ATHANASSIOS (THANOS) N. AVRAMIDIS

Curriculum Vitæ, June 2013

PERSONAL DATA

Citizen of: United States of America (naturalized) and Greece

Address: School of Mathematics, University of Southampton
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EDUCATION

1989–93 Ph.D. in Industrial Engineering with concentration in Operations Research (Purdue University, USA). May 1993. Thesis Title: "Integrated Variance Reduction Techniques with Application to Stochastic Networks". Advisor: James R. Wilson.

1987–89 M.Sc. in Industrial Engineering (Purdue University, USA). May 1989.

1982–87 Diploma in Mechanical Engineering (University of Thessaloniki, Greece). June 1987.

PROFESSIONAL EXPERIENCE

Lecturer in Operational Research, School of Mathematics, University of Southampton, United Kingdom, October 2007–present.

Invited Researcher / Researcher, Department of Computer Science and Operations Research, Université de Montréal, Montréal, Canada, Aug. 2002–Aug. 2006.

Assistant Professor, School of Operations Research and Industrial Engineering, Cornell University, USA, July 1997–July 2001; Visiting Scholar, Aug. 2001–July 2002.

Senior Consultant, The SABRE Group, Dallas, Texas, USA, and Paris, France, March 93–June 97.

Graduate Student Teaching Assistant, School of Industrial Engineering, Purdue University, 5 semesters, Aug. 1987–Dec. 1992.

PRIZES AND DISTINCTIONS

- INFORMS Simulation Society Outstanding Simulation Publication Award, 2009.
- Outstanding Educator, for "having most influenced" Jorge Iragorri, Merrill Presidential Scholar at Cornell University, 2000.
- First Place, George Nicholson Student Paper Competition, Operations Research Society of America, 1993.

- David Ross Research Fellowship, Purdue Research Foundation, 1990–1992.
- Academic Excellence Fellowship, Greek National Fellowship Institute, 1983–1987.
- Honorable Mention, Mathematics Competition for High School Students, Greek Mathematical Society, 1980.

RESEARCH PROJECTS AND INTERESTS

Design and analysis in Monte Carlo and discrete-event stochastic simulation. Efficiency-improvement methods in simulation. Analysis of Monte Carlo algorithms in finance. Stochastic modeling of industrial systems, service systems, and online communities.

LIST OF PUBLICATIONS

Papers in journals

1. A. N. Avramidis, "Constructing Discrete Unbounded Distributions with Gaussian-Copula Dependence and Given Rank Correlation". *INFORMS Journal on Computing*, to appear.
2. A. N. Avramidis, W. Chan, M. Gendreau, P. L'Ecuyer, and O. Pisacane, "Optimizing Daily Agent Scheduling in a Multiskill Call Center", *European Journal of Operational Research* **200**, 3 (2010), 822–832.
3. A. N. Avramidis, N. Channouf, and P. L'Ecuyer, "Efficient Correlation Matching for Fitting Discrete Multivariate Distributions with Arbitrary Marginals and Normal-Copula Dependence", *INFORMS Journal on Computing* **21**, 1 (2009), 88–106.
4. A. N. Avramidis, W. Chan, and P. L'Ecuyer, "Staffing Multi-Skill Call centers via Search Methods and a Performance Approximation", *IIE Transactions* **41**, 6 (2009), 483–497.
5. N. Channouf, P. L'Ecuyer, A. Ingolfsson, and A. N. Avramidis, "The Application of Forecasting Techniques to Modeling Emergency Medical System Calls in Calgary, Alberta", *Health Care Management Science* **10**, 1 (2007), 25–45.
6. A. Deslauriers, P. L'Ecuyer, J. Pichitlamken, A. Ingolfsson, and A. N. Avramidis, "Markov Chain Models of a Telephone Call Center with Call Blending", *Computers and Operations Research* **34**, 6 (2007), 1616–1645.
7. A. N. Avramidis and P. L'Ecuyer, "Efficient Monte Carlo and Quasi-Monte Carlo Option Pricing under the Variance-Gamma Model", *Management Science* **52**, 12 (2006), 1930–1944.
8. A. N. Avramidis, A. Deslauriers, and P. L'Ecuyer, "Modeling Daily Arrivals to a Telephone Call Center", *Management Science* **50**, 7 (2004), 896–908.
9. A. N. Avramidis and H. Matzinger, "Convergence of the Stochastic Mesh Estimator for Pricing Bermudan Options", *The Journal of Computational Finance* **7**, 4 (2004), 73–91.
10. A. N. Avramidis and J. R. Wilson, "Correlation-Induction Techniques for Estimating Quantiles in Simulation Experiments", *Operations Research* **46**, 4 (1998), 574–591.

11. A. N. Avramidis, K. J. Healy, and R. Uzsoy, "Control of a Batch-Processing Machine: A Computational Approach", *International Journal of Production Research* **36**, 11 (1998), 3167–3181.

12. A. N. Avramidis and J. R. Wilson, "Integrated Variance Reduction Strategies for Simulation", *Operations Research* **44**, 2 (1996), 327–346.

13. A. Avramidis and J. R. Wilson, "A Flexible Method for Estimating Inverse Distribution Functions in Simulation Experiments", *ORSA Journal on Computing* **6**, 4 (1994), 342–355.

14. A. Avramidis and J. R. Wilson, "A Splitting Scheme for Control Variates", *Operations Research Letters* **14**, 4 (1993), 187–198.

15. A. N. Avramidis, K. W. Bauer, and J. R. Wilson, "Simulation of Stochastic Activity Networks using Path Control Variates", *Naval Research Logistics* **38**, 2 (1991), 183–201.

Papers in refereed conference proceedings

1. A. N. Avramidis, "A Cross-Validation Approach to Bandwidth Selection for a Kernel-Based Estimate of the Density of a Conditional Expectation", *Proceedings of the 2011 Winter Simulation Conference*, IEEE Press, 2011, 439–443.

2. A. N. Avramidis, "Fitting Discrete Multivariate Distributions with Unbounded Marginals and Normal-Copula Dependence", *Proceedings of the 2009 Winter Simulation Conference*, IEEE Press, 2009, 452–458.

3. A. N. Avramidis, M. Gendreau, P. L'Ecuyer, and O. Pisacane, "Simulation-Based Optimization of Agent Scheduling in Multiskill Call Centers", *Proceedings of the 2007 Industrial Simulation Conference*, Delft University of Technology, 2007, 255–263.

4. A. N. Avramidis and P. L'Ecuyer, "Modeling and Simulation of Call Centers", *Proceedings of the 2005 Winter Simulation Conference*, IEEE Press, 2005, 144–152.

5. A. N. Avramidis, "Efficient Pricing of Barrier Options with the Variance-Gamma Model", *Proceedings of the 2004 Winter Simulation Conference*, IEEE Press, 2004, 1574–1578.

6. A. N. Avramidis, P. L'Ecuyer, and P.-A. Tremblay, "Efficient Simulation of Gamma and Variance-Gamma Processes", *Proceedings of the 2003 Winter Simulation Conference*, IEEE Press, 2003, 319–326.

7. J. Pichitlamken, A. Deslauriers, P. L'Ecuyer, and A. N. Avramidis, "Modeling and Simulation of a Telephone Call Center", *Proceedings of the 2003 Winter Simulation Conference*, IEEE Press, 2003, 1805–1812.

8. A. N. Avramidis, "Importance Sampling for Multimodal Functions and Application to Pricing Exotic Options", *Proceedings of the 2002 Winter Simulation Conference*, IEEE Press, 2002, 1493–1501.

9. A. N. Avramidis and H. Matzinger, “Convergence of the Stochastic Mesh Estimator for Pricing American Options”, *Proceedings of the 2002 Winter Simulation Conference*, IEEE Press, 2002, 1560–1567.

10. A. N. Avramidis and P. Hyden, “Efficiency Improvements for Pricing American Options with a Stochastic Mesh”, *Proceedings of the 1999 Winter Simulation Conference*, IEEE Press, 1999, 344–350.

11. A. Avramidis and J. R. Wilson, “Correlation-Induction Techniques for Estimating Quantiles in Simulation Experiments”, *Proceedings of the 1995 Winter Simulation Conference*, IEEE Press, 1995, 268–277.

12. A. N. Avramidis and J. R. Wilson, “Integrated Variance Reduction Strategies”, *Proceedings of the 1993 Winter Simulation Conference*, IEEE Press, 1993, 445–454.

13. A. N. Avramidis, “Variance Reduction for Quantile Estimation via Correlation Induction”, *Proceedings of the 1992 Winter Simulation Conference*, IEEE Press, 1992, 572–576.

14. T. N. Avramidis and J. R. Wilson, “Control Variates for Stochastic Network Simulation”, *Proceedings of the 1990 Winter Simulation Conference*, IEEE Press, 1990, 323–332.

15. B. W. Schmeiser, T. N. Avramidis, and S. Hashem, “Overlapping Batch Statistics”, *Proceedings of the 1990 Winter Simulation Conference*, IEEE Press, 1990, 395–398.

16. A. Avramidis and J. R. Wilson, “A Flexible Method for Estimating Inverse Distribution Functions in Simulation Experiments”, *Proceedings of the 1989 Winter Simulation Conference*, IEEE Press, 1989, 428–436.

Papers submitted or in progress

1. A. N. Avramidis, “Revenue Management with Learning of a Market Factor”. Submitted to *European Journal of Operational Research*.

Other publications

1. T. Avramidis, Y. Zinchenko, T. Coleman, and A. Verma, “Efficiency Improvements for Pricing American Options with a Stochastic Mesh: Parallel Implementation”, *Financial Engineering News* **19**, December 2000.

Scientific presentations without proceedings

1. A. N. Avramidis, “Constructing Discrete Multivariate Distributions with Unbounded Marginals and Normal-Copula Dependence”, *ALIO-INFORMS Joint International Meeting*, Buenos Aires, Argentina, June 2010.

2. W. Chan, A. N. Avramidis, M. Gendreau, P. L’Ecuyer, and O. Pisacane, “Optimizing Daily Agent Scheduling in a Multiskill Call Center”, *INFORMS Applied Probability Workshop*, Cornell University, Ithaca, New York, USA, July 2009.

3. W. Chan, A. N. Avramidis, M. Gendreau, P. L'Ecuyer, and O. Pisacane, "Optimizing Daily Agent Scheduling in a Multiskill Call Center", *Optimization Days 2009*, Montreal, May 2009.

4. O. Pisacane, A. N. Avramidis, M. Gendreau, and P. L'Ecuyer, "Agent Scheduling in a Multi-skill Call Center", *Canadian Operational Research Society and Optimization Days 2008 Joint Conference*, Quebec City, Canada, May 2008.

5. N. Channouf, P. L'Ecuyer, and T. Avramidis, "Forecasting Models for Daily and Intraday Arrivals in a Call Center", *Canadian Operational Research Society and Optimization Days 2008 Joint Conference*, Quebec City, Canada, May 2008.

6. A. N. Avramidis, "Efficient Correlation Matching for Fitting Discrete Multivariate Distributions with Arbitrary Marginals and Normal-Copula Dependence", School of Mathematics, University of Southampton, United Kingdom, April 2008.

7. W. Chan, A. N. Avramidis, and P. L'Ecuyer, "Staffing Algorithms for Multi-skill Call Centers", *INFORMS Annual Meeting*, Seattle, USA, Nov. 2007.

8. A. N. Avramidis, "Efficient Monte-Carlo Option-Pricing with the Variance-Gamma Model", and "Modeling Daily Arrivals to a Telephone Call Center", School of Mathematics, University of Southampton, United Kingdom, May 2007.

9. N. Channouf, P. L'Ecuyer, and T. Avramidis, "Models of Arrival Processes in a Call Center", *Optimization Days 2007*, Montréal, Canada, May 2007.

10. T. Avramidis, M. Gendreau, P. L'Ecuyer, and O. Pisacane, "Simulation-Based Optimization of Agent Scheduling in Multiskill Call Centers", *Optimization Days 2007*, Montréal, Canada, May 2007.

11. W. Chan, T. Avramidis, and P. L'Ecuyer, "Single Period Staffing for Multi-skill Call Centers", *Optimization Days 2007*, Montréal, Canada, May 2007.

12. A. N. Avramidis, "Staffing in Multi-Skill Call Centers", *Workshop on Call Centers*, Montréal, Canada, May 2006.

13. O. Pisacane, A. N. Avramidis, W. Chan, M. Gendreau, and P. L'Ecuyer, "Scheduling for Multi-Skill Call Centers", *Canadian Operational Research Society and Optimization Days 2006 Joint Conference*, Montréal, Canada, May 2006.

14. A. N. Avramidis, W. Chan, and P. L'Ecuyer, "Méthodes de Recherche pour l'Affectation du Personnel Polyvalent dans un Centre d' Appels", *Canadian Operational Research Society and Optimization Days 2006 Joint Conference*, Montréal, Canada, May 2006.

15. A. N. Avramidis, W. Chan, and P. L'Ecuyer, "Staffing and Scheduling in Multiskill Call Centers", *EURO Working Group on Stochastic Modelling*, Amsterdam, Netherlands, April 2006.

16. P. L'Ecuyer and A. N. Avramidis, "Efficient Monte Carlo and Quasi-Monte Carlo Option Pricing under the Variance-Gamma Model", invited presentation, *International Conference on Financial Engineering*, Gainesville, Florida, March 2006.

17. T. Avramidis, N. Channouf, and P. L'Ecuyer, "Modeling Arrival Processes to Call Centers with Dependence Structure", *INFORMS Applied Probability Conference*, Ottawa, Canada, July 2005.

18. N. Channouf, T. Avramidis, P. L'Ecuyer, and A. Ingolfsson, "Modeling and Forecasting Arrivals to an Emergency Call Ccenter", *Optimization Days 2005*, Montréal, Canada, May 2005.

19. W. Chan, T. Avramidis, and P. L'Ecuyer, "Affectation du Personnel dans un Centre d' Appels Multi-Skill par une Recherche Randomisée Aidée d'un Modèle de Chaînes de Markov en Temps Continu", *Optimization Days 2005*, Montréal, Canada, May 2005.

20. A. N. Avramidis, A. Deslauriers, P. L'Ecuyer, J. Pichitlamken, and A. Ingolfsson, "Markov Chain Models of a Call Center", *Optimization Days 2004*, Montréal, Canada, May 2004.

21. N. Channouf, P. L'Ecuyer, and T. Avramidis, "Processus NORTA pour la Modélisation des Arrivées dans un Centre d'Appels Téléphonique", *Optimization Days 2004*, Montréal, Canada, May 2004.

22. T. Avramidis, A. Deslauriers, J. Pichitlamken, and P. L'Ecuyer, "Markov Chain Models of a Call Center", *INFORMS Annual Meeting*, Atlanta, USA, Oct. 2003.

23. A. N. Avramidis. "Forecast-Accuracy Effects in Revenue Management", *Revenue Management Workshop*, Montréal, Canada, May 2003.

24. A. N. Avramidis, P. L'Ecuyer, and A. Deslauriers, "Modeling Daily Arrivals to a Telephone Call Center", *Optimization Days 2003*, Montréal, Canada, May 2003.

25. J. Pichitlamken, A. Deslauriers, P. L'Ecuyer, and A. N. Avramidis, "Modeling and Simulation of a Telephone Call Center with Inbound and Outbound Traffic", *Optimization Days 2003*, Montréal, Canada, May 2003.

26. A. N. Avramidis, "Monte Carlo Efficiency Improvement via Adaptive Importance Sampling and Applications to Pricing High-Dimensional Options", Département d' Informatique et de Recherche Opérationnelle, Université de Montréal, Canada, March 2003; July 2002.

27. A. N. Avramidis, "Efficiency Improvements for Pricing American Options with a Stochastic Mesh", Center for Applied Mathematics, Cornell University, Feb. 2000.

28. A. N. Avramidis, "Pricing American Options Using Monte Carlo Methods: Bias Reduction", *INFORMS Annual Meeting*, Seattle, USA, Oct. 1998.

29. A. N. Avramidis, "Efficient Comparison of Yield Management Scenarios Using Simulation with Common Random Numbers", *INFORMS Annual Meeting*, Dallas, USA, Oct. 1997.

30. A. N. Avramidis, "Correlation-Induction Techniques for Estimating Quantiles in Simulation Experiments", School of Operations Research and Industrial Engineering, Cornell University, March 1997.

31. A. N. Avramidis, “Estimation of a Choice Model for Train Demand Forecasting with Application to Schedule Planning”, School of Operations Research and Industrial Engineering, Cornell University, March 1997.

32. A. N. Avramidis and J. R. Wilson, “Correlation-Induction Techniques for Estimating Quantiles in Simulation Experiments”, *INFORMS Annual Meeting*, Atlanta, USA, Nov. 1996.

33. A. N. Avramidis, “Variance Reduction Techniques for Simulation with Applications to Stochastic Networks”, Center for Econometric Research, Tilburg University, The Netherlands, April 1995; School of Industrial and Systems Engineering, Georgia Institute of Technology, March 1995; School of Business, University of Miami, March 1995.

34. A. N. Avramidis and J. R. Wilson, “Estimating Quantiles of Flow Times by Simulation with Correlation-Induction Sampling”, *TIMS/ORSA Conference*, Boston, April 1994.

35. A. N. Avramidis, P. Stanfield, M. A. F. Wagner, and J. R. Wilson, “Flexible Techniques for Simulation Input Modeling”, *SIAM Conference on Simulation and Monte Carlo Methods*, San Francisco, Aug. 1993.

36. A. N. Avramidis, “Variance Reduction Techniques for Simulation with Applications to Stochastic Networks”, Department of Industrial Engineering and Operations Research, University of Massachusetts at Amherst, February 1993; Department of Industrial Engineering and Management Sciences, Northwestern University, Jan. 1993.

37. A. N. Avramidis and J. R. Wilson, “A Splitting Scheme for Control Variates”, *ORSA/TIMS Conference*, San Francisco, Nov. 1992.

38. A. N. Avramidis, “Integrated Variance Reduction Techniques”, *1st Industrial Engineering Research Conference*, Chicago, May 1992.

39. A. N. Avramidis and J. R. Wilson, “Latin Hypercube Sampling and Control Variates for Simulating Stochastic Activity Networks”, *ORSA/TIMS Conference*, Orlando, April 1992.

40. A. N. Avramidis, “Variance Reduction Techniques for Simulation with Applications to Stochastic Networks”, Department of Industrial and Operations Engineering, The University of Michigan, March 1992.

41. A. N. Avramidis and J. R. Wilson, “A Flexible Method for Estimating Inverse Distribution Functions in Simulation Experiments”, *ORSA/TIMS Conference*, Philadelphia, Oct. 1990.

FUNDED RESEARCH

- “Risk and Opportunity Management of Huge-Scale Business Community Cooperation” (with Joerg Fliege and Southampton University IT Innovations). Supporting two PhD students.
- Cornell Theory Center, “Efficiency Improvement for Pricing American Options With A Stochastic Mesh: Parallel Implementation;” Student supported: Yuriy Zinchenko, 9/99–12/99, $10,800.
- Cornell Theory Center, “Monte Carlo Methods for Pricing American Options,” 7/99–8/99, $29,111.

- Cornell Theory Center, "Monte Carlo Methods for Pricing American Options," 7/98–8/98, $27,555.

TEACHING

- School of Mathematics, University of Southampton
  - MATH2013 *Introduction to Operational Research* (Autumn 2007–present; co-taught)
  - MATH3013 *Simulation and Queues* (Spring 2008-2012)
  - MATH6004 *Simulation* (Autumn 2007–present)
  - MATH6004 *Stochastic O.R. Methods* (Autumn 2007; co-taught)
  - Advising MSc summer projects
- School of Operations Research and Industrial Engineering, Cornell University
  - Undergraduate/Master's level:
    * ORIE 581 *Simulation Modeling* (Fall 1999-2000)
    * ORIE 582 *Simulation Analysis* (Fall 1998-2000)
    * ORIE 580 *Simulation Design & Analysis* (co-taught, Fall 1997)
    * ORIE 565 *Applied Financial Engineering* (Spring 1999-2001)
    * ORIE 552 *Revenue Management* (Spring 1999)
  - Ph.D. level:
    * ORIE 610 *Monte Carlo Methods* (Spring 1998)
    * ORIE 729 *Monte Carlo Methods in Computational Finance*, Graduate Seminar (Spring 2001)

STUDENT ADVISING

Student	University	Degree	Date	Role
E. Tye	Southampton	Ph.D.	expected 2014	1
P. Hiscock	Southampton	Ph.D.	expected 2014	1
O. Pisacane	Callabria, Italy	Ph.D.	2008	2
N. Channouf	Montreal	Ph.D.	2008	2
W. Chan	Montreal	M.Sc.	2007	2
S. Mejri	HEC Montreal	M.Sc.	2004	1
M. Freimer	Cornell	Ph.D.	2002	4
P. Hyden	Cornell	Ph.D.	2001	3
D. Chen	Cornell	Ph.D.	2001	4
T-S. Chang	Cornell	Ph.D.	2001	4
J. Alvarez	Cornell	M.Sc.	2000	4

Role Key:

1 Formal co-supervision of the student.

2 Significant involvement with the student's work, but not as formal advisor.

3 Involvement with the student's work, but not as formal advisor.

4 Advisory committee member without significant involvement on scientific issues.

OTHER PROFESSIONAL ACTIVITIES

Editorial and Reviewing Activities

- Member, INFORMS Simulation Society Outstanding Publication Award Committee, 2010-2012 (Chair in 2011).
- Associate Editor, *Management Science* (Stochastic Models and Simulation), 8/98–12/05.
- Reviewer for scientific journals, conferences, and books. Since 1997:
  1. ACM Transactions on Modeling and Computer Simulation
  2. Computational Optimization and Applications
  3. Computers and Industrial Engineering
  4. European Journal of Operational Research
  5. IIE Transactions
  6. IMA Journal of Management Mathematics
  7. The Journal of Computational Finance
  8. INFORMS Journal on Computing
  9. Management Science
  10. Manufacturing and Service Operations Management
  11. Naval Research Logistics
  12. Operations Research
  13. Operations Research Letters
  14. Proceedings of the 8th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC 2008)
  15. Proceedings of the 2010 Winter Simulation Conference
  16. Production and Operations Management
  17. Transportation Science

Other activities

- Fellow of the Higher Education Academy, UK (subject to administrative details).
- Session Chair/Organizer:
  - "Simulation Methods in Financial Engineering" Risk Analysis Track, 2003 Winter Simulation Conference.
  - "Design of Simulation Experiments," Introductory Tutorials, 1999 Winter Simulation Conference.
  - "Stochastic Input Modeling," State-of-the-Art Reviews, 1994 Winter Simulation Conference.
- Consulting. Work done for: Zahakos, Giannone & Chiu, Salomon Smith Barney; SAPTO Industries, Singapore.