XUAN VINH DOAN
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Warwick Business School
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EMPLOYMENT

University of Warwick, Warwick Business School Coventry, United Kingdom
Reader Aug 2021 – present
Associate Professor Jan 2015 – July 2021
Assistant Professor Oct 2011 – Dec 2014

The Alan Turing Institute London, United Kingdom
Turing Fellow Oct 2018 – Sep 2023

University of Lorraine, LGIPM Metz, France
Visiting Professor Nov 2021 – Dec 2021

University of Waterloo, C&O Department Waterloo, ON, Canada
Postdoctoral Fellow Nov 2009 – Sep 2011

Massachusetts Institute of Technology, ORC Center Cambridge, MA, USA
Research Assistant Sep 2004 – Oct 2009

Laboratory for Analysis and Architecture of Systems Toulouse, France
Summer Research Intern Jun 2006 – Jul 2006

Port Authority of Singapore Corporation Singapore
Industrial Research Intern Jan 2004 – Jun 2004

Royal Melbourne Institute of Technology, CATT Center Melbourne, VIC, Australia
Research Assistant Jun 2002 – Dec 2002

EDUCATION

Massachusetts Institute of Technology Cambridge, MA, USA
Ph.D. in Operations Research, GPA: 4.9/5.0 Sep 2004 – Oct 2009
Thesis: "Optimization under Moment, Robust, and Data-Driven
Models of Uncertainty"
Advisor: Professor Dimitris Bertsimas

National University of Singapore Singapore
M. S. in High Performance Computation for Engineered Systems, Jul 2003 – Jun 2004
GPA: 5.0/5.0
Thesis: "Expert System – Pilot Deployment Engine"

Royal Melbourne Institute of Technology Melbourne, VIC, Australia
B. Eng in Software Engineering with Honor First Class, GPA: Mar 1999 – Dec 2002
3.99/4.00

SUBMITTED PAPERS

"Operations Research Games under Uncertainty and Distributional Ambiguity", June 2023 (with T. D. Nguyen)

"Capacity Planning for a Healthcare Service Network with Co-Sourcing", November 2022 (with N. Gulpinar and E. Gokalp)

PUBLICATIONS

"Fairness Criteria for Allocating Indivisible Chores: Connections and Efficiencies", *Journal of Autonomous Agents and Multi-Agent Systems*, https://doi.org/10.1007/s10458-022-09587-1, 37(8), August 2023 (with B. Chen and A. Sun)

"Dynamic Surgery Management under Uncertainty", *European Journal of Operational Research*, https://doi.org/10.1016/j.ejor.2022.12.006, 309(2): 832–844, September 2023 (with N. Gulpinar and E. Gokalp)

"Learning from data with structured missingness", *Nature Machine Intelligence*, https://doi.org/10.1038/s42256-022-00596-z, 5: 13–23, January 2023 (with R. Mitra, S. McGough, C. Harbron, and B. MacArthur et al.)

"Equitability and Welfare Maximization for Allocating Indivisible Items", *Journal of Autonomous Agents and Multi-Agent Systems*, https://doi.org/10.1007/s10458-022-09587-1, 37 (8), December 2022 (with B. Chen and A. Sun)

"Price of Anarchy for Atomic Congestion Games with Stochastic Demands", *Journal of Combinatorial Optimization*, https://doi.org/10.1007/s10878-020-00583-3, 44: 2123–2142, October 2022 (with B. Chen and C. Wang)

"Distributionally Robust Optimization under Endogenous Uncertainty with an Application in Retrofit Planning", *European Journal of Operational Research,* https://doi.org/10.1016/j.ejor.2021.07.013, 300(1): 73-84, July 2022

"Low-Rank Matrix Recovery with Ky Fan 2-k-Norm", *Journal of Global Optimization*, https://doi.org/10.1007/s10898-021-01031-0, 82: 727-751, April 2022 (with S. Vavasis)

"Robust Newsvendor Games with Ambiguity in Demand Distributions", *Operations Research*, https://doi.org/10.1287/opre.2019.1955, 68(4): 1047–1062, July 2020 (with T. D. Nguyen)

"Pricing of Reusable Resources under Ambiguous Distributions of Demand and Service Time with Emerging Applications", *European Journal of Operational Research*, https://doi.org/10.1016/j.ejor.2019.09.003, 282(1): 235-251, April 2020 (with X. Lei and S. Shen)

"Capacity Planning for a Network of Stem-Cell Donation Centres under Uncertainty", *Production and Operations Management*, https://doi.org/10.1111/poms.13090, 29(2): 281-297, February 2020 (with N. Gulpinar and E. Gokalp)

"Resource Allocation When Planning for Simultaneous Disasters", *European Journal of Operational Research*, https://doi.org/10.1016/j.ejor.2018.10.015, 274(2): 687 – 709, January 2019 (with D. Shaw)

"Finding the Largest Low-Rank Clusters with Ky Fan 2-k-norm and L_1-Norm", *SIAM Journal on Optimization*, http://dx.doi.org/10.1137/140962097, 26(1): 274 – 312, January 2016 (with S. Vavasis)

"Robustness to Dependency in Portfolio Optimization using Overlapping Marginals", *Operations Research*, http://dx.doi.org/10.1287/opre.2015.1424, 63(6): 1468 – 1488, November 2015 (with X. Li and K. Natarajan)

"Price of Anarchy for Non-Atomic Congestion Games with Stochastic Demands", *Transportation Research Part B: Methodology*, http://dx.doi.org/10.1016/j.trb.2014.08.009, 70: 90 – 111, December 2014 (with B. Chen and C. Wang)

"Finding Approximately Rank-One Submatrices with the Nuclear and L_1-Norm", *SIAM Journal on Optimization*, http://dx.doi.org/10.1137/100814251, 23(4): 2502 – 2540, December 2013 (with S. Vavasis)

"A Proximal Point Algorithm for Sequential Feature Extraction Applications", *SIAM Journal on Scientific Computing*, http://dx.doi.org/10.1137/110843381, 35(1): A517 – A540, February 2013 (with K. C. Toh and S. Vavasis)

"A Robust Algorithm for Semidefinite Programming", *Optimization Methods and Software*, http://dx.doi.org/10.1080/10556788.2011.610456, 27(4-5): 667 – 693, August 2012 (with S. Kruk and H. Wolkowicz)

"On the Complexity of Non-Overlapping Multivariate Marginal Bounds for Probabilistic Combinatorial Optimization Problems", *Operations Research*, http://dx.doi.org/10.1287/opre.1110.1005, 60(1): 138 – 149, February 2012 (with K. Natarajan)

"Data-Driven and Robust Optimization Approaches to Call Centers", *European Journal of Operations Research,* http://dx.doi.org/10.1016/j.ejor.2010.05.040, 207(2): 1072 – 1085, December 2010 (with D. Bertsimas)

"Models for Minimax Stochastic Linear Optimization Problems with Risk Aversion", *Mathematics of Operations Research*, http://dx.doi.org/10.1287/moor.1100.0445, 35(3): 580 – 602, August 2010 (with D. Bertsimas, K. Natarajan, and C. P. Teo)

"Approximating Integrals of Multivariate Exponentials: A Moment Approach", *Operations Research Letters*, http://dx.doi.org/10.1016/j.orl.2007.07.002, 36(2): 205 – 210, March 2008 (with D. Bertsimas and J. Lasserre)

CONFERENCE PROCEEDINGS
"Optimizing Merkle Tree Structure for Blockchain transactions by a DC Programming approach" in "Computational Collective Intelligence. ICCCI 2023. Lecture Notes in Computer Science, vol 14162": N. T. Nguyen et al. (eds.), https://doi.org/10.1007/978-3-031-41456-5_31, September 2023 (with H. A. Le Thi and T. T. T. Nguyen)

"Connections between fairness criteria and efficiency for allocating indivisible chores" in "Proceedings of the 20th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2021)": U. Endriss, A. Nowe, F. Dignum, A. Lomuscio (eds.), http://dx.doi.org/10.5555/3463952.3464100, May 2021 (with A. Sun and B. Chen)

"Low-Rank Matrix Recovery with Ky Fan 2-k-Norm" in "Optimization of Complex Systems: Theory, Models, Algorithms and Applications, WCGO 2019": Le Thi H., Le H., Pham Dinh T. (eds), https://doi.org/10.1007/978-3-030-21803-4_32, *Advances in Intelligent Systems and Computing, vol 991*, Springer, Cham, July 2019 (with S. Vavasis)

TECHNICAL REPORTS
"Real-Time Scheduling for Multi-Functional Phased Array Radar", *Project Report*, Operations Research Center, MIT, March 2008 (with D. Bertsimas and M. Weber)

"Bounds on Some Contingent Claims with Non-Convex Payoff Based on Multiple Assets", *Technical Report*, Operations Research Center, MIT, August 2007 (with D. Bertsimas and K. Natarajan)

"Multivariate Exponential Integral Approximations: A Moment Approach", *Technical Report*, Operations Research Center, MIT, January 2006 (with D. Bertsimas and J. Lasserre)

"Ant Colony Optimization for a Machine-Job Scheduling Problem with Sequence-Dependent Setup Times and Delay Threshold Limits", *Working Paper*, Singapore – MIT Alliance, National University of Singapore, May 2004

"Capacity Management: Using the Dual Solution of the Multi-Commodity Flow Problem to Set OSPF Weights – A Fast Heuristics", *ATcrc Technical Report*, Australia, January 2003 (with J. Murphy, R. Nelson, and R. Harris)

TEACHING EXPERIENCE

Optimal Decision Making (doctoral course)	Warwick Business School, Doctoral Program
Optimisation Models, Analytics in Practice, Text Analytics, Advanced Analytics (master courses)	Warwick Business School, MSc in Business Analytics Program
Mathematical Programming I and II, Applied Optimisation Methods, Decision Making under Uncertainty (undergraduate courses)	University of Warwick, MORSE Program
Optimization Training for Industry (training course)	The Isaac Newton Institute, Newton Gateway to Mathematics
Scheduling Theory (undergraduate course)	University of Waterloo, C&O Department
Optimization Methods in Management Science, OR in the Real World, Operations Management, The Theory of Operations Management, Nonlinear Programming, Optimization Methods (teaching assistant)	MIT (Sloan School of Management, EECS Department)

PROFESSIONAL SERVICE
External Examiner for BSc in Business Analytics, Exeter University, March 2023 - present

Reviewer for Management Science, Operations Research, Mathematical Programming, SIAM Journal on Optimization, and European Journal of Operational Research

Co-chair of OR64, Annual Conference of the UK's OR Society, Sep 2022

Member of EPSRC Peer Review College, Oct 2016 - present

Member of NATCOR Executive Committee, May 2021 - present

Member of the OR Society's General Council (Research and Event Committees), March 2021 - present

Coordinator for DIMAP Seminar Series, 2012 – 2014

Local organizer for APMOD 2014, International Conference on Applied Mathematical Optimization and Modeling

AWARDS

Singapore-MIT Alliance IHPC-SGI Award for Best Student in HPCES Program (2004)

Institution of Engineers Australia Award and Medal for Best Final Year Engineering Student (2002)

RMIT Faculty of Engineering Dean's Esso Awards for Best Engineering Student (1999 and 2002)