statistics
 - ◊ Nominated for *Fellow* in 2012

- INFORMS, The Institute for Operations Research and the Management Sciences
 - ◊ Elected *Fellow* in 2012
 - ◊ Elected *Chair* of the New Jersey Chapter in 2014
- ISI, International Statistical Institute
 - ◊ Elected '*Elected Member*' in 2012
- POMS, Production and Operations Management Society
 - ◊ *President* of the College of Service Operations (CSO), for 2015-2017
- SIAM, Society of Industrial and Applied Mathematics

Activities at Main Positions

Rutgers University, Rutgers Business School - Newark and New Brunswick, Department of Management Science and Information Systems (MSIS), New Jersey, Chair, 7/2011 - present

- In collaboration with the Dean and department faculty, designed and launched the Strategic Plan for the MSIS department, which is currently comprised by 29 full time (18 tenure track) faculty
- Worked on the design and implementation of the following new degrees:
 - ◊ Undergraduate major in Business Analytics and Information Technology (BAIT) at the New Brunswick campus
 - ◊ Dual MS/MBA degree in Operations Research and Business Analytics
 - ◊ MBA Concentration in Analytics & Information Management (AIM)
 - ◊ Master degree in Information Technology (MIT), that incorporated the RUTCOR MS program in O.R. The enrollment has increased from about six (6) students in 2010 to about 140 in 2016
- Work in progress on additional new degree initiatives:
 - ◊ A Master's Degree in Computer Science and Business Analytics jointly with the Rutgers CS department
- Grew enrollment by over 100% and overall revenue by over 200%
- Obtained funding for additional scholarships for undergraduate students
- The department recruited 5 tenure track and 4 clinical, faculty members
- Guided faculty through tenure and promotion to Associate and promotion to Professor
- Strongly supported faculty members to obtain recognition and promotion within and outside Rutgers
- Managed the integration of *RUTCOR*, its faculty, students and courses into the MSIS department
- Invited world renown scholars to visit Rutgers and give short courses to our Ph.D. students
- Started, in 2012 and chaired the annual [Rutgers Applied Probability Conference](#)

Rutgers University, Rutgers Business School - Newark and New Brunswick, Department of Management Science and Information Systems (MSIS), New Jersey, Professor, 1989 - present

- Taught courses on business analytics, stochastic models in supply chain management, stochastic processes, data models and decisions, deterministic models, operations management, production and operations
- Started in 2010 the MSIS-RUTCOR Seminar that achieved wide recognition as many world renowned scholars were invited as speakers
- Conducted research on business analytics methods, auctions, production-inventory systems, supply chain finance and the multi-armed bandit problem
- Developed several new courses including graduate courses in *Stochastic Models in Operations Research*, *Revenue Management* and the first graduate course on *Stochastic Models In Supply Chains* taught at Rutgers since 1997
- Supervised Ph.D. students in Operations Research and in Supply Chain Management.

- Supervised nine Ph.D. students, eight have completed their Ph.d. theses
- Supervised several Master's theses
- Chair, Dean's Task Force on the Integration of RUTCOR the Rutgers Center for Operations Research with the Rutgers Business School-Newark and New Brunswick
- Member of the [New Brunswick Faculty Council](#), 2014 - 2017
- Member of the Budget and Planning Committee of the New Brunswick Faculty Council, 2014 - 2017
This Committee considers all matters related to New Brunswick/Piscataway Campus budget priorities and allocations, general planning, and campus facilities
- Department of *Management Science and Information Systems*, *Vice Chair*, 1997 - 1998
- New Brunswick Fellow, 1999-present
- Research Resources Committee, *Chair*, 1998 - 2000
- MSIS department recruitment committee, *Chair*, 1997-1998
- Member of various school committees including, Planning, FASIP (merit) Award, M.B.A. Policy, Curriculum Review, Computer Policy, Dean's Advisory, Chairs, and the Dean's Cabinet, 1989-present

Rutgers University, Rutgers Business School - Newark and New Brunswick, Department of Supply Chain Management & Marketing Sciences (SCMMS), affiliated faculty

- In 2002, before the establishment of the SCMMS department, I developed and taught one of the first courses in Supply Chain Management at Rutgers: 26:711:685 *Stochastic Models & Applications in Supply Chains & Marketing*.
- This course later evolved into a core Ph.D. course: 26:799:661 *Stochastic Methods in Supply Chains*.
- Adviser of Ph.D. students whose main research was in Supply Chain Management, including: Bin. Zhou (Ph.D. in 2005), Wen Chen (Ph.D. in 2008), Junmin Shi (Ph.D. in 2010), Karti S. Puranam (Ph.D. in 2010), Wajahat Gilani (current student).
- Advised many other Ph.D. students and served in their committees.
- Prepared Qualifying Exams in Stochastic Processes and Stochastic Methods in SCM.

Rutgers University, School of Arts and Sciences, New Brunswick, Department of Mathematics, member of graduate faculty, 2013 - present

- Member of DIMACS the Center for Discrete Mathematics and Theoretical Computer Science, 2013-present
- Primary Investigator at the Center for Dynamic Data Analytics, 2014-present
- Worked with H. Robbins, cf. paper [36] and NSF grant [5]
- Taught the course on Stochastic Models in Operations Research, attended by Math. and Engineering students
- Supervising a department of mathematics doctoral student, 2012 - present

Technical University of Crete, Hania, Greece, Associate Professor, 1985 - 1989

- As an elected member of the university 'governing board', contributed to the development of the new academic department of *Production and Management Engineering*
- Obtained funding [6] to establish the [Dynamic Systems and Simulation Laboratory](#) and served as its founding director
- Taught courses on stochastic models in production management, stochastic processes, statistics, reliability, dynamic programming, linear programming
- Supervised the Ph.d. thesis of A.N. Burnetas
- Supervised the Master thesis of C. Papachristou

State University of New York at Stony Brook, Stony Brook, New York, *Department of Applied Mathematics and Statistics*, Assistant Professor, 9/1981 - 1/1985

- Doctoral student supervision
- Taught classes in optimization, stochastic processes, queueing, dynamic programming.
- Worked with H. Robbins on research sponsored by the AFOSR cf. grant [9]

Activities at Visiting & Short Term Positions

University of Leiden, Leiden, The Netherlands, *Mathematisch Instituut*, July 2012, August 2013, October 2014.

- Supervised Master's Thesis of L.C. Smit
- Member of the Ph.D. committee of D. Ertiningsih
- Worked with F. Speikma, cf. papers [4], [8], [77] and [82]

National and Kapodistrian University of Athens, Greece, *Division of Statistics and Operations Research*, 9/1991 - 8/1992 & Fall 1995

- Taught classes in Linear Programming and Dynamic Programming
- Supervised several Master's theses

Columbia University, New York, NY, *Department of Statistics*, Summers 1987 & 1988

- Lectured in a class on Sequential Statistics
- Worked with H. Robbins on research sponsored by the AFOSR, cf. grant [7]

Stanford University, Stanford, CA Summer 1984 & 1/1985 - 8/1985

- Taught classes in Operations Research Models and Case Studies in Operations Research,
- Worked with C. Derman and A.F. Veinott Jr. cf. papers [45], [46], [47]

Columbia University, New York, NY., *Department of Industrial Engineering and Operations Research*, 9/1981 - 5/1982 & 9/1989 - 5/1990

- Taught classes in Linear Programming and Markovian Decision Theory
- Worked with C. Derman on papers [42] and [56]

Technion, Haifa, Israel, *School of Management*, January 1994

- Seminar on Sequential Statistics
- Worked with U. G. Rothblum, cf. paper [33] and conference abstracts [68], [71]

Industry & Consulting

Bell Laboratories, Holmdel, NJ, *Operations Research Center, Member of Technical Staff*, 8/1980 - 9/1981
Worked on projects related to capacity expansion and on a *Dynamic Non-Hierarchical Traffic Routing System*. This system relied on dynamic routing that changed by the time of a day in anticipation of changing traffic load patterns, and it could significantly reduce the cost of a network that carried intra-metropolitan traffic as compared to the cost of a static hierarchical network

Brookhaven National Laboratory, Upton, NY. Department of Nuclear Energy & Department of Applied Mathematics *Consultant*, 8/1983 - 9/1985

Work involved studies on the reliability of diesel auxiliary power generators of nuclear power stations. Also worked on mathematical reliability problems

Athens Airport S.A., Spata, Greece Member of the board of Directors, 9/1986 - 5/1987.

Participated on the creation of an evaluation process for bids submitted from bidding groups for the design, construction, operation, maintenance and financing of the new International Airport, and on evaluation of plans for a new highway system

AM-Gold Products Inc - Jewelry- Manufacturers, New York, NY. Consultant, 10/1995-11/1995

Advised the management on issues of organizing a \$40,000,000 per year production process: inventory, management, security, quality control, and sales forecasting

Neotronics inc, N. Bellmore, NY. *Vice President*, 8/1995 - 7/2006

Work involved simulation for research and development specializing in electronic control systems

Southern Regional Education Board (SREB), NJ. Consultant, 11/2011 - 12/2012

Advised the board in developing a program of study in Global Logistics/Supply Chain Management that begins in high school and connects seamlessly to high-quality postsecondary programs

CPR | Strategic Marketing Communications, NJ. Consultant, Summer 2013

Analyzed advertising and public relations data to determine the demographics associated with the number of impressions of marketing activities

Publications

Refereed Journal Publications

1. Burnetas A., Kanavetas O. and M. N. Katehakis (2017). ‘Asymptotically Optimal Multi-Armed Bandit Policies under a Cost Constraint’, *Probability in the Engineering and Informational Sciences*, 31 (3), 284-310
2. Cowan W., Honda J. and M. N. Katehakis (2017). ‘Normal Bandits of Unknown Means and Variances: Asymptotic Optimality, Finite Horizon Regret Bounds, and a Solution to an Open Problem’, first version online at: arxiv.org/abs/1504.05823, *Journal of Machine Learning Research (JMLR)* to appear.
3. Katehakis M.N., Melamed B. and J. Shi (2016). ‘Cash-Flow Based Dynamic Inventory Management’, *Production and Operations Management, Production and Operations Management Journal (POMS)*, 25(9), 1558-1575. DOI: [10.1111/poms.1257](https://doi.org/10.1111/poms.1257).
4. Katehakis M.N., Smit L.C. and F.M. Spieksma (2016). ‘A Comparative Analysis of the Successive Lumping and the Lattice Path Counting Algorithms’, *Journal of Applied Probability*, 53(1): 106-120.
5. Chen, W., Fleischhacker A. and M.N. Katehakis (2015). ‘Dynamic Pricing and Inventory Control in a Dual Market Environment’, *Naval Research Logistics*, 62(7): 531-549, DOI: [10.1002/nav.21663](https://doi.org/10.1002/nav.21663).
6. Katehakis M.N., Melamed B. and J. Shi (2015). ‘Optimal Replenishment Rate for Inventory Systems with Compound Poisson Demands and Lost-Sales: A Direct Treatment of Time Average Cost’, *Annals of Operations Research*, 1-27, DOI: [10.1007/s10479-015-1998-y](https://doi.org/10.1007/s10479-015-1998-y).
7. Cowan, W. and M. N. Katehakis (2015). ‘Multi-Armed Bandits under General Depreciation and Commitment’, *Probability in the Engineering and Informational Sciences*, 29(1): 51-76.
★ Finalist of the New Jersey Chapter of INFORMS 6th Annual Student Contest
8. Katehakis M.N., Smit L.C. and F.M. Spieksma (2015). ‘DES RES Processes and their Explicit Solutions’, *Probability in the Engineering and Informational Sciences*, 29: 191-217.
★ Winner of the New Jersey Chapter of INFORMS 5-th Annual Student Contest
9. Puranam K.S. and M.N. Katehakis (2014). ‘On Optimizing Taboo Criteria in Markov Decision Processes’, *International Journal of Applied Decision Sciences*, 7(1): 33-43.
10. Puranam K.S. and M.N. Katehakis (2014). ‘On Optimal Bidding and Inventory Control in Sequential Procurement Auctions: The Multi Period Case’, *Annals of Operations Research*, 217: 447-462.
11. Shi, J., Katehakis M.N., Melamed B. and Y. Xia (2014). ‘Optimal Replenishment Rate for Inventory Systems with Compound Poisson Demands and Lost-Sales under Discounting’, *Operations Research*, 6 (5): 1048 - 1063.
12. Shi J., Katehakis M.N. and B. Melamed (2013) ‘Pricing the Penalty Function for Inventory Overage and Underage via Martingale Methods’, *Annals of Operations Research*, 208(1): 593-612.
13. Katehakis M.N., Ross S.M., Olkin I. and J. Yang (2013). ‘The Life and Work of Cyrus Derman’, in *Optimization under uncertainty: costs, risks and revenues Cyrus Derman memorial volume I*, Katehakis M.N., Ross S.M. and J. Yang (Eds.) *Annals of Operations Research*, 208(1): 5-26.

14. Tavana M., Zandi F. and M.N. Katehakis (2013). ‘A Hybrid Fuzzy Group ANP-TOPSIS Framework for E-government Readiness Assessment from a CiRM Perspective’, *Information & Management*, 50: 383 - 397.
15. Katehakis M.N and K.S. Puranam (2012). ‘On Optimal Bidding in Sequential Procurement Auctions’, *Operations Research Letters*, 40(4): 223-306.
16. Katehakis M.N and L.C. Smit (2012). ‘A Successive Lumping Procedure for a Class of Markov Chains’, *Probability in the Engineering and Informational Sciences*, 26 (4): 483-508.
★ Finalist of the New Jersey Chapter of INFORMS 4-th Annual Student Contest
17. Katehakis M.N and L.C. Smit. (2012). ‘Efficient Algorithms for Computing an Optimal (R, Q) Policy in Continuous Review Stochastic Inventory Systems with Quantity Discounts’, *Annals of Operations Research*, 200(1): 279-298, 2012.
18. Katehakis M.N and K.S. Puranam (2012). ‘On Bidding for a Fixed Number of Items in a Sequence of Auctions’, *European Journal of Operations Research*, 222(1): 76-84.
19. Zhou, B., M.N. Katehakis and Y. Zhao (2009). ‘Stochastic inventory Systems With Free Shipping Options’, *European Journal of Operations Research*, 196(1): 186-197.
20. Ungureanu V., Melamed B. and M.N. Katehakis (2008). ‘Effective Load Balancing for Cluster-based Servers Employing Job Preemption’, *Journal of Performance Evaluation*, 65(8) 606-622.
21. Zhao, Y., Zhou B. and M.N. Katehakis (2007). ‘Effective Control Policies for Stochastic Inventory Systems with Minimum Order Quantity and Linear Costs’ *International Journal of Production Economics*, 106(2): 523-531.
22. Bradford, P. G. and M.N. Katehakis (2007). ‘Insight into Combinatorial Expanders’ , *SIAM Journal on Computing*, 37(1): 83-111.
23. Bradford P. G. and M.N. Katehakis (2007). ‘Constrained Inventory Allocation and its Applications’, *WSEAS Transactions on Mathematics*, 6(2): 263-270.
24. Katehakis M.N. and K.S. Puranam (2007). ‘On Optimal Replacement Under Semi-Markov Conditions’, ‘WSEAS Transactions on Mathematics’, 6(3): 330-334.
25. Ungureanu V., Melamed B., Katehakis M.N. and P.G. Bradford (2006). ‘Deferred Assignment Scheduling in Cluster-Based Servers’ *Cluster Computing* 9(1): 57-65.
26. Zhao, Y. and M.N. Katehakis (2006). ‘On the Structure of Optimal Ordering Policies for Stochastic Inventory Systems with Minimum Order Quantity’, *Probability in the Engineering and Informational Sciences*, 20(2): 257-270.
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72. Burnetas, A.N. and M.N. Katehakis (1994). ‘Fast-Convergent Adaptive Policies for Constrained Markovian Decision Processes Under Partial Information’, *ORSA/TIMS Joint National Meeting*, Detroit MI
73. Katehakis M.N. (1993). ‘Scaling MDP Problems’, *ORSA/TIMS*, Phoenix AZ
74. Burnetas, A.N. and M.N. Katehakis (1993). ‘On Estimation of Expected Passage Times - Rewards and Average Rewards for Finite State Markov Chain’, *ORSA/TIMS Joint National Meeting*, Chicago IL.
75. Burnetas, A.N. and M.N. Katehakis (1993). ‘Further Results on Asymptotically Efficient Adaptive Policies for Markovian Decision Processes’, *ORSA/TIMS Joint National Meeting*, Phoenix AZ
76. Burnetas, A.N. and M.N. Katehakis (1992). ‘On Finding Optimal Policies for MDP’s under Incomplete Information’, *ORSA/TIMS Joint National Meeting*, Orlando FL
77. Burnetas, A.N. and M.N. Katehakis (1991). ‘On Finding Optimal Policies of MDP’s with Simulation’, *ORSA/TIMS Joint National Meeting*, Anaheim CA
78. Katehakis M.N. and C. Melolidakis (1991). ‘On the Optimal Maintenance of Systems and Control of Arrivals in Queues’, *ORSA/TIMS Joint National Meeting*, Nashville TN
79. Burnetas, A.N. and M.N. Katehakis (1991). ‘On Optimal Allocation Policies for the One Armed Bandit Problem’, *ORSA/TIMS Joint National Meeting*, Nashville TN
80. Katehakis M.N. and C. Melolidakis (1988). ‘Dynamic Repair Allocation for a K out of N system’, *ORSA/TIMS Joint National Meeting*, Washington DC
81. Katehakis M.N. and A.F. Veinott Jr. (1985). ‘On Computing the Gittins DAI Index’, *TIMS/ORSA*, Boston, MA
82. Katehakis M.N. and Y.R. Chen (1984). ‘Scheduling in a Two Stage Multiprocessor System’, *ORSA/TIMS Joint National Meeting*, San Francisco Ca
83. Katehakis M.N. and A. Levine (1983). ‘On the Optimal Operation of a Emergency Services - Heavy and Light Traffic Results’, *ORSA/TIMS Joint National Meeting*, Chicago IL
84. Katehakis M.N. (1983). ‘On the Optimal Maintenance of a Series System with Dependent Components’, *ORSA/TIMS Joint National Meeting*, Chicago IL
85. Katehakis M.N. and P.K. Johri (1982). ‘Optimal Repair Allocation in a Series System’, *ORSA/TIMS Joint National Meeting*, San Diego CA
86. Derman C. and M.N. Katehakis (1981). ‘Optimal Repair Allocation in a Series System’, *CORS/ORSA/TIMS Joint Meeting*, Toronto, CAN

Selected Special Lectures

Lectures Outside Rutgers

1. **(Invited)** Eindhoven University of Technology, Netherlands (2016). ‘Simple Data Driven Policies for MDPs’, Workshop Data-Driven Operations Management, October 24
2. **(Invited)** University of Osnabrueck, Germany (2016). ‘Simple Data Driven Policies for MDPs’, Workshop in honor of Wolfgang Stadje, October 21
3. **(Invited)** InfoSymbiotics/DDDAS Conference (2016). ‘New Bandit and MDP Models that Provide Optimal DDDA Methods’, Hartford, CT, Aug 9-12
4. **(Invited)** IWAP-2016, 20-23 June, 2016, Toronto, Canada. *The ninth International Workshop on Applied Probability*, ‘Recent Advances in Sequential Allocation Problems ’
5. **(Invited)** University of Southern California (2016). Viterbi School of Engineering, ‘Sequential Allocation Policies in a Changing Environment’, January 20.

6. **(Invited)** Lancaster University, Lancaster UK, School of Management (2016). ‘Optimal Sequential Allocation under Constraints’, January 13.
7. **(Invited)** Lancaster University, Lancaster UK, STOR-i: Statistics and Operational Research Centre for Doctoral Training in Partnership with Industry, *Multi-armed Bandit Workshop 2016*, ‘Asymptotically Optimal Policies for Non-Parametric MAB Models under Generalized Ranking’, January 11.
8. **(Invited)** Duke University (2015). *Decision Sciences Seminar Series*, Fuqua School of Business, ‘?On Optimal Sequential Allocation under Constraints’, planned for December 14.
9. **(Invited)** INFORMS - Philadelphia (2015). ‘Models And Problems of Dynamic Pricing In The Multi-armed Bandit Framework’
10. **(Invited)** University of Connecticut (2015) *Joint Department of Operations and Information Management and Department of Statistics Seminar*, ‘Short Term Loss and Asymptotically Optimality of Sequential Allocation Policies’
11. **(Invited)** IBM T.J. Watson Research Center (2015). *Mathematical Sciences and Analytics Seminar*, Yorktown Heights, NY, ‘On Asymptotically Optimal Sequential Allocation Policies Under Side Constraints’
12. **(Tutorial)** Koç University, Sarıyer/ İstanbul, Turkey (2015). *18th INFORMS Applied Probability Society Conference*, ‘A Tutorial on Multi-Armed Bandit Problems’
13. **(Invited)** Koç University, Sarıyer/ İstanbul, Turkey (2015). *18th INFORMS Applied Probability Society Conference*, ‘On the Structure of Average Reward Optimal Policies for Multi-Chain MDPs’
14. **(Plenary)** AMCSE’15, Agios Nikolaos, Greece (2015). *2015 International Conference on Applied Mathematics, Computational Science & Engineering*, ‘Short Term and Asymptotic Properties of Minimal-Exploration Sequential Allocation Rules’
15. **(Plenary)** AMATHI ’15, Tenerife, Spain (2015). *6th European Conference on Applied Mathematics and Informatics*, ‘On Optimal Bidding in Internet Concurrent Auctions’
16. **(Invited)** Columbia University (2015). *Fifth International Workshop in Sequential Methodologies*, ‘On the Short Term and the Asymptotic Behavior of Sequential Allocation Policies’
17. **(Opening Plenary)** University of Crete, Greece (2015). *International Workshop in Memory of Vassilios K. Klonias*, ‘Vassilios K. Klonias his Research and his Teaching Methods’
18. **(Invited)** University of Crete, Greece (2015). *International Workshop in Memory of Vassilios K. Klonias*, ‘Multi-Armed Bandit Problems, Models and Algorithms’
19. **(Invited)** Lehigh University (2015). *Modeling and Optimization: Theory and Applications Conference*. ‘Multi-Armed Bandit Problems, Models and Algorithms’
20. **(Invited)** INFORMS - San Francisco (2014). ‘Adaptive Bidding in Repeated Auctions’
21. **(Invited)** IWAP-2014, Antalya, Turkey (2014). *The seventh International Workshop on Applied Probability*, ‘On Non-Parametric Quantile Estimation’
22. **(Plenary)** Northwestern University (2014). *Center for Engineering and Health*, ‘Multi-Armed Bandits in Healthcare: Adaptive designs, matching, and admission control’
23. **(Plenary)** AEBD’14, Lisbon, Portugal (2014). *The 6th International Conference on Applied Economics, Business and Development*, ‘Multi-Armed Bandits in Healthcare, Machine Learning and Scheduling’
24. **(Invited)** Stony Brook University (2014). *Center for Dynamic Data Analytics Workshop*, ‘Models and Problems in Sequential Auctions’
25. **(Invited)** IFORS’14, Barcelona Spain (2014). *20th Conference of the International Federation of Operational Research Societies*, ‘A Tractable Inventory Model with Random Lead Times’
26. **(Invited)** IFORS’14, Barcelona Spain (2014). *20th Conference of the International Federation of Operational Research Societies*, ‘On Optimal Tax Planning and Inventory Systems with Perishable Items’
27. **(Discussant)** Technion, Israel (2013). *Operation Research Conference in memory of Professor Uriel G. Rothblum*, [invitation-only conference](#)

28. **(Invited)** University of Haifa, Israel (2013). Statistics Department, ‘Research on Sequential Allocation and State Aggregation’
29. **(Invited)** University of Michigan, Ross School of Business (2013). *Technology & Operations Seminar*: ‘Research on Sequential Allocation and State Aggregation’
30. **(Invited)** EURO-INFORMS Joint International Meeting, 26th European Conference on Operational Research (2013). ‘Cash-Flow Based Dynamic Inventory Management’, Rome, Italy
31. **(Invited)** ICS’13, Santa Fe, NM. (2013). *INFORMS Computing Society Conference*, ‘On Sequential Allocation in a Changing Environment’
32. **(Invited)** ICS’13, Santa Fe, NM. (2013). *INFORMS Computing Society Conference*, ‘Successive Lumping for a Class of Markov Chains’
33. **(Invited)** INFORMS - Minneapolis (2013). ‘A Markov Chain Modulated Inventory Model’
34. **(Invited)** INFORMS NJ - Chapter (2013). ‘Multi Armed Bandit Analytics: A Survey and Recent Advances’
35. **(Invited)** *INFORMS Applied Probability Society Conference*, Costa Rica (2013). ‘Cash-Flow Based Dynamic Inventory Management’
36. **(Invited)** *INFORMS Annual Meeting*, Phoenix AZ (2012). ‘Optimal Adaptive Policies for Sequential Allocation Problems’
37. **(Discussant)** Stanford University (2013). *Operation Research Conference in memory of Professor Arthur F. Veinott, Jr.*, [invitation-only conference](#)
38. **(Invited)** Stevens Institute of Technology, *6th Rutgers-Stevens Workshop on Optimization of Stochastic Systems* (2011). ‘On Sequential Procurement Auctions’
39. **(Discussant)** Stanford University (2011). *Conference to celebrate the contributions of Professors Richard W. Cottle and Arthur F. Veinott, Jr.* [invitation-only conference](#)
40. **(Plenary)** Columbia University (2011). *Center of Applied Probability Conference in Honor and Memory of Professor Cyrus Derman*, ‘Non-Parametric Up-and-Down Experimentation Revisited’, one of five talks given by M. Brown, M. Katehakis, S.M. Ross, M. Sobel and A.F. Veinott Jr. [invitation-only conference](#)
41. CONTROL’08, Corfu Greece (2008). *4th WSEAS/IASME International Conference on Dynamical Systems And Control*, ‘Optimization of the Total Present Value of Profits Under Semi Markov Conditions with Applications in the Optimal Ferry Dispatch Problem’
42. SEPADS’07, Crete, Greece (2007). *6th WSEAS International Conference on Software Engineering, Parallel and Distributed Systems*, ‘Optimal Booking Policies’
43. **(Plenary)** CIMMACS’07, Tenerife Spain (2007). *6th International Conference on Computational Intelligence, Man-Machine Systems and Cybernetics*, ‘The AMESO Class of Optimization Problems and their Applications’
44. **(Invited)** *INFORMS Annual Meeting*, Denver CO (2004). *Special Cluster Honoring A.F. Veinott Jr.* ‘On the Structure of Optimal Policies for Stochastic Inventory Systems with Minimum Order Quantity’²
45. **(Invited)** University of Crete, Greece (2002). *Department of Mathematics*, ‘Notable Operations Research Methodologies and their Applications’
46. **(Memorial)** Columbia University (2001). *Memorial Conference for Professor Herbert E. Robbins*, ‘My Memories of Herb and his Contributions to Statistics’
47. **(Invited)** *INFORMS Annual Meeting*, Salt Lake City UT (2000). ‘Transformations of Constrained Multi-Armed Bandit Problems & Implications’
48. **(Invited)** University of Ulm, Germany (1999). *10th Applied Probability Conference*, ‘On Confidence Intervals from Simulation of Finite Markov Chains’
49. **(Invited)** *INFORMS Annual Meeting*, Philadelphia PA(1999). ‘Models for Adaptive Airline Revenue Management’

²In my absence due to illness, talk was delivered by my co-author Y. Zhao.

50. **(Panelist)** *MASCOTS 1997*, IEEE International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems, January 12-15, 1997 Haifa, Israel.
51. **(Invited)** *2nd World Congress of Nonlinear Analysis*, Athens, Greece (1997). ‘Remarks on sequential allocation’
52. **(Invited)** Columbia University (1996). Graduate School of Business, ‘Uniformly Fast and Maximal Convergence Rate Adaptive Policies for uMDPs’
53. **(Invited)** *INFORMS Annual Meeting*, Washington DC (1996), ‘Adaptive MDP Pricing Models’
54. **(Invited)** National and Kapodistrian University of Athens, Division of Statistics and Operations Research, Greece (1994). ‘On Sequencing Different Types of Tasks on a Single Processor under Incomplete Information’
55. **(Plenary)** Columbia University (1994). *Special Conference in Honor of Professor Cyrus Derman*, Industrial Engineering and Operations Research Department, ‘Asymptotically Efficient Adaptive Policies for Markovian Decision Processes’, *One of five presentations, other speakers: A.F. Veinott Jr., I. Karatzas, M. Sobel, S.M. Ross.*
56. **(Invited)** University of Rhode Island (1994). *Department of Computer Science and Statistics*, ‘Dynamic Allocation in Survey Sampling’
57. *ORSA/TIMS Joint National Meeting*, Phoenix AZ (1993). ‘Scaling MDP Problems’
58. **(Invited)** Technion - Israel Institute of Technology, Israel (1992). *Faculty of Management*, ‘A Survey and Recent Advances in Dynamic Allocation Problems’
59. **(Invited)** Hasselt (Limburgs) University, Statistics Department, Belgium (1991). ‘On Stochastic Optimality of Policies in First Passage Problems’
60. **(Invited)** Syracuse University (1989). *Special Conference: Modern Sequential Statistical Analysis in Honor of Professor Herbert Robbins*, ‘Dynamic Allocation in Survey Sampling’
61. **(Invited)** Bilkent University, Turkey (1988). ‘Dynamic Routing Problems - Numerical Procedures’
62. **(Invited)** Columbia University (1988). Mathematical Statistics Department, ‘Problems and Models for Maximizing the Availability of Systems’
63. **(Invited)** Columbia University (1987). Department of Mathematical Statistics. *Mini Conference on ‘Statistical Reliability, Sequential Methods and Related Topics’*, ‘An Optimal Restart Model to Compute the Gittins’ Index’
64. **(Invited)** Columbia University (1986). Mathematical Statistics Department, ‘The Multi-Armed Bandit Problem: Decomposition, Computation and Complexity’
65. **(Invited)** Thomas Jefferson Medical Center (1986). *Department of Radiation Therapy and Nuclear Medicine*, ‘On Optimal Allocation of Patients to Different Treatments’
66. **(Invited)** Brookhaven National Laboratory (1985). *Special IMS Conference in Honor of Professor Herbert Robbins*, ‘On Computing the Gittins Indices for Optimal Allocations in Clinical Trails’
67. **(Invited)** ORSA/TIMS Joint National Meeting, Boston, MA (1985). ‘On Computing the Gittins DAI Index’
68. **(Invited)** Stanford University (1985). *Operations Research Department*, ‘The Multi Armed Bandit Problem, its Solution with the Gittins Indices and their Computation’
69. **(Invited)** Technical University of Crete, Greece (1985). *Production Engineering and Management Department*, ‘Models and Problems of Optimal Maintenance of Systems’
70. **(Invited)** University of California, Santa Barbara (1985). *Statistics Department*, ‘On the Multi Armed Bandit Problem - ϵ - optimal policies’
71. **(Invited)** Purdue University (1985). *Statistics Department*, ‘Linear Programming for Finite State Multi Armed Bandit Problems’

72. **(Invited)** Air Force Office of Scientific Research (1985). *Conference on Reliability*, ‘On the Maintenance of Highly Reliable Systems’
73. **(Invited)** Yale University (1984). *Department of Statistics*, ‘On Optimal Allocation in Clinical Trails’
74. **(Invited)** University of Maryland (1984). *Institute for Systems Research*, ‘On Dynamic Allocation Problems and the Gittins Index’
75. **(Invited)** Brookhaven National Laboratory (1984). *Mini Conference on ‘Statistical Reliability’*, ‘Models and Problems of Dynamic Repairman Assignments to Failed Components of a System’
76. **(Invited)** Brookhaven National Laboratory(1983). Nuclear Energy Department, ‘On Computing the Availability of Highly Reliable Systems’
77. **(Invited)** Johns Hopkins University (1983). *Mathematical Sciences Department*, ‘Multi-Objective Markovian Decision Processes with Applications to Urban Planning’
78. **(Invited)** Columbia University (1981). *Industrial Engineering and Operations Research Department*, ‘Optimal Server Allocations in a Series System’
79. **(Invited)** New York University (1981). *Decision and Information Sciences Department*, Stern School of Business ‘On the Optimal Maintenance of Reliability Systems’
80. **(Invited)** Stony Brook University (1981). *Applied Mathematics and Statistics Department* ‘On the Optimal Allocation of Servers in Queues’
81. **(Invited)** Bell Telephone Laboratories (1980). *Operations Research Center*, ‘An Explicit Solution to a Combinatorial Size Dynamic Allocation Problem’
82. **(Invited)** Columbia University (1980). *Mathematical Statistics Department*, ‘Optimal Server Allocation for Highly Reliable Systems’

Lectures at Rutgers

83. Rutgers University (2015). *7th Rutgers-Stevens Workshop on Optimization of Stochastic Systems*, ‘Simple Policies with Arbitrarily Slow Growing Regret for Sequential Allocation Problems’
84. Rutgers University (2014). *DIMACS/CCICADA Interdisciplinary Seminar Series*, ‘Solutions to two problems on Bandit Models’
85. Rutgers University (2014). *First Rutgers ECE and MSIS Workshop*, ‘Fast Detection of the Best Treatment and Google Analytics’
86. Rutgers University (2013). *Second Rutgers Applied Probability Conference*, ‘The Multi Armed Bandit Problem: A survey and Recent Advances’
87. Rutgers University (2013). *The Center for Dynamic Data Analytics Fall 2013 Workshop & IAB Meeting*, ‘Multi-Armed Bandit Analytics: A Survey and Recent Advances’
88. Rutgers University (2013). *Newark Chancellor’s Research Day*, ‘Research in the Era of Big-Data Driven Analytics’
89. Rutgers University (2012). *First Rutgers Applied Probability Conference*, ‘The Class of Quasi-Skip Free Processes: Explicit solutions when successively lumpable’
90. Rutgers University (2012). *The 20th Annual Conference on Pacific Basin Finance, Economics, Accounting, and Management*, ‘Cash-Flow Based Dynamic Inventory Management’
91. Rutgers University (2011). *RUTCOR Rutgers Center for Operations Research Seminar*, ‘Non-Parametric Up-and-Down Experimentation Revisited’
92. Rutgers University (2011). *DIMACS/CCICADA Workshop*, ‘Non-Parametric Up-and-Down Experimentation Revisited’
93. **(Discussant)** Rutgers University (2011). *NSF Workshop: A Conversation between Computer Science and Operations Research on Stochastic Optimization*, [invitation-only conference](#)
94. Rutgers University (2009). *Management Science & Information Systems Department*, ‘Optimal Bid Strategies in Sequential Auctions’

95. Rutgers University (1994). RUTCOR - Rutgers Center of Operations Research, 'Problems and Models of Dynamic Service Allocation in Queues'
96. Rutgers University (1987). *Statistics Department*, 'The Restart Problem and its use to calculate Dynamic Allocation Indices'
97. Rutgers University (1986). RUTCOR - Rutgers Center of Operations Research, 'On the Optimal Maintenance of Systems and Control of Arrivals in Queues'

Educational Activities

Program and Curriculum Development

1. **Created and taught** one of the first courses in Supply Chain Management at Rutgers: 26:711:685: 'Stochastic Models & Applications' in Supply Chains. This course is a core course in the PhD program of the successful Supply Chain Department, and it has been offered at Rutgers Business School NB undergraduate program since the academic year 2006/2007.
2. **Created** (with Ron Armstrong) in 1997, the core undergraduate course 29:623:311: 'Production and Operations Management'. I serve as the coordinator of the many (currently 12) sections offered per semester, often teaching a section.
3. **Created** (with Lee Papayanopoulos) in 1997, the core undergraduate course: 29:623:340: 'Introduction to Business Research Methods', for the similarly many sections of which Dr. Papayanopoulos served as its coordinator.
4. **Created** several new classes some of which I did not teach including: a) 'Introduction to Business Analytics' (with Jonathan Eckstein and Xiadong Lin) an undergraduate course for non Business School majors for the NB campus, b) 'Dynamic Pricing and Revenue Management' (with J. Yang) a PhD course, and c) 'Revenue Management' (with J. Yang) an MBA elective course.
5. **Restarted** the MSIS department seminar in 2010.
6. **Created**, in 2012, the now world renown **Rutgers Applied Probability Conference Series**.
7. As chair of the MSIS department I lead the efforts of the department to create the following modern degree programs:
 - (a) A new PhD program in Operations Research, offered at Rutgers Business School since the academic year 2013/2014.
 - (b) The Analytics and Information Management MBA concentration, offered at Rutgers Business School MBA program since the academic year 2013/2014.
 - (c) Master of Information Technology MS program, offered at Rutgers Business School MBA program since the academic year 2013/2014. Its modernization in 2013 included adding two new concentrations: 'Information Assurance' and 'Operations Research and Business Analytics' (in the previously single concentration in 'Information Systems' program). This led to significantly increased enrollments (from about 6 students being admitted in 2011, to about 70 in 2015).
 - (d) Establishment of a **new major** in Business Analytics and Information Technology, offered at Rutgers Business School NB undergraduate program since the academic year 2012/2013.
8. Lead the efforts to establish the alumni clubs:
 - (a) 'The Rutgers Business School Management Science and Information Systems Graduate Alumni Network', for MS. and Ph.D. alumni, in 2012.
 - (b) 'The Rutgers Business School Management Science and Information Systems Alumni Network', for the BA and BS alumni, in 2012.

Courses Taught

Taught a variety of graduate and undergraduate courses, in Business Analytics: Operations Research, Statistics, Stochastic Processes and Supply Chains, at four Universities in the U.S. (Columbia, Rutgers, Stanford and SUNY at Stony Brook) and two in Greece (National and Kapodistrian University at Athens and University of Crete). Course related material and syllabi are available on line at my [Teaching Page](#) and at the Production and Operations Management [Online Class Site](#).

In the list below a ‘.’ symbol indicates a new course developed, and a ‘✓’ symbol a course revised.

Courses taught at Rutgers

Graduate

1. Stochastic Models in Operations Research (PhD) ✓
2. Stochastic Methods in Supply Chains (MS, PhD) .:
3. Stochastic Models & Applications in Supply Chains & Marketing (MS, PhD) .:
4. Stochastic Dynamic Programming (PhD) .:
5. Stochastic Processes (MS, PhD) ✓
6. Data Analysis (MBA) ✓
7. Deterministic Optimization Models (MBA)
8. Linear Stat. Models (MBA) ✓
9. Optimization Methods in Finance (MS & PhD) .:
10. Supply Chain Logistics (MBA)

Undergraduate

11. Data Warehousing (BA) ✓
12. Operations Management (BA)
13. Production and Operations Management (BA).:

Courses taught at other Universities

Graduate

14. Reliability and Maintenance of Systems, Athens University (PhD) .:
15. Markovian Decision Processes, Columbia University (MS & PhD) ✓
16. Linear Programming, Columbia University and SUNY Stony Brook (MS & PhD)
17. Queuing Theory, SUNY Stony Brook (MS & PhD) .:
18. Topics in Applied Mathematics, SUNY Stony Brook (PhD) .:
19. Probability Theory, SUNY Stony Brook (MS & PhD)
20. Non Linear and Dynamic Programming, Athens University (PhD) .:
21. Applications of Operations Research, Stanford Univ. (MS)

Undergraduate

22. Introduction to Statistical Inference, University of Crete (BA)
23. Probability Theory, University of Crete (BA)
24. Reliability and Maintenance of Systems, University of Crete (BA)
25. Models and Applications of Operations Research in Society, Stanford University (BA)

Doctoral Thesis Supervision

Doctoral Students [Work in Progress at Rutgers]

1. Daniel Pirutinsky, Dept. of Management Science & Information Systems, Rutgers University
Partial support provided by NSF grant: CMMI-14-50743
2. Nilofar Varzгани (jointly with S. Govindaraj), Dept. of Management Science & Information Systems, Rutgers University

3. Tingting Zhou (jointly with J. Yang), Dept. of Management Science & Information Systems, Rutgers University
4. Aichih Chang (jointly with B. Melamed), Dept. of Supply Chain Management, Rutgers University
5. Ehsan Teymourian (jointly with Mert Gurbuzbalaban), Dept. of Management Science & Information Systems, Rutgers University

Doctoral Students [Completed]

6. Wesley Cowan, Dept. Mathematics, New Brunswick, Rutgers University. *Partial support provided by NSF grant: CMMI-14-50743*. First position: CS department, Rutgers University
7. Wajahat Gilani, Dept. of Supply Chain Management, Rutgers University. First position: Strike Valuation inc. New York
8. Laurens Smit (2014) (jointly with Flora Spieksma - University of Leiden). ‘On Successive Lumping of Large Scale Systems’, Dept. of Management Science & Information Systems, Rutgers University. First position: University of Leiden
9. Karti S. Puranam (2010). ‘Stochastic Analysis of Bidding in Sequential Auctions and Related Problems’, Dept. of Management Science & Information Systems, Rutgers University. First position: Lasalle University, School of Business
10. Junmin Shi, (2010) (jointly with B. Melamed). ‘Make to Stock Production Inventory Systems with Compound Poisson Demands, Constant Continuous Replenishment’, Dept. of Supply Chain Management and Marketing Sciences, Rutgers University. First position: Georgia State University, Robinson College of Business
11. Wen Chen (2008). ‘New Models and Solutions for Stochastic Optimization for R&D and Transportation Problems’, Dept. of Management Science & Information Systems, Rutgers University. First position: University of Texas at Austin
12. Bin Zhou (2007). ‘On Optimal Pricing and Ordering in Supply Chain Management’, Dept. of Supply Chain Management and Marketing Sciences, Rutgers University. First position: Kean University, College of Business and Public Administration
13. Timothy T. Elkins, 2003 (jointly with K. Lawrence). ‘Multiple Criteria and Dynamic Data Envelopment Analysis with the Freight Service Business’, Dept. of Management Science & Information Systems, Rutgers University. First position: N.Y.U, Leonard Stern School of Business
14. Kemal Gursoy, (1997). ‘Branch and Bound Methods for Sequentially Choosing Some Among Several Competing Projects’, Dept. of Management Science & Information Systems, Rutgers University. First position: Long Island University
15. Apostolos N. Burnetas (1993). ‘On Adaptive Estimation and Control for Markovian Decision Processes’, Dept. of Management Science & Information Systems, Rutgers University.
Partial support provided by AFOSR contract AFOSR-87-0072
First position: Weatherhead School of Management, Case Western Reserve University
16. Yih-Ren Chen (1984). State University of New York at Stony Brook, ‘Stochastic Scheduling Under Incomplete Information’, Dept. of Applied Mathematics & Statistics, Stony Brook University.
Partial support provided by AFOSR contract AFOSR-84-0136
First position: ATT-Bell Labs
17. Sanja Durinovic (1984). State University of New York at Stony Brook, ‘On Multi-Objective Markov Decision Processes’, Dept. of Applied Mathematics & Statistics, Stony Brook University. First position: ATT-Bell Labs
18. Pravin Jhori (1984). ‘On Maximizing First Passage Probabilities in Gambling and in Queues’, Dept. of Applied Mathematics & Statistics, Stony Brook University. First position: ATT-Bell Labs.
19. Alan L. Levine (1983). ‘On the Optimal Operation of Queueing Systems—Asymptotic Results’, Dept. of Applied Mathematics & Statistics, Stony Brook University. First position: Franklin and Marshall College.

Doctoral Committee [In Progress]

20. Deniz Eskandani, Dept. of Management Science & Information Systems, Rutgers University
21. Dwi Ertiningsih, Mathematisch Instituut University of Leiden
22. Javier Rubio-Herrero, Dept. of Management Science & Information Systems, Rutgers University
23. Dionysios Kalogierias, Dept. of Electrical and Computer Engineering, Rutgers University

Doctoral Committee [Completed]

24. Kwon Gi Mun, Dept. of Supply Chain Management, Rutgers University (2016).
25. Shunqiao Sun (2015). ‘Mimo Radars with Sparse Sensing’, Dept. of Electrical and Computer Engineering, Rutgers University
26. Yifeng Liu (2014). ‘Dynamic Revenue and Inventory Management Models’, Dept. of Management Science & Information Systems, Rutgers University
27. Xin Xu (2014). ‘Essays on the Interface between Supply Chain and Project Management’, Dept. of Supply Chain Management and Marketing Sciences, Rutgers University
28. Sitki Gülten (2014). ‘Two-Stage Portfolio Optimization With Higher-Order Conditional Measures of Risk’, Dept. of Management Science & Information Systems, Rutgers University
29. Ozlem Cavus (2012). ‘Risk-Averse Control of Undiscounted Transient Markov Models’, Rutgers Center for Operations Research (RUTCOR), Rutgers University
30. Kathleen M. Iacocca (2011). ‘Essays on Drug Distribution and Pricing Models’, Dept. of Supply Chain Management and Marketing Sciences, Rutgers University
31. Sungyong Choi (2009). ‘Risk-Averse Newsvendor Models’, Dept. of Management Science & Information Systems, Rutgers University
32. Fleischhacker, Adam (2009). ‘An Investigation of Clinical Trial Supply Chains’, Dept. of Supply Chain Management and Marketing Sciences, Rutgers University
33. Ching-Yu Chen (2007). ‘Essays on Supply Chain Inventory Management’, Dept. of Management Science & Information Systems, Rutgers University
34. Ulas Akkucuk (2004). ‘Metric Nonlinear Mapping: Approaches Based on Optimizing an Index of Continuity and Applying Classical Metric MDS on Revised Distances’, Dept. of Management Science & Information Systems, Rutgers University
35. Unsal Ozdogru (2000). ‘Performance Analysis of Continuous Material Flow Systems’, Rutgers Center for Operations Research (RUTCOR), Rutgers University
36. Avsar, Zeynep Muge (1998). ‘Algorithms for Stochastic Games and a Stochastic Game Application: Inventory Control Under Substitutable Demand’, Dept. of Management Science & Information Systems, Rutgers University
37. Ashis Kumar Dev (1996). ‘Essays in Ownership Structure, Firm Value and Insider Trading’, City University of New York
38. Ashis Kumar Dev (1983). ‘A General Equilibrium Analysis of the Time Structures of Saving, Investment and Financial Decisions’, Dept. of Economics, Stony Brook University
39. Aninda K. Bose (1983). Dept. of Economics, State University of New York at Stony Brook, ‘Equilibrium Analysis of Cyclic Queues’, Dept. of Economics, Stony Brook University