DESSISLAVA A. PACHAMANOVA

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EDUCATION

- **Massachusetts Institute of Technology**, Cambridge, MA, USA
  Ph. D. in Operations Research at the Sloan School of Management, June 2002
- **Princeton University**, Princeton, NJ, USA
  A.B. in Mathematics, *Magna cum laude*, June 1997
  Certificate in the Princeton (formerly Woodrow Wilson) School of Public and International Affairs
- **United World College of the Adriatic**, Duino (TS), Italy
  International Baccalaureate, May 1993

EMPLOYMENT AND AFFILIATIONS

- **Mathematics, Analytics, Science and Technology Division, Babson College, Wellesley, MA**
  Professor of Analytics and Computational Finance (tenured), September 2015 – present
  Associate Professor of Operations Research (tenured), September 2008 – August 2015
  Assistant Professor of Operations Research, September 2002 – May 2008
- **Sloan School of Management, Massachusetts Institute of Technology, Cambridge, MA**
  Research Affiliate, August 2019 – present
  Visiting Professor, September 2018 – May 2019
- **Simon Business School, University of Rochester, Rochester, NY**
  Visiting Researcher, February 2022 – February 2024
- **UMass Chan Medical School, University of Massachusetts, Worcester, MA**
  Collaborator – Off Campus, October 2022 – present
- **Optimal Path, LLC, Boston, MA**
  Consultant, August 2004 – present
  Advises clients on matters related to optimization, data mining, statistics, operations, and financial modeling.
- **Goldman, Sachs & Co., New York, NY**
  Associate – Fixed Income, Currency and Commodities, May-August 2000
  Worked with Foreign Exchange and Credit Derivatives strategists. Programmed potential exposure calculation libraries, worked on derivative products pricing and marketing.
- **Westdeutsche Landesbank (WestLB), Duesseldorf, Germany**
  Consultant – Credit Derivatives Department, June-August 1998
  Researched and implemented tools for pricing credit default swaps and credit spread options.

BOOKS

1. **D. A. Pachamanova**, F.J. Fabozzi, F.A. Fabozzi, *Simulation, Optimization and Machine Learning for Finance*, MIT Press, Sep 2025; https://mitpress.mit.edu/9780262049801/simulation-optimization-and-machine-learning-for-finance/
2. **D. A. Pachamanova** and F.J. Fabozzi, *Portfolio Construction and Analytics*, Wiley, Apr 2016; https://onlinelibrary.wiley.com/doi/book/10.1002/9781118656747
3. **D. A. Pachamanova** and F.J. Fabozzi, *Simulation and Optimization in Finance: Modeling with MATLAB, @RISK or VBA*, Wiley, Oct 2010; https://onlinelibrary.wiley.com/doi/book/10.1002/9781118267752
4. F. Fabozzi, P. Kolm, **D. Pachamanova** and S. Focardi, *Robust Portfolio Optimization and Management*, Wiley, May 2007; https://onlinelibrary.wiley.com/doi/book/10.1002/9781119202172

ARTICLES IN REFEREED JOURNALS (IN REVERSE CHRONOLOGICAL ORDER)[1]

1. *M. Canellas, J. Luo, **D. Pachamanova** and G. Perakis, "Fair Online Hospital Diagnostic Service Scheduling: Helping Both Patients and Providers," to appear, *Production and Operations Management*, https://doi.org/10.1177/10591478261476253
2. W. Glover, **D. Pachamanova**, D. Simmons, R. Soldano and E. Alper, "Avoiding "Shiny Objects" and Heeding "Red Flags": A Sensemaking Framework for Emerging Technology Procurement," to appear, *JAMIA Open*
3. **D. Pachamanova**, V. Tilson, and K. Dwyer-Matzky, "AdWords to AdWards: AI as a Coding Partner in Teaching Online Optimization Algorithms," to appear, *INFORMS Transactions on Education*; https://doi.org/10.1287/ited.2025.0147ca
4. W. Glover, O. Ajayi, **D. Pachamanova**, S. Stempek, A. Solorza, S. Moffatt-Bruce, "Clinician Satisfaction with Hospital at Home: A Multilevel Framework," to appear, *Health Care Management Review*, https://doi.org/10.1097/HMR.0000000000000512
5. *K. Dwyer-Matzky, **D. Pachamanova**, and V. Tilson, "Earlier Medically Ready for Discharge Date Entry Associated with Lower Unnecessary Bed Days," *BMC Health Services Research*, 26, 1388, October 2026, https://doi.org/10.1186/s12913-026-15010-2
6. *Z. Bai, **D. Pachamanova**, V. Steblovskaya, and K. Wallbaum, "Target Volatility Strategies: Optimal Rebalancing Boundary for Transaction Cost Minimization," *Financial Markets and Portfolio Management*, 40(2): 245–272, July 2026, https://doi.org/10.1007/s11408-025-00486-5
7. J. Kokina, S. Blanchette Proulx, T. Davenport, and **D. Pachamanova**, "Challenges and Opportunities for Artificial Intelligence in Auditing: Evidence from the Field," *International Journal of Accounting Information Systems* (*IJAIS*), special issue on Advanced Technology and Decision Support for Auditing, 56, December 2025, https://doi.org/10.1016/j.accinf.2025.100734
8. *M.A. Bennouna, **D. Pachamanova**, G. Perakis, and O. Skali Lami, "Learning the Minimal Representation of a Continuous State Space MDP from Transition Data," *Management Science*, 71(6), June 2025, pp. 5162-5184; https://doi.org/10.1287/mnsc.2022.01652
    - Finalist, 2024 INFORMS Service Science Best Cluster Paper Award Competition, Oct 2024
9. S.B. Thakur-Weigold, V. Tilson, **D. Pachamanova**, and S. El Sayed Mohamad, "Humanitarian Supply Chains and Inventory Management: Planning Medical Supply at the International Committee of the Red Cross," *INFORMS Transactions on Education*, 25(3), May 2025, pp. 209-214; https://doi.org/10.1287/ited.2023.0066ca
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11. *M. Canellas, **D. Pachamanova**, G. Perakis, O. Skali Lami, and A. Tsiourvas, "A Granular Approach to Optimal and Fair Patient Placement in Hospital Emergency Departments," *Production and Operations Management*, special issue on Diversity and Inclusion, 24(4), April 2025, pp. 575-589; https://doi.org/10.1177/10591478241240390
12. *D. Li, **D. Pachamanova**, and P. Siricharoensang, "Prescriptive Analytics for Entrepreneurial Growth: Vehicle Routing and Data-Driven Strategic Decision Making for iParty Bangkok Co., Ltd.," *INFORMS Transactions on Education*, 25(2), Jan 2025, pp. 89-174; https://pubsonline.informs.org/doi/full/10.1287/ited.2023.0028ca
13. *M. Canellas, K. Kotkowski, **D. Pachamanova**, G. Perakis, M. Reznik, O. Skali Lami, and A. Tsiourvas, "A Granular View of Emergency Department Length of Stay: Improving Predictive Power and Extracting Actionable Insights", *Annals of Emergency Medicine*, 84(4), 2024, 386-398; https://doi.org/10.1016/j.annemergmed.2024.02.004
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15. V.S.Y. Lo and **D.A. Pachamanova**, "From Meaningful Data Science to Impactful Decisions: The Importance of Being Causally Prescriptive", *Data Science Journal*, 22(8), 2023, pp. 1–18. https://doi.org/10.5334/dsj-2023-008
16. M. Wrobel, A.M. Cahalane, **D. Pachamanova**, K. Leppelmann, S. Silverman, A. Sharma, P. Shyn, M.D. Mercaldo, and F. Fintelmann, "Comparison of expected imaging findings following percutaneous microwave and cryoablation of pulmonary tumors: Ablation zones and thoracic lymph nodes", *European Radiology*, 32(12), 2022, pp. 8171-8181; https://link.springer.com/article/10.1007/s00330-022-08905-1
17. *L. Berk Wheelock and **D. Pachamanova**, "Acceptable Set Topic Modeling", *European Journal of Operational Research*, 299(2), June 2022, pp. 653-673. https://doi.org/10.1016/j.ejor.2021.11.024
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    - 2022 *INFORMS Transactions on Education* Best Paper Award
19. *D. Nersessian and **D. Pachamanova**, "Human Trafficking in the Global Supply Chain: Using Machine Learning to Enhance Understanding of Corporate Disclosures under the UK Modern Slavery Act", *Harvard Human Rights Journal*, 35, Spring 2022; https://harvardhrj.com/wp-content/uploads/sites/14/2022/05/35HHRJ1-Nersessian.pdf
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32. J. Kokina, **D. Pachamanova** and A. Corbett, "The Role of Data Visualization and Analytics in Performance Management: Guiding Entrepreneurial Growth Decisions," *Journal of Accounting Education*, 38, March 2017, pp. 50-62; https://doi.org/10.1016/j.jaccedu.2016.12.005
33. *T. Lester and **D. Pachamanova**, "The Dilemma of False Positives: Making Content ID Algorithms More Conducive to Fostering Innovative Fair Use in Music Creation," *UCLA Entertainment Law Review*, 24(5), May 2017, pp. 52-73
34. N. Gulpinar, **D. Pachamanova** and E. Canakoglu, "A Robust Asset-Liability Management Framework for Investment Products with Guarantees," *OR Spectrum*, 38(4), pp. 1007-1041, 2016; https://doi.org/10.1007/s00291-016-0437-z
35. **D. Pachamanova**, "Mapping Business Problems to Analytics Solutions: Surrogate Experiential Learning in an MBA Introductory Data Science and Business Analytics Course", *INFORMS Transactions on Education*, 16(1), September 2015, pp. 15-22; https://doi.org/10.1287/ited.2015.0146ca
36. *V. Lo and **D. Pachamanova**, "From Predictive Uplift Modeling to Prescriptive Uplift Analytics: A Practical Approach to Treatment Optimization While Accounting for Estimation Risk", *Journal of Marketing Analytics*, 3(2), 2015, pp. 79–95; https://doi.org/10.1057/jma.2015.5
37. **D. A. Pachamanova** and F. J. Fabozzi, "Recent Trends in Equity Portfolio Construction Analytics," *Journal of Portfolio Management*, 40(3), Spring 2014, pp. 137–151
38. N. Gulpinar, E. Canakoglu and **D. Pachamanova**, "Robust Investment Decisions under Disruption in Petroleum Markets**,**" *Computers and Operations Research*, 44(4), 2014, pp. 75-91
39. *N. Gulpinar and **D. Pachamanova**, "A Robust Optimization Approach to Asset Liability Management under Time-Varying Investment Opportunities**,**" *Journal of Banking and Finance*, 37(6), Jun 2013, pp. 2031-2041
40. N. Gulpinar, **D. Pachamanova** and E. Canakoglu ,"Robust Strategies for Facility Location under Uncertainty**,**" *European Journal of Operational Research*, 225(1), Feb 2013, pp. 21-35
41. *P. Benson, M. Casali and **D. Pachamanova**, "The 'Significance' of Optimization: How Statistical Analysis Can Be Your Most Powerful Optimization Strategy," *Search Marketing Standard*, Summer 2012, pp. 16-19
42. *C. Low, **D. Pachamanova** and M. Sim, "Skewness-Aware Asset Allocation: A New Theoretical Framework and Empirical Evidence," *Mathematical Finance*, 22(2), April 2012, pp. 379-410
43. *N. Gulpinar, K. Katata and **D. Pachamanova**, "Robust Portfolio Optimization under Discrete Asset Choice Constraints," *Journal of Asset Management*, 12(1), April 2011, pp. 67-83
44. *A. Nanni, **D. Pachamanova** and J. Shanks, "Even'Star Organic Farm," *IMA Educational Case Journal*, 3(3), 2010
45. *K. Natarajan, **D. Pachamanova** and M. Sim, "Constructing Risk Measures from Uncertainty Sets," *Operations Research*, 57(5), September-October 2009, pp. 1129-1141
46. *M. Elanjian and **D. Pachamanova**, "Is Revenue Sharing Working for Major League Baseball? A Historical Perspective," *The Sport Journal*, 12(2), April 2009
47. S. Ansari, A. Nanni, **D. Pachamanova** and D. Kopcso, "Using Simulation to Model Customer Behavior in the Context of Customer Lifetime Value Estimation," *INFORMS Transactions on Education*, 9(1), September 2008, pp. 1-10

48. B. Tsankov, R. Pachamanov and **D. Pachamanova**, "Resource Planning for Voice over Wireless Both-Way Transmission Media," *Radioengineering*, 17(1), April 2008, pp. 78-81
49. *K. Natarajan, **D. Pachamanova** and M. Sim, "Incorporating Asymmetric Distributional Information in Robust Value-at-Risk Optimization," *Management Science*, 54(3), March 2008, pp. 573-585
50. *D. Bertsimas and **D. Pachamanova**, "Robust Multiperiod Portfolio Management with Transaction Costs," *Computers and Operations Research*, special issue on *Applications of OR in Finance*, 35(1), January 2008, pp. 3-17
51. A. Pachamanov and **D. Pachamanova**, "Optimization of the Light Distribution of Luminaries for Tunnel and Street Lighting," *Engineering Optimization*, 40(1), January 2008, pp. 47-65
52. R. Pachamanov, **D. Pachamanova** and B. Tzankov, "Optimal Resource Allocation in WiMax," *Electrotechnica & Electronica*, 43(1-2), January 2008, pp. 41-47
53. B. Tsankov, R. Pachamanov and **D. Pachamanova**, "Modified Brady Voice Traffic Model for WLAN and WMAN," *Electronics Letters*, 43(23), November 2007, pp. 1295-1297
54. *C. Hicks and **D. Pachamanova**, "Back-Propagation of User Innovations: The Open Source Compatibility Edge," *Business Horizons*, 50(4), July-August 2007, pp. 315-324
55. F. Fabozzi, P. Kolm, **D. Pachamanova** and S. Focardi, "Robust Portfolio Optimization: Recent Trends and New Directions," *Journal of Portfolio Management*, 33(3), Spring 2007, pp. 40-48
56. **D. Pachamanova**, "Introducing Integer Modeling with Excel Solver," special issue of *INFORMS Transactions on Education* on *Effective Use of Software in the Classroom*, 7(1), September 2006, pp. 89-99
57. **D. Pachamanova**, "Handling Parameter Uncertainty in Portfolio Risk Minimization: The Robust Optimization Approach," *Journal of Portfolio Management*, 32(4), Summer 2006, pp. 70-78
58. *C. Hicks and **D. Pachamanova**, "Metamodeling with Perl and AMPL," *Dr. Dobb's Journal: Software Tools for the Professional Programmer*, 30(1), January 2005, pp. 16-22, and *The Perl Journal*, December 2004
59. *D. Bertsimas, **D. Pachamanova** and M. Sim, "Robust Linear Optimization under General Norms," *Operations Research Letters*, 32(6), 2004, pp. 510-516

EDITOR-REFEREED JOURNAL ARTICLES

60. **D.A. Pachamanova**, V. Tilson, K. Dwyer-Matzky, "Machine Learning, Ethics and Change Management in Healthcare: Bridging operations management and predictive analytics concepts to prepare students for the complexities of real-world, data-driven decision-making and process improvement", *ORMS Today*, 48(1), 2021.

WORKING PAPERS

Under Review at Refereed Journals

1. *J. Luo, **D. Pachamanova** and G. Perakis, "Discovering Latent Treatments in Unstructured Observational Data: A Framework for Causal Effect Estimation and Personalized Intervention Design"
2. *G. Findlay, A. Lin, **D. Pachamanova** and G. Perakis, "Holistically Robust Markov Decision Processes: Towards Trustworthy AI-Augmented Clinical Decision Support"
3. *T. Bayley and **D. Pachamanova**, "Scalable by Design: Evidence-Informed Principles for Teaching Large Classes"
4. V. Tilson, **D. Pachamanova** and G. Dobson, "Optimizing Automated Dispensing Cabinets Inventory: A Prescription for Smarter Medication Management?"
    - Finalist, 2026 Decision Sciences Institute Best Case Competition
5. D.J. McConnell, A. Lin, **D.A. Pachamanova**, X. Xie, A. Schwartz, W.D. Miller, A. Eranki, K. Cherabuddi, K. Kim, M. Leming, J.W. Wilson, R.C. Merchant, J. Weber, I. Dumitru, L.H. Le, G. Perakis, "AI-Augmented Dynamic Decision Support for Individualized Sepsis Fluid Resuscitation"

6. *A. Lin, **D. Pachamanova** and G. Perakis, "Dynamic Geographic Cohorting for Healthcare Service Design"
7. *L. Le, A. Lin, **D. Pachamanova**, G. Perakis, and O. Skali Lami, "An Interpretable Risk-Aware Reinforcement Learning Framework for Clinical Decision-Making under Limited Resources"
8. *A. Lin, **D. Pachamanova**, and G. Perakis, "Reinforcement Learning for Clinical Decision Support"
    - Finalist (3 out of 27 submissions), 2025 INFORMS Best Case Competition

Work in Progress

9. W. Glover, **D. Pachamanova**, D. Simmons, and G. O'Connor, "Examining Ambidexterity and New Technological Venture Performance: An Institutional Logics Perspective"
10. *S. Blood, M. Canellas, E. Dickson, I. Goodwin, Y. Guilarte-Walker, J. Hughes, P. Iannelli, M. Kalfopoulos, D. McManus, C. Michaelidis, **D. Pachamanova**, G. Perakis, C. Phillips, J. Sayers, A. Soni, M. Ward, "Operationally Relevant Evaluation of Machine Learning Models for Hospital-at-Home Screening: Balancing Predictive Performance, Operational Efficiency, and Interpretability"

TEACHING/PRACTICE CASES PUBLISHED IN REFEREED JOURNALS (IN REVERSE CHRONOLOGICAL ORDER)[2]

1. **D. Pachamanova**, V. Tilson, and K. Dwyer-Matzky, "AdWords to AdWards: AI as a Coding Partner in Teaching Online Optimization Algorithms," to appear, *INFORMS Transactions on Education*; https://doi.org/10.1287/ited.2025.0147cs
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2. S.B. Thakur-Weigold, V. Tilson, **D. Pachamanova**, and S. El Sayed Mohamad, "Humanitarian Supply Chains and Inventory Management: Planning Medical Supply at the International Committee of the Red Cross," *INFORMS Transactions on Education*, 25(3), May 2025, pp. 215-218; https://doi.org/10.1287/ited.2023.0066cs
    - Winner, 2023 Decision Sciences Institute Case Study Competition, Nov 2023
3. *D. Li, **D. Pachamanova**, and P. Siricharoensang, "Prescriptive Analytics for Entrepreneurial Growth: Vehicle Routing and Data-Driven Strategic Decision Making for iParty Bangkok Co., Ltd.," *INFORMS Transactions on Education*, 25(2), Jan 2025, pp. 175-178; https://doi.org/10.1287/ited.2023.0028cs
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BOOK CHAPTERS

Invited and Peer-Refereed (Blind Review)

1. **D. A. Pachamanova**, N. Gulpinar and E. Canakoglu, "Robust Approaches to Pension Fund Asset-Liability Management under Uncertainty", Chapter 4 in *Optimal Financial Decision Making under*

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Uncertainty, P. Brandimarte, G. Consigli, D. Kuhn (eds.), Springer's International Series in Operations Research and Management Science, 2017, pp. 89-119

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3. T. Lester and **D. Pachamanova**, "Content ID-Algorithmen und das Dilemma der falschen Treffer," in: Lina Brion und Detlef Diederichsen (Ed.): 100 Jahre Copyright, Bibliothek 100 Jahre Gegenwart, Matthes & Seitz Berlin, November 2019. (In German)
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13. P. Kolm, F. Fabozzi, S. Focardi and **D. Pachamanova**, "Quantitative Investment Management Today and Tomorrow," Chapter 5 in Vol. 2 of *Handbook of Finance*, F. Fabozzi (ed.) , J. Wiley & Sons, 2008, pp. 45-52

REFEREED CONFERENCE PROCEEDINGS

1. V. Tilson, S. Xiao, **D. Pachamanova**, K. Dwyer-Matzky, "Assessing the Effect of Capacity Balancing Algorithms for Observation Status Patient Placement on Emergency Department Crowding," *2024 Hawaii International Conference on System Sciences (HICSS) Conference Proceedings*, January 2024
2. *M. Canellas, **D. Pachamanova**, G. Perakis, O. Skali Lami and A. Tsiourvas, "75 Disparities in Emergency Department Wait Times for Female, Transgender Female, Black and Non-English-Speaking Patients," *Annals of Emergency Medicine*, 80(4), S39, October 2022
3. *M. Canellas, K. Kotkowski, **D. Pachamanova**, G. Perakis, O. Skali Lami, and A. Tsiourvas, "172 A Granular View of Emergency Department Length of Stay: Improving Predictive Power and Extracting Actionable Insights," *Annals of Emergency Medicine*, 78(4), S69, October 2021
4. *D. Nersessian and **D. Pachamanova**, "Law, Ethics, and Machine Learning – An Interdisciplinary Analysis of Corporate Reporting on Human Trafficking in the Global Supply Chain," *Symposium on*

Ethical Leadership and Legal Strategies for Post-2020 Organizations, the Tobias Leadership Center, the Center for Legal Studies & Business Ethics, and the American Business Law Journal, March 2021

5. A. Pachamanov and **D. Pachamanova**, "Optimizing the Operating Modes of Roof Photovoltaic Systems on Public Premises," Seventh Balkan Conference on Lighting (BalkanLight) (pp. 1-5). IEEE, September 2018
6. A. Pachamanov and **D. Pachamanova**, "Optimization of the Activities in the Construction and Operation of Small Roof Photovoltaic Power Plants for Municipalities," *Lighting 2017*, Varna, Bulgaria, October 19-21, 2017
7. *A. Nanni, **D. Pachamanova** and J. Shanks, "Even'Star Organic Farm: A Case Study," *Proceedings of the American Accounting Association International Case and Research Conference* (Management Accounting Section), Orange County, CA, January 10-12, 2008
8. T. Snow and **D. Pachamanova**, "What Drives the Demand for In-Vitro Fertilization? A Multivariate Statistical Analysis of the Utilization of Assisted Reproductive Technologies in the United States: 1995-2004," *Fertility & Sterility*, 88, Suppl. 1, p. S252 (Proceedings of the Annual Meeting of the American Society for Reproductive Medicine, ASRM 2007, October 13–17, 2007, Washington, D.C.)
5. R. Pachamanov, **D. Pachamanova** and B. Tsankov, "An Optimization-Based Admission Control Method for IEEE 802.16 Wireless Networks," *IEEE Africon 2007 Conference Proceedings*, Namibia, September 2007
6. A. Pachamanov and **D. Pachamanova**, "An Optimization Model for Control of Tunnel Lighting Using Power Line Carrier Communication," *Balkan Light'05 Conference Proceedings*, Cluj, Romania, June 2005
7. A. Pachamanov, **D. Pachamanova** and D. Bibev, "Control of the Voltage Regime of Electric Power Supply Systems in Industrial Enterprises" and "An Optimization Model for Determining the Optimal Voltage Regime in Industrial Electric Power Supply Systems," *Balkan Conference on Electric Supply and Equipment Conference Proceedings*, Sofia, Bulgaria, October 2003
8. **D. Pachamanova**, B. Pregyov and A. Pachamanov, "Optimization of Artificial Lighting in Road Tunnels," *Balkan Light'02 Conference Proceedings*, Istanbul, Turkey, October 2002
9. A. Pachamanov, B. Pregyov, **D. Pachamanova** and N. Ratz, "Dimming of Artificial Lighting in Threshold and Transition Zones of Road Tunnels," *Balkan Light'02 Conference Proceedings*, Istanbul, Turkey, October 2002
10. V. Todorova, A. Pachamanov and **D. Pachamanova**, "Optimization of the Light Distribution of Luminaries for Threshold and Transmission Zones of Road Tunnels," *Balkan Light'00 Conference Proceedings*, Varna, Bulgaria, June 2000
11. G. Georgieva, A. Pachamanov and **D. Pachamanova**, "Energy-Effective Light Distribution of Luminaries for Block Alleys," *Balkan Light'00 Conference Proceedings*, Varna, Bulgaria, June 2000

SELECTED INVITED TALKS

1. "Towards Trustworthy AI-Augmented Clinical Decision Support: A Holistically Robust, Interpretable Reinforcement Learning Framework," Brandeis University Seminar Series, September 2026
2. "A Causal Framework for Latent Treatments: Evaluating Supporter Communications in Digital Mental Health Services," Enrique, A. Luo, J. Pachamanova, D. Perakis, G. 2026 MSOM Conference, Harvard Business School, Cambridge, MA, June 2026
3. "Dynamic Resource Allocation for Healthcare Service Design with Geographic Cohorting," Lin, A. Pachamanova, D. Perakis, G. 2026 POMS Annual Meeting, Reno, NV, May 2026
4. "AdWords to AdWards: AI as a Coding Partner in Teaching Online Optimization Algorithms," with V. Tilson and K. Dwyer-Matzky, Featured Session: AWARD: 2025 DSI Best Teaching Case Studies Competition Finalists, Orlando, FL, November 2025
5. "The Interplay of Technological Capabilities and Domain-Specific Investors for Health System Adoption of Emerging Technologies," with W. Glover and D. Simmons, 2025 DSI Annual Meeting, Orlando, FL, November 2025

6. “Real-Time Patient Placement in Observation Units: A Capacity-Aware Optimization Approach with Machine Learning,” with K. Dwyer-Matzky and V. Tilson, 2025 DSI Annual Meeting, Orlando, FL
7. “Reinforcement Learning for Clinical Decision Support,” with A. Lin and G. Perakis, 2025 INFORMS Best Case Competition Award Finalist Session, 2025 INFORMS Annual Meeting, Atlanta, GA, October 2025
8. “Addressing Healthcare Provider Burnout: Fair Online Hospital Diagnostic Service Scheduling,” with M. Canellas, J. Luo, and G. Perakis, 2025 MSOM Conference, London, the UK, June 2025; 2025 POMS Conference, Atlanta, GA, May 2025
9. “Emerging Workflow Technologies in Healthcare: Dynamic Resourcefulness for Health System and Vendor Success,” with W. Glover and D. Simmons, 2025 POMS Conference, Atlanta, GA, May 2025
10. “A Data-Driven, Interpretable, Risk-Aware Framework for Clinical Decision-Making under Limited Resources,” with L. Le, A. Lin, G. Perakis, and O. Skali Lami, 2025 POMS Conference, Atlanta, GA, May 2025
11. “A Revenue Management Approach to Fair Hospital Diagnostic Service Scheduling,” with M. Canellas, J. Luo, and G. Perakis, 2024 INFORMS Annual Meeting, Seattle, WA, October 2024
12. “Data-Driven Robust MDPs: an Application to Clinical Treatment Decisions,” with G. Findlay, A. Lin, and G. Perakis, 2024 INFORMS Annual Meeting, Seattle, WA, October 2024
13. “A Granular Approach to Optimal and Fair Patient Placement in Hospital Emergency Departments,” with M. Canellas, G. Perakis, A. Tsiourvas, and O. Skali Lami, OR 2024: Data, Learning and Optimization, Munich, Germany, September 2024
14. “A Granular Approach to Optimal and Fair Patient Placement in Hospital Emergency Departments,” with M. Canellas, G. Perakis, A. Tsiourvas, and O. Skali Lami, 33rd European Conference on Operational Research, Copenhagen, Denmark, July 2024
15. “Assessing the Impact of Hospitalist Compliance with Providing Medically-Ready-for-Discharge Date,” with K. Dwyer-Matzky and V. Tilson, POMS Annual Meeting, Minneapolis, MN, April 2024
16. “Humanitarian Supply Chains and Inventory Management: Planning Medical Supply at the International Committee of the Red Cross”, with S.B. Thakur-Weigold, V. Tilson, and S. El Sayed Mohamad, Featured Session: AWARD: Best Teaching Case Studies Competition, Decision Sciences Institute Annual Conference, Atlanta, GA, November 2023
17. “Assessing the Effect of Capacity Balancing Algorithms for Observation Status Patient Placement on Emergency Department Crowding”, with V. Tilson, S. Xiao, and K. Dwyer-Matzky, DSI Annual Conference, Atlanta, GA, November 2023 and 2024 Hawaii International Conference on System Sciences (HICSS) Conference, Hawaii, January 2024
18. “Assessing the Impact of Hospitalist Compliance with Providing Medically-Ready-for-Discharge Date on Patient Length of Stay”, with K. Dwyer-Matzky and V. Tilson, INFORMS Annual Meeting, Indianapolis, IN, October 2023
19. “A Granular Approach to Optimal and Fair Patient Placement In Hospital Emergency Departments”, with Maureen Canellas, Georgia Perakis, Asterios Tsiourvas, Omar Skali Lami, 33rd Annual POM Conference, Orlando, FL, May 2023; also presented at INFORMS Annual Meeting, Indianapolis, IN, October 2022 and the MSOM Conference, June 2022, Munich, Germany
20. “Optimizing Treatment of Sepsis to Inform Resource Allocation In The ICU”, with Lien Le, Angela Lin, Georgia Perakis, and Omar Skali Lami, INFORMS Annual Meeting, Indianapolis, IN, October 2022
21. “AI-Enhanced Healthcare Task Management”, with W. Glover and Z. Li, INFORMS Annual Meeting, Indianapolis, IN, October 2022
22. “Observation Unit Routing Decisions with Consideration of Capacity”, with V. Tilson and K. Dwyer-Matzky, INFORMS Annual Meeting, Indianapolis, IN, October 2022
23. “Disparities in Emergency Department Wait Times for Female, Transgender Female, Black and Non-English-Speaking Patients,” with M. Canellas, G. Perakis, O. Skali Lami and A. Tsiourvas, American College of Emergency Physicians Research Forum, October 2022

24. “Acceptable Set Topic Modeling”, with L. Berk Wheelock, Future of OR and Analytics Workshop, Indianapolis, IN, October 2022
25. “A Granular View of Emergency Department Length of Stay: Improving Predictive Power and Extracting Actionable Insights”, with M. Canellas, K. Kotkowski, G. Perakis, O. Skali Lami, A. Tsiourvas, American College of Emergency Physicians Research Forum, October 2021
26. “A Real-Time Optimization Approach to Managing Hospital Observation Unit Utilization”, with K. Dwyer-Matzky and V. Tilson, INFORMS Annual Meeting, Anaheim, CA, October 2021
27. “Improving Emergency Department Operations with Predictive-Prescriptive Analytics”, with M. Canellas, G. Perakis, O. Skali Lami, and A. Tsiourvas, INFORMS Annual Meeting, Anaheim, CA, October 2021
28. “Toward Interpretable and More Efficient Offline Reinforcement Learning: Learning Minimal Representations” with A. Bennouna, G. Perakis, and O. Skali Lami, INFORMS Annual Meeting, Anaheim, CA, October 2021
29. “Learning Optimal Sequential Treatments from Clinical Data”, with A. Bennouna, G. Perakis, and O. Skali Lami, INFORMS Healthcare Conference, Virtual, July 2021
30. “Prescriptive Analytics”, with V. Lo, part of the “Essential Data Science for Business” series, National Institute of Statistical Sciences, May 2021
31. “Law, Ethics, and Machine Learning – Big Data Analytics and Corporate Reporting on Human Trafficking in the Global Supply Chain”, with D. Nersessian, Symposium on Ethical Leadership and Legal Strategies for Post-2020 Organizations cohosted by Indiana University, Oklahoma State University, and the *American Business Law Journal*, March 2021
32. “Ethics and AI” panelist, Women in Data Science (WiDS) Central Massachusetts, March 2021
33. “Machine Learning, Ethics, and Change Management: A Data-Driven Approach to Improving Hospital Observation Unit Operations,” with V. Tilson and K. Dwyer-Matzky, INFORMS Case Competition Finalist Session, INFORMS Annual Meeting, November 2020
34. “Learning Optimal Dynamic Treatments: A Novel Reinforcement Learning Approach,” with A. Bennouna, G. Perakis, O. Skali Lami, INFORMS Annual Meeting, November 2020
35. “A Real-Time Optimization Approach to Managing Observation Unit Utilization,” with V. Tilson and K. Dwyer-Matzky, Conference on Health IT and Analytics (CHITA), University of Maryland, October 2020
36. “Structuring Writing Assignments to Improve Analytics Course Outcomes,” with K. Getchell, INFORMS Annual Meeting, Seattle, WA, October 2019
37. “Drivers of Commercial Value for Healthcare Innovations,” with S. Erzurumlu, EURO, Dublin, Ireland, June 2019
38. “Realizing Value from Healthcare Innovation: Text-Augmented Analytical Frameworks for Evaluating Innovations in the Context of Large Patent Portfolios,” based on work with S. Erzurumlu and C. Hicks, MIT, April 2019
39. “Drivers of Commercial Value for Healthcare Innovations,” with S. Erzurumlu, INFORMS Annual Meeting, Phoenix, AZ, November 2018
40. “Music Innovation, Math, Technology, and the Law: Ensuring Algorithms and Processes Are Fair to Independent Music Creators,” with T. Lester, invited poster presentation, Babson Board of Trustees Meeting, May 2017
41. “From Predictive Uplift Modeling to Prescriptive Uplift Analytics,” with V. Lo, Babson Faculty Research Fund Research Day, February 2017
42. “Trends in Portfolio Construction and Analytics,” invited plenary talk, 3rd Industrial-Academic Workshop on Optimization in Finance and Risk Management at the Fields Institute, Toronto, Canada, 6 October 2015
43. “Recent Computational Trends and Opportunities in Equity Portfolio Optimization”, APMOD 2014, University of Warwick, UK, 10 April 2014

44. “R Workshop”, Invited presentation, Business Analytics students’ club, Babson College Graduate School, 5 December, 2013
45. “Constructing Risk Measures from Uncertainty Sets”, Best of Women in ORMS session, INFORMS, 15 October 2012
46. “Tractable Asset-Liability Management”, Session on Optimization in Finance, INFORMS, 16 October 2012
47. “Skewness-Aware Asset Allocation”, International Symposium on Mathematical Programming (ISMP), Berlin, Germany, 21 August 2012
48. “Robust Portfolio Optimization,” Invited talk, Fidelity Investments, Strategic Advisors Group, Boston, MA, 10 June 2009
49. “Robust Portfolio Optimization: Recent Trends and New Directions,” Invited talk, University of Warwick Business School, Coventry, UK, 28 May 2008
50. “Robust Portfolio Optimization: Recent Trends and New Opportunities,” Invited talk, Boston Chapter of QWAFAFEW (Quantitative Work Alliance for Applied Finance, Education and Wisdom), 13 November 2007
51. “Robust Optimization: Applications for Risk Management and New Directions,” Invited talk, Bentley College, MA, USA, 11 October 2007
52. “Constructing Risk Measures from Uncertainty Sets” (with M. Sim and K. Natarajan), Invited talk, ICCOPT-MOPTA Conference on Continuous Optimization, Hamilton, Ontario, Canada, August 2007
53. “Robust Optimization and Portfolio Risk Measures” (with M. Sim and K. Natarajan), Invited talk, EUROXXII Operational Research Conference, Prague, Czech Republic, July 2007
54. “Tractable Parametric VaR Optimization” (with M. Sim and K. Natarajan), Invited talk, INFORMS Annual Meeting, Pittsburgh, November 2006
55. “Introducing Integer Modeling with Excel Solver,” Invited talk, INFORMS Annual Meeting, Pittsburgh, November 2006
56. “A Tractable Probabilistic Approach to VaR Optimization” (with M. Sim and K. Natarajan), Invited talk, EUROXXI Operational Research Conference, Reykjavik, Iceland, July 2006
57. “Robust Portfolio Management and Risk Measures,” Board of Research Talk, Babson College, February 2006
58. “The Profitability of Home Equity Protection” (with M. Allietta and T. Malloy), Invited talk, Financial Services section, INFORMS Annual Meeting, Denver, CO, October 2004
59. “Robust Portfolio Shortfall Minimization” (with R. Lombardi), EURO XX Operational Research Conference, Rhodes, Greece, July 2004
60. “Robust Optimization Applications to Portfolio Management,” Board of Research Talk, Babson College, March 2004
61. “Robust Multiperiod Portfolio Management with Transaction Costs” (with D. Bertsimas), Invited talk, Euro-INFORMS Meeting, Istanbul, Turkey, July 2003
62. "Robust Optimization: Norms, Convexity, and Applications" (with D. Bertsimas and M. Sim), INFORMS Annual Meeting, San Jose, CA, November 2002

MEDIA

- “Exploring Nonconvex Portfolio Optimization” by Jan Shi and Sarah M. Ryan, ISE: Industrial and Systems Engineering at Work, 52 (9), September 2020, pp. 52-53, https://www.iise.org/isemagazine/Issue.aspx?IssueMonth=09&IssueYear=2020
- “Bridging Business and Healthcare to the Benefit of Students” by Bryan Lipiner, Babson Thought & Action, July 20, 2020, https://entrepreneurship.babson.edu/bridging-business-and-health-care/
- “4 Important Trends Happening Now In Business Education” by Nathan Allen, Poets & Quants, January 10, 2018, https://poetsandquantsforundergrads.com/2018/01/10/four-important-trends-happening-now-business-education/

- "Learning What Matters" by John Crawford, Babson Magazine, Winter 2017, http://magazine.babson.edu/2017/02/14/learning-what-matters/
- "Babson Professor Co-Authors Guide To Developing A Modern Investment Analytics Skillset", April 22, 2016, http://www.wdam.com/story/31793623/babson-professor-co-authors-guide-to-developing-a-modern-investment-analytics-skillset
- "Babson Executive Education and Pearson Collaborate to Offer Innovative Business Analytics for Managers in India Program", March 4, 2016, http://blogs.babson.edu/news/2016/03/04/babson-executive-education-and-pearson-collaborate-to-offer-innovative-business-analytics-for-managers-in-india-programme/
- "Babson College Prepares Students for Success with Business Analytics", March 2016, http://www.tableau.com/stories/customer/babson-college-prepares-students-success-data-analytics
- "IBM and Babson College Team Up to Teach Big Data Skills" , September 30, 2014, http://www.ibmbigdatahub.com/video/ibm-and-babson-college-team-teach-big-data-skills and https://www.youtube.com/watch?v=gvBQMzKJ-DY
- "Harnessing the Big Data Explosion", *NextExecutive*, August 28, 2014, http://www.nextexecutive.com/articles/harnessing-the-big-data-explosion
- "Data Management Challenges in Analytics: The Case of Portfolio Management" (with F.J. Fabozzi), *Babson Insight*, August 2014 Issue
- "Babson Offers New Concentrations in Business Analytics for Undergraduate and Graduate Students", *Association of Independent Colleges and Universities in Massachusetts* (*AICUM*) *Weekly Digest*, January 10, 2014
- "Babson Offers New Business Analytics Executive Education Program", *Metro MBA*, February 21, 2014, http://www.metromba.com/2014/02/babson-offers-new-business-analytics-executive-education-program/
- "Babson Offers New Concentration in Business Analytics", *MetroMBA*, January 9, 2014
- "The Age of Too Much Information," Babson Magazine, Fall 2013, http://magazine.babson.edu/2015/12/07/the-age-of-too-much-information/

TEACHING EXPERIENCE

Babson College, MS Programs (Evening/Blended MBA, Two-Year MBA, One-Year MBA, MSBA, MSF)

1. **Designer and instructor, QTM7515 Reinforcement Learning and Sequential Decision Making in Practice (S 2025, S 2026) (offered in blended format)**

   An intensive STEM graduate elective that is a practical hands-on introduction to analytical models for sequential decision-making. Covers reinforcement learning concepts like bandit problems, Markov Decision Processes, dynamic programming, Monte Carlo methods, and temporal difference learning. The main overall objective is to illustrate the interaction and use of numerous analytical techniques necessary to solve actual business problems from diverse business areas (marketing, inventory management, supply chain management, healthcare operations, manufacturing, financial services, and humanitarian logistics).

2. **Instructor, QTM9510 Optimization Methods and Applications (S 2022, F 2023, F2024) (online format)**

   An advanced graduate elective course that is part of the STEM Business Analytics & Machine Learning concentration focused on developing quantitative reasoning and modeling skills through formulating, solving, analyzing, and interpreting optimization models. Software used in the course includes both spreadsheet-based optimization tools (Excel Solver) and optimization modeling languages (Python optimization libraries).

3. **Designer and instructor, QTM9515 Introduction to Data Science and Business Analytics (F 2013-F 2023) (offered in both online and face-to-face formats)**

An intensive graduate-level elective that is a core requirement for the Business Analytics MBA concentration. The course discusses the business analytics lifecycle, and introduces examples of use of predictive analytics techniques in the context of real-world applications from diverse business areas such as database marketing, financial forecasting, and operations. The course utilizes Tableau, R, and Amazon Web Services (AWS).

4. **Instructor, QTM7800 Business Analytics (F 2022-2023) (online format)**

   A core part-time MBA course covering descriptive statistics, regression, decision analysis, and simulation.

5. **Instructor, QTM7200 Data, Models and Decisions (Summer 2015-2018)**

   A core one-year MBA course covering descriptive statistics, hypothesis testing, regression, decision analysis, and simulation.

6. **Instructor, Management Consulting Field Experience (MCFE)**

   (**F2013**) Advisor for three MBA student teams staffed on business analytics management consulting projects for companies in the retail and the technology space.

   (**S2024**) Advisor for an MBA student team staffed on a project for the *Harvard Data Science Review*. The team won the 2024 Babson United MCFE Award for its work.

7. **Designer and instructor, QTM7200 Data, Models and Decisions (S 2013)**

   A core evening MBA course covering descriptive statistics, chi-square tests, regression, decision analysis, and simulation.

8. **Instructor, MBA 7301 Data, Models and Decisions (F 2011-2012)**

   A core full-time MBA course covering descriptive statistics, hypothesis testing, chi-square tests, regression, decision analysis, and simulation.

9. **Instructor/Lead, MBA7330 Designing and Managing Delivery Systems (S 2005-2008):**

   A core full-time MBA course integrating simulation and optimization modeling tools into management, accounting, and finance applications.

10. **Instructor, QTM8400 Data and Decision Modeling (F 2003-2005, S 2004-2009, 2012):**

    A core evening MBA course covering descriptive statistics, sampling, hypothesis testing, regression, decision analysis, simulation, linear and nonlinear optimization.

Babson College, Undergraduate Program

11. **Designer and instructor, QTM3650/QTM2000 Case Studies in Business Analytics (F 2013, F 2017, F2019-2021)**

    An upper level undergraduate elective that is a required course for the Business Analytics undergraduate concentration. The course covers advanced methods for data visualization, logistic regression, decision tree learning methods, clustering, and association rules. Students gain exposure to a variety of software packages for data analysis, including R, IBM SPSS Modeler, and Tableau.

12. **Designer and Instructor, QTM3673 (QTM3625) Financial Modeling with Simulation and Optimization (S 2004, F 2005, S 2007, F 2008, F 2011, S 2013, F 2014-2016):**

    An upper level undergraduate elective focusing on simulation and optimization applications in finance. Topics covered: simulation of important probability distributions, bootstrapping, curve fitting, random walks, linear and nonlinear optimization, genetic algorithms. Applications and examples: asset allocation under different definitions of risk, index tracking, scenario approaches to project and portfolio management, hedging and arbitrage, derivative pricing.

13. **Instructor, QTM2420 Applied Quantitative Modeling (F 2012)**

    An intermediate level core undergraduate course covering applied multiple linear regression, basic time series analysis (including decomposition techniques), linear programming, basic decision analysis, and simulation.

14. **Instructor, QTM1310 Probability and Statistics (S 2003):**

A core undergraduate course covering descriptive analysis, sampling, hypothesis testing, and regression.

15. **Instructor, QTM1300 Quantitative Methods with Calculus (F 2002):**

    A core undergraduate course covering time value of money, linear and nonlinear optimization, calculus, trendlines.

Babson College, Executive Education Center (BEEC)

16. **Faculty director and instructor, Business Analytics for Managers (March 2014-2016)**

    Co-designed, piloted, and continuously updated a two-day open enrollment executive education program in business analytics for mid-level managers. Involved Babson faculty from multiple disciplines as well as practitioners from financial and consulting companies.

17. **Faculty director and instructor, Babson-Pearson Business Analytics Program in India (August 2015 – October 2016)**

    Designed and piloted a 60-credit-hour (13 week) open enrollment executive education online program in business analytics for mid-level managers in India. Worked with instructional designers and involved seven Babson faculty from multiple disciplines as well as practitioners from consulting companies.

18. **Designer and instructor, various modules in Business Analytics for custom programs at Babson Executive Education (Fall 2013 – present)**

    Designed custom modules in business analytics for BEE clients in the manufacturing, insurance, and financial services industries, including modules on addressing specific problems involving customer data.

MIT, Sloan School of Management

19. **Instructor, 15.060 Data, Models, and Decisions (F 2018)**

    Team-taught a core MBA course covering descriptive statistics, sampling, regression, decision analysis, simulation, linear optimization, nonlinear optimization, integer optimization, and applications in supply chain management and operations.

STUDENT ADVISEES

1. **Megan Meany**, MBA, Summer 2024
   Independent Study: "Analysis of Successful Matches for the Big Brothers Big Sisters Organization"
2. **Jessica Ross**, Undergraduate, AY 2022-2023
   Honors Thesis: "Write That Down: Effective Methods of Information Transfer Among Direct Care Staff in Assisted Living Facilities"
3. **Michelle Buslov**, Undergraduate, AY 2019-2020
   Honors Thesis: "Text Analysis of Donation Campaign Descriptions"
4. **Cody Wan**, Undergraduate, Spring-Fall 2018
   Honors Thesis: "Securitization for Pharmaceutical Research"
5. **Jamie Traverso**, Undergraduate, AY 2017-2018
   Honors Thesis: "Evaluating the Impact of Hurricanes Using Social Media: A Methodology"
6. **Julianne Carlin**, Undergraduate, AY 2016-2017
   Honors Thesis: "Using a Multi-Round Deferred Acceptance Algorithm to Solve the Undergraduate College Admissions Problem"
7. **Jessica Farber**, Undergraduate, Spring 2018
   Independent Study: "Introduction to Probability: Society of Actuaries Probability Exam"
8. **Finbar Fleming**, Evening MBA, Fall 2016
   Independent Study: "Using data visualization and predictive analytics with R to identify trends in a local real estate market"

9. **Hannah Haight**, Undergraduate, Summer 2016, Winter 2017
   Independent Study: "The Relationship Millennials Have with Money and Investing"
10. **Eileen Duray**, Blended MBA, Spring 2016
    Independent Study: "A Statistical Evaluation in R of Stock Price Performance vs Board Participation of Women in S&P 500 Companies"
11. **Kripa Shroff**, Undergraduate, Fall 2014 – Spring 2015
    Honors Thesis: "Are Financial Advisors Making a Mistake?"
12. **Ashley Hoffstetter**, Undergraduate, Fall 2013 – Spring 2014
    Honors Thesis: "Balancing an American Definition of Yoga"
13. **Ayush Biyani**, Undergraduate (Salutatorian, Class of 2014), Spring 2013 – Fall 2013
    Honors Thesis: "Predicting the Likelihood of Success of Attempts at Mergers and Acquisitions in India"
14. **Sarah Cullem**, Two-Year MBA (Valedictorian, Class of 2013), Spring 2013
    Independent Study: "Applied Data Mining for Business Decision Making (with R)"
15. **Michael Elanjian**, Undergraduate, Spring 2008 – Fall 2008
    Honors Thesis: "Quantifying Market Size Inefficiencies in Major League Baseball" (Paper published in *The Sport Journal*, 12(2), April 2009)
16. **David Peltier**, Full-time MBA, Summer 2007
    Global Management Program Internship: "Enhancement of the existing backtest package under R and documentation update for Kane Capital Management, Boston, MA"
17. **Thomas Snow**, Evening MBA (employed by EMD Serono, Inc.), Spring 2007
    Independent Study: "What Drives the Demand for In-Vitro Fertilization? A Multivariate Statistical Analysis of the Utilization of Assisted Reproductive Technologies in the United States: 1995-2004" (Paper selected for presentation at the Annual Meeting of the American Society for Reproductive Medicine, ASRM 2007, October 13−17, 2007, in Washington, D.C)
18. **Joseph Spinelli**, Undergraduate, AY 2004-2005
    Honors Thesis: "Quantifying Emerging Trends in the Promotion of "Independent" Recording Artists" (Paper selected for presentation at the Annual Conference of the International Association for the Study of Popular Music (IASPM-US) in Nashville, TN, February 2006)
19. **Ricardo Lombardi**, Undergraduate, AY 2003-2004
    Honors Thesis: "Robust Optimization Applications to Portfolio Risk Management " (Paper presented at the EURO XX Operational Research Conference, Rhodes, Greece, July 2004)

PHD THESIS COMMITTEES

- **Joyce Luo**, Massachusetts Institute of Technology, Cambridge, MA; Expected graduation date: June 2027
- **Angela Lin**, Massachusetts Institute of Technology, Cambridge, MA; Graduation date: August 2026
- **Zefeng Bai**, Bentley University, Waltham, MA; Graduation date: May 2022
- **Lauren Berk**, Massachusetts Institute of Technology, Cambridge, MA; Graduation date: May 2020

INSTITUTIONAL SERVICE AT BABSON COLLEGE

1. **Chair**, **Undergraduate Business Analytics STEM Major Design**, Fall 2022 – Spring 2025
2. **Co-Chair**, **MBA Business Analytics & Machine Learning STEM Concentration Electives Eligibility Committee**, Fall 2022 – Spring 2023
3. **Chair**, **Math & Science Divisional Journal Approval Committee**, Summer 2022 – present
4. Elected member, **Babson Faculty Research Fund**; Fall 2020 – Spring 2023; re-elected Fall 2023 – Spring 2026
   - **Elected Chair**, Fall 2023 – Spring 2026
   - **Elected Co-Chair**, Fall 2021 – Spring 2023

5. Member, **4th Year Tenure-Track Faculty Review Committees**; Spring 2018, Fall 2019, Spring 2020, Fall 2020
6. Member, **MS in Accounting Revision Task Force**; worked with Accounting and Information Systems faculty members to integrate analytics into the Masters in Accounting curriculum at Babson, Spring 2017 – Fall 2017
7. **Co-chair**, **MS in Business Analytics Task Force**, responsible for creating the design of an MS and a certificate program in Business Analytics, Spring 2016. The program was approved by the Faculty Senate and the Board of Trustees in Fall 2016, and launched in Fall 2017
8. Member, **edX committee**, responsible for assessing the implications for faculty of a potential Babson partnership with edX, October 2015 – June 2016
9. **Co-lead**, **market research for certificates and masters programs in analytics**, Babson College, Summer 2015. Conducted survey, followed up with industry practitioners, put together an executive summary of findings for the Graduate Dean's Office, the Graduate Academic Policy Committee, and the Faculty Senate. Co-led open meetings with faculty to determine shape of new programs.
10. **Faculty advisor**, **Weissman Scholars Program**, Fall 2015 – Spring 2017
11. **Co-designer**, **coordinator and student advisor, Business Analytics concentrations** at the undergraduate and MBA levels, Babson College, Fall 2012 – present
12. **Faculty advisor** (by invitation from the students), **MBA Business Analytics Club** (Fall 2013-Spring 2021) and **Undergraduate Data Analytics Club** (Fall 2014-Spring 2017)
13. **Elected faculty representative on the Graduate Academic Policy Committee** (GAPC), Fall 2012-Spring 2015; reelected for Fall 2015 - Spring 2018
14. **Chair, Data Analytics Task Force**, responsible for studying the placement and market demand for graduates of analytics programs and coming up with a recommendation to the Provost of Babson College, Summer 2012
15. Member, **Math & Science curriculum redesign committee**, Spring 2012-Fall 2012
16. **Co-designer**, **Math & Science undergraduate core**, Summer 2012
17. Member, **Math & Science faculty recruiting committee**, Summer 2012-Spring 2013
18. Member, **Math & Science scheduling committee**, Fall 2012 – present
19. Member of the **Honors Program Council**, F 2011 – F 2013
20. Member of the **interdisciplinary task force Entrepreneurial Thought and Action for a Better World**, responsible for producing a conceptual framework and a report with guidelines for integrating the concepts of Entrepreneurial Thought and Action and People, Planet and Profits into the Babson curriculum, Summer 2009
21. **Elected division representative on the Faculty Senate**, F 2008 – S 2010
    - Member of the Student Opinion Survey Task Force, responsible for investigating the issue of moving student opinion surveys online, F 2008 – F2009
22. **Elected member of the Graduate Decision Making Board** (GDMB), F 2005–S 2008
    - GDMB representative on the Graduate Electives Task Force, F 2006–S 2006
    - Fast Track liaison on the GDMB, F 2007 – S 2007
    - GDMB representative on the Course Equivalencies Revision Task Force, F 2007–S 2008
    - Participant in the All-Program Calendar Coordination Task Force, F 2007–S 2008
23. **Faculty advisor** for two teams of MBA students, **Babson Consulting Alliance Program** (BCAP), F 2007 – S 2008
24. Math/Science Division representative on the **Liberal Arts Advisory Committee** to the Undergraduate DMB, S 2007
25. **Elected member of the Babson College Board of Research**, F 2004–F 2005
26. Undergraduate student **advisor for the Computational Finance concentration**, S 2004 – present
27. Faculty representative on the **Academic Honesty and Integrity Committee**, S 2005
28. Faculty representative on the **Undergraduate Judicial Board**, S 2005
29. Member of the **Math/Science Division Concentrations Task Force**, F 2006 – present

30. Member of the **Math/Science Division Electives Task Force**, F 2002 – present
31. Member of the **Math/Science Division MBA Curriculum Task Force**, F 2003 – present
32. **Coordinator** of the **Math/Science Division Colloquium Series** (F 2003–S 2006) and the **Babson/Bentley Colloquium Series** (F 2007–S 2008)

PROFESSIONAL ACTIVITIES

- Member of INFORMS (Institute for Operations Research and Management Science) and ASA (American Statistical Association)
- Member, **2026 INFORMS Edelman Award Committee**, October 2025 – April 2026
- Member, **2025 INFORMS Edelman Award Committee**, October 2024 – April 2025
    - **Verification team lead** and **coach**, Google Cloud / Lufthansa Group team
- Member, **2024 INFORMS Edelman Award Committee**, October 2023 – April 2024
    - **Verification team member** and **coach**, Aldi Süd team
- **Member**, **Advisory Board**, ***Harvard Data Science Review*** (MIT Press), 2023 – present
- **Chair**, **2023 INFORMS Case Competition**, December 2022 – October 2023
- **Area Editor (Cases)**, *INFORMS Transactions on Education*, 2020 – present
- **Associate Editor**, *Journal of Financial Data Science*, 2022 – present
- **Associate Editor**, *IMA Journal of Management Mathematics*, 2022 – present
- **Member, Search Committee**, Editor-in-Chief, *INFORMS Transactions on Education*, January – July 2021
- **Judge**, 2022 INFORMS Case Competition, December 2021 – October 2022
- **Member**, **INFORMS Professional Development Committee**, Fall 2013 – present
- **Member**, **INFORMS Pro Bono Committee**, January 2019 – January 2022
- **Member of the organizing committee and judge**, 2020 INFORMS OR & Analytic Student Team Competition, June 2019 – Apr 2020; Problem posed by Bayer
- **Judge**, 2019 Elwood S. Buffa Doctoral Dissertation Award, Decision Sciences Institute
- **Member of the organizing committee and judge**, 2019 INFORMS OR & Analytic Student Team Competition, June 2018 – Apr 2019; Problem posed by General Motors
- **Judge**, 2018 INFORMS OR & Analytic Student Team Competition, Dec 2017 – Apr 2018; Problem posed by Principal Investments
- **Guest editor**, special issue of *The Engineering Economist* on Nonconvex Portfolio Optimization, June 2018-June 2019
- **Reviewer and designer**, INFORMS Continuing Education courses, 2013-2014
- **Member**, **Organizing Committee**, 11th Applied Mathematical Optimization and Modeling (APMOD) Conference, April 9-11, 2014, University of Warwick, UK
- **Elected Secretary of the Financial Services Section of INFORMS** (2006-2009)
- **Member of the Financial Services Section of INFORMS Advisory Board**, 2009-2010
- **Student paper competition judge**, Financial Services Section of INFORMS, 2005-2009
- **Session chair**, Financial Services Stream, INFORMS Annual Meetings in 2004, 2006, 2008
- **Session organizer and chair**, Second Mathematical Programming Society International Conference on Continuous Optimization, August 2007
- **Fellow**, Stephen D. Cutler Center for Investments and Finance at Babson College, Fall 2012 - present
- **Member of the editorial boards** of *International Journal of Operations Research and Information Systems* (2008-2019) and *Frontiers in Mathematical Finance* (2014-present)
- Ad-hoc **referee** for *Algorithmic Finance, Annals of Operations Research*, *Computers and Operations Research*, *Computers in Biology and Medicine*, *Constraints, Data Mining and Knowledge Discovery,*

Decision Sciences Journal of Innovative Education, Discover AI, Discover Sustainability, European Journal of Operational Research, Expert Systems with Applications, Financial Management, Financial Review, Frontiers In Applied Mathematics and Statistics, Frontiers in Digital Health, HICSS, IEEE Transactions on Systems, Man and Cybernetics: Systems, IMA Journal of Management Mathematics, INFORMS Journal on Data Science, *INFORMS Journal on Optimization*, *INFORMS Transactions on Education*, *International Journal of Information Technology & Decision Making, International Journal of Operations Research and Information Systems, International Journal of Risk Assessment and Management, Journal of Banking and Finance, Journal of Economic Dynamics and Control, Journal of Emerging Technologies in Accounting, Journal of the Operational Research Society, Journal of Optimization Theory and Applications, Journal of Portfolio Management*, *Management Science*, *Mathematical and Computer Modelling*, *Mathematical Finance*, *Mathematical Programming*, *New England Journal of Medicine (NEJM) AI*, *Omega*, *Operations Research*, *Optimization Letters*, *OR Spectrum, Quantitative Finance, Risk Analysis, Scientific Reports, SIAM Journal on Optimization and Control*, *Socio-Economic Planning Sciences, Technological Forecasting and Social Change, The Engineering Economist, The Joint Commission Journal on Quality and Patient Safety, The Quarterly Review of Economics and Finance, 4OR*

- Ad-hoc **reviewer** for MITACS Accelerate (Canadian Research Organization) and NWO (Netherlands Organisation for Scientific Research)

AWARDS AND HONORS

- **Finalist**, **2026 Decision Sciences Institute Best Case Study Competition**, November 2026 (with V. Tilson)
- **Deans Award** in recognition of excellence in teaching, Babson College**,** September 2026
- **Finalist**, **2025 Decision Sciences Institute Best Case Study Competition**, November 2025 (with V. Tilson and K. Dwyer-Matzky)
- **Finalist**, **2025 INFORMS Best Case Competition**, October 2025 (with A. Lin and G. Perakis)
- **Faculty Service Award** in recognition of outstanding service to Babson College**,** September 2025
- **Finalist**, **2024 INFORMS Service Science Best Cluster Paper Award Competition**, October 2024 (with M.A. Bennouna, G. Perakis, and O. Skali Lami)
- **Winner**, **2023 Decision Sciences Institute Best Case Study Competition**, November 2023 (with S.B. Thakur-Weigold, V. Tilson and S. El Sayed Mohamad)
- ***INFORMS Transactions on Education* 2022 Best Paper Award**, awarded for paper voted best publication in the journal in 2022, October 2023 (with V. Tilson and K. Dwyer-Matzky)
- **Winner**, **2021 INFORMS Data Mining Section Best Paper Competition**, November 2021 (with L. Berk Wheelock)
- **Zwerling Family Endowed Term Chair**, Babson College, September 2021 – May 2026; renewed, September 2026 – May 2031
- **Finalist**, **Best Interdisciplinary Paper Award**, Academy of Legal Studies in Business, August 2021 (with D. Nersessian)
- **Winner**, **INFORMS Case Competition**, November 2020 (with V. Tilson and K. Dwyer-Matzky)
- Named among **Top 50 Undergraduate Professors** by Poets & Quants, November 2018, https://poetsandquantsforundergrads.com/2018/11/13/2018-top-50-undergraduate-professors-dessislava-pachamanova-babson-college/
- **Zwerling Family Endowed Research Scholar**, September 2015 – May 2018; renewed for September 2018 – May 2021
- **Babson Research Scholar**, Dean's award of lower teaching load to recognize outstanding research contributions, September 2012 – May 2015
- Two-time recipient of the **Faculty Scholarship Award**, awarded annually by the Babson Faculty Research Fund to 4-5 faculty members for substantive contributions to their field and to Babson College over the previous three years, September 2009 and September 2013
- **Deans' Teaching Award** in recognition of excellence and innovation in teaching in the Graduate School, Babson College, September 2008

- **Zwerling Term Chair**, Babson College, September 2006 – May 2011
- **Best Presentation Award** of the Financial Services Section of INFORMS, INFORMS Annual Meeting, Denver, CO, October 2004
- Nominated and appointed to the **Young Researcher Roundtable**, INFORMS Conference on OR/MS Practice, April 25-27, 2004, Cambridge, MA
- **Middleton Miller Prize** of the Math Department at Princeton for best independent research work during junior and senior year, June 1997
- **Sigma Xi Honorary Research Society Book Award** for best thesis in Mathematics, Princeton, 1997
- **Summer Institute for Mathematical Sciences Fellowship**, University of California at Berkeley, 1996

RESEARCH GRANTS

- MIT Health Systems Innovation Grants, June 2021 – August 2025
- Co-PI, Babson Faculty Research Fund Summer Stipend Grant, 2019
- Co-PI, MIT Health Systems Innovation Grant, June 2019 – August 2020
- Co-PI, 2016 PwC INQuires Grant, Business Analytics, June 2016 – March 2017
- Babson Faculty Research Fund Summer Stipend ($10,000), Summer 2019
- Babson Board of Research Course Release Grant, Spring 2003, Fall 2003, Fall 2008
- Babson Faculty Research Fund Summer Stipend ($7,500), Summer 2007, 2012
- Babson Faculty Research Fund Major Award (3 Course Releases), Fall 2006
- Gill/Babson Board of Research Grant ($25,000), October 2003

OTHER

- *Computer Skills*: R, Python, MATLAB, Perl, AMPL, IBM SPSS Modeler, Tableau, Alteryx, JMP, Minitab, SAS, MS Excel, MS Access, Visual Basic, @RISK
- *Languages*: fluent in English and Bulgarian; working knowledge of German, Italian and Russian