Ali Eshragh *Curriculum Vitae*

Contact Information

Carey Business School, Johns Hopkins University Ali.Eshragh@jhu.edu
Washington DC, United States

Website

Homepage **Google Scholar** **LinkedIn**

Current Position

Associate Professor in Business Analytics and Operations Management
Carey Business School, Johns Hopkins University
Washington DC, United States

Research Affiliation

Institute for Data Intensive Engineering & Science Faculty Member
Johns Hopkins University, United States

International Computer Science Institute Affiliated Researcher
University of California at Berkeley, United States

Research Interests

Advanced Computing: Data Processing and Analysis Techniques

Artificial Intelligence: Reinforcement Learning

Probabilistic Operations Research: Markov Decision Processes

Business Analytics: Supply Chain Analytics and Demand Forecasting

Education

Johns Hopkins University, USA *Expected: August 2027*
M.Sc. in Artificial Intelligence, Whiting School of Engineering

University of South Australia, Australia *August 2011*
Ph.D. in Applied Mathematics, Stochastic Operations Research
Minor: Applied Probability and Optimization
Thesis Topic: Hamiltonian Cycles and the Space of Discounted Occupational Measures

Sharif University of Technology, Iran *January 2004*
M.Sc. in Industrial Engineering, Stochastic Operations Research
Minor: Statistical Modeling and Stochastic Optimization
GPA: 89.0%
Thesis Topic: Application of Decision on Beliefs in Response Surface Methodology

Sharif University of Technology, Iran *September 2001*
B.Sc. in Industrial Engineering, Stochastic Operations Research
Minor: System Analysis
GPA: 87.5%
Thesis Topic: A New Approach to Distribution Fitting: Decision on Beliefs

Training and Certificates

Computer Science Department, Stanford University *Expected: August 2025*
Machine Learning
8-week course

Computer Science Department, Stanford University *March 2025*

Reinforcement Learning
10-week course
Overall Grade: 100%

School of Computer Science, Carnegie Mellon University *November 2021*

Machine Learning: Fundamentals and Algorithms
10-week online course
Overall Grade: 100%

DeepLearning.AI, Coursera *September 2020*

Deep Learning Specialization — 5-month online program including:

- Neural Networks and Deep Learning
- Improving Deep Neural Networks
- Structuring Machine Learning Projects
- Convolutional Neural Networks
- Sequence Models

Overall Grade: 100%

Honors and Awards

- **Staff Excellence Award — Values Award Category**, University of Newcastle, *2020*.
- **Australian Society for Operations Research Rising Star Award**, Australia, *2017*.
- **Teaching Excellence and Contribution to Student Learning Team Award — Runner-up**, University of Newcastle, *2016*.
- **South Australia Science Excellence Award — PhD Research Excellence (Physical Sciences, Mathematics, and Engineering) — Runner-up**, Government of South Australia, Australia, *2011*.
- **B.H. Neumann Prize for the Best Student Talk — Runner-up**, 54^{th} Annual Australian Mathematical Society Conference, Australia, *2010*.
- **Endeavour International Postgraduate Research Scholarship Award**, Australian Government, Australia, *2008–2011*
  (Covered Tuition Fees, Family Insurance, and a Tax-Free Living Allowance of AU$27,222 per annum).
- **Best Paper Award**, 5^{th} International Industrial Engineering Conference, Iran, *2005*.
- **Best Bachelor Final Project Award**, R&D Department of Schlumberger Company (US$1,000), France, *2002*.
- **Ranked First** (out of approximately 5000 entrants) in the National Masters Entrance Exam of Iranian Universities, *2001*.
- **Best Student Award**, Sharif University of Technology, Iran, *2001*.

Research Grants: AU$2,752,088 (equivalent to US$1,987,407) Total Awarded Funds

- **Lead-Chief Investigator**, Large Markov Decision Processes and Combinatorial Optimization, *Australian Research Council (ARC) Discovery Project*, AU$383,000, *2022–2024*
  (Fully awarded but withdrawn due to departure from Australia to Johns Hopkins University in the United States).
- **Lead-Chief Investigator**, Stochastic Analysis of the COVID-19 Population, *ARC Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS)*, AU$6,890, *2020–2022*.
- **Chief Investigator**, Big Time Series Data and Randomized Numerical Linear Algebra, *ACEMS*, AU$11,580, *2020*.
- **Chief Investigator**, Approximate Solutions to Large Markov Decision Processes, *ACEMS*, AU$12,000, *2019*.
- **Chief Investigator**, The Higher Education Participation and Partnerships Grant, *Australian Government, Department of Education and Training*, AU$161,151, *2016*.
- **Chief Investigator**, The Industrial Transformation Training Centre for Food and Beverage Supply Chain Optimization, *ARC Industrial Transformation Training Centre*, AU$2,119,872, *2016–2020*.
- **Lead-Chief Investigator**, Rapidly Mixing Markov Chains and the Hamiltonian Cycle Problem, *The Priority Research Centre for Computer-Assisted Research Mathematics and its Applications (CARMA)*, AU$30,000, *2014–2016*.
- **Lead-Chief Investigator**, The New Staff Grant, *University of Newcastle*, AU$10,000, *2014*.
- **Chief Investigator**, Application of Simulation-Based Optimization Algorithms in Sustainable Logistic and Supply Chain Management, *School of Management, University of South Australia*, AU$10,000, *2011*.
- **Chief Investigator**, Application of Non-Smooth Optimization Methods for Hamiltonian Cycle Problem, *Barbara Hardy Institute, University of South Australia*, AU$3,500, *2010*.
- **Lead-Chief Investigator**, An International Travel Grant, *University of South Australia*, AU$4,095, *2009*.

Research Outcomes: Submitted and Working Papers

- **A. Eshragh**, Y. Li, L. Yerbury, F. Roosta, and M.W. Mahoney, Efficient Leverage Score Subsampling Methods with Applications in Large-Scale Energy Market Demand Forecasting, *Work in Progress*.
- **A. Eshragh**, A. Fattahi, Y. Li, and K. Wang, Bridging Data-Driven Learning and Optimization for Efficient Decision-Making in Large-Scale Uncertain Models, *Work in Progress*.
- **A. Eshragh**, Y. Li, K. Wang, and B. Xiang, Decision-Focused Offline Deep Reinforcement Learning for Healthcare Policy Optimization, *Work in Progress*.
- A. Fattahi, **A. Eshragh**, B. Aslani, and M. Rabiee, Ranking Vectors Clustering: Theory and Applications, *Submitted to Operations Research*, 2025.

- G. Dunn, H. Charkhgard, **A. Eshragh**, and E. Stojanovski, Double Traversals in Optimal Picker Routes for Warehouses with Multiple Blocks, *Submitted to Operations Research Letters*, 2025.
- **A. Eshragh**, S. Alizamir, K. Bandara, F. Iravani, and B. Fahimnia, Understanding Online Consumer Behavior in E-commerce Supply Chains: An Interpretable Machine Learning Approach, *Revised and Resubmitted to Transportation Research Part E*, 2024.
- E. Harris, **A. Eshragh**, B.P. Lamichhane, J. Shaw-Carmody, and E. Stojanovski, Big Data, Leverage Scores, and Minimum Volume Covering Ellipsoids: Bridging Theory with Practice, *arXiv preprint arXiv:2411.03617*, 2025.
- G. Dunn, H. Charkhgard, **A. Eshragh**, and S. Mahmoudinazlou, Deep Reinforcement Learning for Picker Routing Problem in Warehousing, *arXiv preprint arXiv:2402.03525*, 2024.
- V. Dewanto, G. Dunn, **A. Eshragh**, M. Gallagher, and F. Roosta, Average-reward Model-free Reinforcement Learning: A Systematic Review and Literature Mapping, *arXiv preprint arXiv:2010.08920*, 2023.
- **A. Eshragh**, G. Livingston, T.M. McCann, and L. Yerbury, Rollage: Efficient Rolling Average Algorithm to Estimate ARMA Models for Big Time Series Data, *arXiv preprint arXiv:2103.09175*, 2023.
- **A. Eshragh**, O.D. Pietro, and M. Saunders, Toeplitz Least Squares Problems, Fast Algorithms, and Big Data, *arXiv preprint arXiv:2112.12994*, 2021.

Research Outcomes: Published Papers

- **A. Eshragh**, M.P. Skerrittd, B. Salvye, and T. McCallum, Optimal Experimental Design for Partially Observable Pure Birth Processes, *Forthcoming in PLOS-One*, 2025.
- S. Mahmoudinazlou, A. Sobhanan, H. Charkhgard, **A. Eshragh**, and G. Dunn, Deep Reinforcement Learning for Dynamic Order Picking in Warehouse Operations, *Computers and Operations Research*, 182:107112, 2025.
- H. Charkhgard, H.R. Moghaddam, **A. Eshragh**, and S. Mahmoudinazlou, Solving Hard Bi-Objective Knapsack Problems Using Deep Reinforcement Learning, *Discrete Optimization*, 55:100879, 2025.
- A.S. Altamiranda, H. Charkhgard, I. Dayarianb, **A. Eshragh**, and S. Javadia, Learning to Project in Multi-objective Binary Linear Programming, *Optimization Letters*, 18(9):2051-2078, 2024.
- **A. Eshragh**, F. Roosta, A. Nazari, and M. Mahoney, LSAR: Efficient Leverage Score Sampling Algorithm for the Analysis of Big Time Series Data, *Journal of Machine Learning Research*, 23:1-36, 2022.
- **A. Eshragh**, B. Ganim, T. Perkins, and K. Bandara, The Importance of Environmental Factors in Forecasting Australian Power Demand, *Environmental Modeling & Assessment*, 27:1–11, 2021.
- M. Abolghasemi, J. Hurley, **A. Eshragh**, and B. Fahimnia, Demand Forecasting in the Presence of Systematic Events: Cases in Capturing Sales Promotions, *International Journal of Production Economics*, 230:107892, 2020.

- **A. Eshragh**, S. Alizamir, P. Howley, and E. Stojanovski, Modeling the Dynamics of the COVID-19 Population in Australia: A Probabilistic Analysis, *PLOS-One*, 15(10):e0240153, 2020.
- **A. Eshragh**, R. Esmaeilbeigi, and R. Middleton, An Analytical Bound on the Fleet Size in Vehicle Routing Problems: A Dynamic Programming Approach, *Operations Research Letters*, 48(3):350-355, 2020.
- **A. Eshragh**, J. Filar, T. Kalinowski, and S. Mohammadian, Hamiltonian Cycles and Subsets of Discounted Occupational Measures, *Mathematics of Operations Research*, 45(2):403-795, 2020.
- H. Charkhgard and **A. Eshragh**, A New Approach to Select the Best Subset of Predictors in Linear Regression Modeling: Bi-Objective Mixed Integer Linear Programming, *ANZIAM Journal*, 62(1):64-75, 2019.
- B. Fahimnia, H. Davarzani, and **A. Eshragh**, Performance Comparison of Three Meta-Heuristic Algorithms for Planning of a Complex Supply Chain, *Computers and Operations Research*, 89:241-252, 2018.
- R. Esmaeilbeigi, **A. Eshragh**, R. Garcia-Flores, and M. Heydar, Whey Reverse Logistics Network Design: A Stochastic Hierarchical Facility Location Model, *Proceedings of the 22^{nd} International Congress on Modeling and Simulation*, Hobart, Australia, 2017.
- K. Avrachenkov, **A. Eshragh**, and J. Filar, On Transition Matrices of Markov Chains Corresponding to Hamiltonian Cycles, *Annals of Operations Research*, 243(1):19-35, 2016.
- N.G. Bean, **A. Eshragh**, and J.V. Ross, Fisher Information for a Partially-Observable Simple Birth Process, *Communications in Statistics: Theory and Methods*, 45(24):7161-7183, 2016.
- N.G. Bean, R. Elliott, **A. Eshragh**, and J.V. Ross, On Binomial Observation of Continuous-Time Markovian Population Models, *Journal of Applied Probability*, 52:457-472, 2015.
- B. Fahimnia, J. Sarkis, A. Choudhary, and **A. Eshragh**, Tactical Supply Chain Planning Under a Carbon Tax Policy Scheme: A Case Study, *International Journal of Production Economics*, 164:206-215, 2015.
- B. Fahimnia, J. Sarkis, and **A. Eshragh**, A Trade-off Model for Green Supply Chain Planning: A Leanness-Versus-Greenness Analysis, *OMEGA*, 54:173-190, 2015.
- **A. Eshragh**, Fisher Information, Stochastic Processes, and Generating Functions, *Proceedings of the 21^{st} International Congress on Modeling and Simulation*, Gold Coast, Australia, 2015.
- **A. Eshragh** and J. Filar, Hamiltonian Cycles, Random Walks, and the Geometry of the Space of Discounted Occupational Measures, *Mathematics of Operations Research*, 36(2):258-270, 2011.
- **A. Eshragh**, J. Filar, and M. Haythorpe, A Hybrid Simulation-Optimization Algorithm for the Hamiltonian Cycle Problem, *Annals of Operations Research*, 189:103–125, 2011.
- K. Avrachenkov, **A. Eshragh**, and J. Filar, Markov Chains and Hamiltonian Transition Matrices, *Proceedings of the 5^{th} International ICST Conference on Performance Evaluation Methodologies and Tools*, Paris, France, 2011.

- **A. Eshragh**, J. Filar, and A. Nazari, A Projection-Adapted Cross Entropy (PACE) Method for Transmission Network Planning, *Energy Systems*, 2(2):189-208, 2011.
- **A. Eshragh** and M. Modarres, A New Approach to Distribution Fitting: Decision on Beliefs, *Journal of Industrial and Systems Engineering*, 3(1):56-71, 2009.
- H. Mahlooji, **A. Eshragh**, H. Abouee Mehrizi, and N. Izady, Uniform Fractional Part: A Simple Fast Method for Generating Continuous Random Variates, *Scientia Iranica*, 15(5):613-622, 2008.

Talks in International Conferences

- An Efficient Algorithm for Approximating ARMA Model Fitting in Large-scale Time Series Data, *The 43rd International Symposium on Forecasting (ISF)*, Virginia, USA, 2023.
- Efficient Leverage Score Sampling Algorithm for the Analysis of Big Time Series Data, *The 2021 INFORMS Annual Meeting*, Anaheim/Online, USA, 2021.
- A New Fast Algorithm to Approximate the Leverage Scores of Big Time Series Data: Theory and Application, *The 20th INFORMS Applied Probability Society Conference*, Brisbane, Australia, 2019.
- Optimal Experimental Design for a Partially Observable Simple Birth Process, *The 2018 INFORMS Annual Meeting*, Phoenix, USA, 2018.
- A New Approach to Select the Best Subset of Predictors in Linear Regression Modeling, *The 61st Australian Mathematical Society Conference*, Sydney, Australia, 2017.
- Fisher Information, Stochastic Processes and Generating Functions, *The 18th INFORMS Applied Probability Conference*, Istanbul, Turkey, 2015.
- Fisher Information, Stochastic Processes and Generating Functions, *The 21st International Congress on Modeling and Simulation*, Gold Coast, Australia, 2015.
- Approximating the Fisher Information for a Partially-Observable Growing Population, *ICERM Workshop on Challenges in 21st Century Experimental Mathematical Computation*, Providence, USA, 2014.
- Random Walks, Polyhedra and Hamiltonian Cycles, *CARMA Workshop on Optimization, Nonlinear Analysis, Randomness & Risk*, Newcastle, Australia, 2014.
- On Binomial Observations of Continuous-Time Markov Chains, *The 57th Australian Mathematical Society Conference*, Sydney, Australia, 2013.
- Fisher Information for a Partially-Observable Simple Birth Process, *Australia and New Zealand Applied Probability Workshop*, Brisbane, Australia, 2013.
- Optimal Observation Times for a Partially-Observable Pure Birth Process, *The 26th European Conference on Operational Research*, Rome, Italy, 2013.
- Hamiltonian Cycles, Extreme Points and Rapidly Mixing Markov Chains, *Hamiltonian Cycle, Traveling Salesman and Related Optimization Problems Workshop*, Adelaide, Australia, 2012.
- Optimal Experimental Design for a Pure Birth Process with Incomplete Information, *The 25th European Conference on Operational Research*, Vilnius, Lithuania, 2012.

- A Modified Cross Entropy Method for the Optimization of an Environmentally Sustainable Supply Chain, *The 25th European Conference on Operational Research*, Vilnius, Lithuania, 2012.
- Optimal Observations of a Growing Population, *The 48th Australian and New Zealand Industrial and Applied Mathematics Conference*, Warrnambool, Australia, 2012.
- Polynomial Limit Control Algorithm to Identify Nearly all Cubic, Non-Hamiltonian, Graphs, *The 19th Triennial Conference of the IFORS*, Melbourne, Australia, 2011.
- On Random Graphs, Random Walks and the Hamiltonian Cycle Problem, *The 54th Annual Australian Mathematical Society Conference*, Brisbane, Australia, 2010.
- A Random Pivoting Algorithm for the Hamiltonian Cycle Problem, *The 24th European Conference on Operational Research*, Lisbon, Portugal, 2010.
- Investigating Hamiltonian Cycles through Random Walks, *The 46th Australian and New Zealand Industrial and Applied Mathematics Conference*, Queenstown, New Zealand, 2010.
- A New Random Algorithm for the Hamiltonian Cycle Problem, *The 23rd European Conference on Operational Research*, Bonn, Germany, 2009.
- A Hybrid Simulation-Optimization Algorithm for the Hamiltonian Cycle Problem, *The 45th Australian and New Zealand Industrial and Applied Mathematics Conference*, Caloundra, Australia, 2009.
- A New Approach to Response Surface Methodology, *The 5th International Industrial Engineering Conference*, Tehran, Iran, 2005.
- A New Approach to Distribution Fitting: Decision on Beliefs, *The 53rd Session of International Statistical Institute*, Seoul, South Korea, 2001.
- Order Statistics and Their Applications, *The 1st Iranian Statistical Student Conference*, Tehran, Iran, 1999.

Invited Seminars

- Efficient Models and Algorithms for the Analysis of Big Time Series Data, *International Computer Science Institute*, University of California at Berkeley, USA, April 13, 2022.
- Randomized Numerical Linear Algebra and the Analysis of Big Time Series Data, *Simons Institute for the Theory of Computing*, University of California at Berkeley, USA, December 16, 2019.
- Efficient Leverage Score Sampling for the Analysis of Big Time Series Data, *School of Mathematics and Statistics*, University of Melbourne, Australia, October 21, 2019.
- Hamiltonian Cycles, Polytopes and Random Walks, *Colloquium — School of Mathematics and Physics*, University of Queensland, Australia, February 18, 2019.
- Hamiltonian Cycles and Subsets of Discounted Occupational Measures, *Linear Algebra and Optimization Seminars — Institute for Computational & Mathematical Engineering*, Stanford University, USA, October 25, 2018.

- Hamiltonian Cycles, Polytopes and Markov Chains, *Simons Institute for the Theory of Computing*, University of California at Berkeley, USA, February 19, 2016.
- Fisher Information, Stochastic Processes and Generating Functions, *Colloquium — School of Mathematics and Statistics*, University of New South Wales, Australia, October 8, 2015.
- Computational Complexity of the Fisher Information, *INRIA — Paris*, France, October 6, 2014.
- Binomial Observations, Fisher Information and Optimal Sampling Times, *Colloquium — School of Mathematical and Physical Sciences*, University of Newcastle, Australia, November 14, 2013.
- P or NP: That Is the Question, *Undergraduate Seminar — School of Mathematical Sciences*, University of Adelaide, Australia, May 22, 2012.
- Can Hamiltonian Cycle Problem on a Random Graph be Solved with High Probability in Polynomial Time?, *Colloquium — Faculty of Information Technology*, Monash University, Australia, February 29, 2012.
- Hamiltonian Cycles and Random Walks, *Colloquium — School of Computer Science*, University of Adelaide, Australia, December 7, 2011.
- Hybrid Simulation-Optimization Algorithm for Combinatorial Optimization Problems, *Divisional Research Day — University of South Australia*, Australia, September 10, 2010.
- Hamiltonian Cycles, Random Walks and Discounted Occupational Measures, *Department of Applied Mathematics*, University of Twente, The Netherlands, June 22, 2010.
- Decision on Beliefs: Concepts and Applications, *Indian Statistical Institute — New Delhi*, India, March 2004.

Teaching Experience

List of Courses:

- *Johns Hopkins Carey Business School:*
  Statistical Analysis, Simulation for Business Applications, Forecasting Models for Business Intelligence, and Business Analytics (MBA course).
- *University of Newcastle:*
  Business Decision Making, Supply Chain Optimization, Forecasting with Linear Time Series Models, Deterministic and Stochastic Optimisation, Data Analytics for Business Intelligence, Markov Chains and Their Applications, Engineering Statistics, and Statistical Reasoning and Literacy.

Course Development:

- Designed and created all teaching and assessment materials for a newly established elective course titled *Forecasting Models for Business Intelligence*, offered to Master of Business Analytics and Risk Management students, Johns Hopkins Carey Business School, 2024.
- Developed all lecture slides and assessment items, and two new cases for the course, *Simulation for Business Applications*, offered to Business students, Johns Hopkins Carey Business School, 2023.

- Developed all teaching and assessment materials for the core course, *Statistical Analysis*, offered to Business students, Johns Hopkins Carey Business School, 2022.
- Designed and created all teaching and assessment materials for the newly established third-year core course, *Deterministic and Stochastic Optimization*, offered to Mathematics, Statistics, Engineering, and Business students, University of Newcastle, 2021.
- Designed and created all teaching and assessment materials for the newly established second-year core course, *Engineering Statistics*, offered to Electronic and Electrical Engineering students, University of Newcastle, 2018–2019.
- Designed all teaching and assessment materials for the first-year core course, *Business Decision Making*, offered to Business students in blended mode, University of Newcastle, 2016–2017.
- Developed the course syllabus, as well as all teaching and assessment materials, for the elective third-year/graduate course, *Forecasting with Linear Time Series Models*, offered to Mathematics, Statistics, Engineering, and Business students, University of Newcastle, 2016–2021.
- Developed all teaching and assessment materials for the second-year core course, *Engineering Mathematics and Statistics*, offered to Electrical Engineering and Computer Science students, University of Newcastle, 2014–2015.
- Developed all teaching and assessment materials for the compulsory graduate course *Statistics in Engineering*, offered to Engineering students, University of Adelaide, 2013.

Supervising Experience

- **PhD Student** *2022–2025*
  Thesis Title: *Deep Reinforcement Learning for Combinatorial Optimization Problems*
- **PhD Student** *2020–2025*
  Thesis Title: *Efficient Algorithms to Detect Outliers in Big Data*
- **Honours Student** *2021–2022*
  Thesis Title: *Solution Algorithms for Large Markov Decision Processes*
- **Honours Student** *2021*
  Thesis Title: *Toeplitz Least Squares Problems, Fast Algorithms and Big Data*
- **Honours Student** *2020*
  Thesis Title: *A New Algorithm for Fitting ARMA Models to Big Time Series Data*
- **Honours Student** *2020*
  Thesis Title: *Rollage: Efficient Rolling Average Algorithm to Estimate ARMA Models for Big Time Series Data*
- **Honours Student** *2019*
  Thesis Title: *A New State Aggregation Algorithm to Solve Large Markov Decision Processes*
- **PhD Student** *2018–2021*
  Thesis Title: *Policy Optimization in Reinforcement Learning*
- **Honours Student** *2017–2018*
  Thesis Title: *Exploration of Flu-tracking Approaches Using Time Series Models*

- **Honours Student** *2016–2017*
  Thesis Title: *Optimal Observation Times, Fisher Information and Generating Functions*

Positions and Professional Experiences

- **Associate Professor in Business Analytics and Operations Management**
  Carey Business School, Johns Hopkins University, United States *2022–Present*

- **Senior Lecturer in Data Science — Ongoing** *2018–2022*
  (Equivalent to Tenured Associate Professor in the U.S. System)
  School of Information and Physical Sciences, University of Newcastle, Australia

- **Lecturer in Statistics and Optimization — Ongoing** *2014–2017*
  School of Mathematical and Physical Sciences, University of Newcastle, Australia

- **Lecturer in Stochastic Operations Research — Fixed Term** *2013–2014*
  School of Mathematical Sciences, University of Adelaide, Australia

- **Postdoctoral Research Associate** *2011–2013*
  Australian Research Council (ARC) Discovery Project: New Methods for Improving Active Adaptive Management in Biological Systems
  School of Mathematical Sciences, University of Adelaide, Australia

- **Consultant**
  Several Industries and Organizations Including Coca-Cola Amatil, Nestlé, and Sanitarium Health & Wellbeing Australia

Professional Services

- **Chair and Organizer**, Business Analytics, Artificial Intelligence, and Cherry Blossom Conference, Washington D.C. *22–23 March, 2025*

- **Chair and Organizer**, CaRey AI Integration Gathering (CRAIG), Washington D.C. *2 October, 2024 & 28 May, 2025*

- **Organizer**, Machine Leaning Reading Group, Carey Business School, Johns Hopkins University. *2024–Present*

- **Member**, Grade Appeals Committee, Carey Business School, Johns Hopkins University. *2024–Present*

- **Member**, Diversity and Inclusion Committee, Carey Business School, Johns Hopkins University. *2023–Present*

- **Program Director**, Graduate Certificate in Data Analytics/Science, University of Newcastle. *2021*

- **Associate Editor and Member of Editorial Board**, Environmental Modeling & Assessment, Springer Journal. *2020–Present*

- **Chair and Organizer**, Data Science Down Under International Workshop, Newcastle. *8–12 December, 2019*

- **Deputy Head of School — Industry and Engagement Coordinator**, School of Information and Physical Sciences, University of Newcastle. *2019–2021*

- **Academic Representative on the Organizing Committee**, Quarterly Central Coast and Hunter Area Supply Chain & Logistics Forum. *2019–2021*

- **Member of the Faculty of Science Board**, University of Newcastle. *2019–2020*
- **Chair and Organizer**, Applied Probability, Combinatorics and Optimization Workshop, Newcastle. *17 December, 2016*
- **Member of the Faculty of Science Board**, University of Newcastle. *2016–2017*
- **Member of Progress and Appeals Committee**, Faculty of Science, University of Newcastle. *2016–2021*
- **Ph.D. Students Coordinator**, School of Mathematical and Physical Sciences, University of Newcastle. *2014–2017*
- **Organizer**, Hamiltonian Cycle and Traveling Salesman Problems: Theory and Computation Workshop, Adelaide. *14–15 December, 2012*
- **Convener**, Stochastic Lunch: Fortnightly Research Presentations Meetings, School of Mathematical Sciences, University of Adelaide. *2012*
- **Returning Officer**, Australian and New Zealand Industrial and Applied Mathematics (ANZIAM) Division. *2012–2014*
- **Refereeing for Journals:**
  Annals of Applied Statistics, *Annals of Operations Research*, *ANZIAM Journal*, *Environmental Modeling & Assessment*, *International Journal of Production Economics*, *International Journal of Production Research*, *Journal of Applied Probability*, *Journal of the American Statistical Association*, *Management Science*, *Mathematics of Operations Research*, *Operations Research*, *Queuing Systems*, *Random Structures and Algorithms*. *2009–Present*

Professional Affiliations

- **Institute for Operations Research and the Management Sciences (INFORMS)**
- **International Institute of Forecasting (IIF)**
- **Australian Society for Operations Research (ASOR)**

Special Skills

Software Skills:

- **Mathematical Packages:** *Matlab*, *Mathematica*
- **Statistical Packages:** *R*, *SPSS*
- **Optimization Packages:** *CPLEX*, *Lingo*
- **Simulation Packages:** *@Risk*, *Arena*, *Enterprise Dynamics*
- **Programming Languages:** *C*, *Python*
- **Others:** *LaTeX*, *MS-Office*