

## **XUAN VINH DOAN**

**Associate Professor  
Warwick Business School  
The University of Warwick**

Warwick Business School  
Scarman Road, WBS 1.215  
Coventry, CV4 7AL  
United Kingdom

Phone: +44 (0)24 7652 2475  
Email: [Xuan.Doan@wbs.ac.uk](mailto:Xuan.Doan@wbs.ac.uk)  
Website: [go.warwick.ac.uk/xvdoan](http://go.warwick.ac.uk/xvdoan)

### **EMPLOYMENT**

<b>University of Warwick, Warwick Business School</b> Associate Professor Turing Fellow (The Alan Turing Institute)	Coventry, United Kingdom Jan 2015 – present Oct 2018 – present
<b>University of Warwick, Warwick Business School</b> Assistant Professor	Coventry, United Kingdom Oct 2011 – Dec 2014
<b>University of Waterloo, C&amp;O Department</b> Postdoctoral Fellow	Waterloo, ON, Canada Nov 2009 – Sep 2011
<b>Massachusetts Institute of Technology, ORC Center</b> Research Assistant	Cambridge, MA, USA Sep 2004 – Oct 2009
<b>Laboratory for Analysis and Architecture of Systems</b> Summer Research Intern	Toulouse, France Jun 2006 – Jul 2006
<b>Port Authority of Singapore Corporation</b> Industrial Research Intern	Singapore Jan 2004 – Jun 2004
<b>Royal Melbourne Institute of Technology, CATT Center</b> Research Assistant	Melbourne, VIC, Australia Jun 2002 – Dec 2002

### **EDUCATION**

<b>Massachusetts Institute of Technology</b> Ph.D. in Operations Research, GPA: 4.9/5.0 <u>Thesis</u> : “Optimization under Moment, Robust, and Data-Driven Models of Uncertainty” <u>Advisor</u> : Professor Dimitris Bertsimas	Cambridge, MA, USA Sep 2004 – Oct 2009
<b>National University of Singapore</b> M. S. in High Performance Computation for Engineered Systems, GPA: 5.0/5.0 <u>Thesis</u> : “Expert System – Pilot Deployment Engine”	Singapore Jul 2003 – Jun 2004
<b>Royal Melbourne Institute of Technology</b> B. Eng in Software Engineering with Honor First Class, GPA: 3.99/4.00	Melbourne, VIC, Australia Mar 1999 – Dec 2002

## IN PREPARATION

“Capacity Planning for a Healthcare Service Network with Co-sourcing” (with N. Gulpinar and E. Gokalp)

## SUBMITTED PAPERS

“Dynamic Surgery Management under Uncertainty”, May 2021 (with N. Gulpinar and E. Gokalp)

“Distributionally Robust Optimization under Endogenous Uncertainty with an Application in Retrofit Planning”, April 2021

“Operations Research Games under Moment-Based Distributional Ambiguity”, June 2020 (with T. D. Nguyen)

## PUBLICATIONS

“Low-Rank Matrix Recovery with Ky Fan 2-k-Norm”, *Journal of Global Optimization*, accepted, April 2021 (with S. Vavasis)

“Robust Newsvendor Games with Ambiguity in Demand Distributions”, *Operations Research*, 68(4): 1047–1062, July 2020 (with T. D. Nguyen)

“Price of Anarchy for Atomic Congestion Games with Stochastic Demands”, *Journal of Combinatorial Optimization*, <https://doi.org/10.1007/s10878-020-00583-3>, May 2020 (with B. Chen and C. Wang)

“Pricing of Reusable Resources under Ambiguous Distributions of Demand and Service Time with Emerging Applications”, *European Journal of Operational Research*, 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*, 29(2): 281-297, February 2020 (with N. Gulpinar and E. Gokalp)

“Resource Allocation When Planning for Simultaneous Disasters”, *European Journal of Operational Research*, 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*, 26(1): 274 – 312, January 2016 (with S. Vavasis)

“Robustness to Dependency in Portfolio Optimization using Overlapping Marginals”, *Operations Research*, 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*, 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*, 23(4): 2502 – 2540, December 2013 (with S. Vavasis)

“A Proximal Point Algorithm for Sequential Feature Extraction Applications”, *SIAM Journal on Scientific Computing*, 35(1): A517 – A540, February 2013 (with K. C. Toh and S. Vavasis)

“A Robust Algorithm for Semidefinite Programming”, *Optimization Methods and Software*, 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*, 60(1): 138 – 149, February 2012 (with K. Natarajan)

“Data-Driven and Robust Optimization Approaches to Call Centers”, *European Journal of Operations Research*, 207(2): 1072 – 1085, December 2010 (with D. Bertsimas)

“Models for Minimax Stochastic Linear Optimization Problems with Risk Aversion”, *Mathematics of Operations Research*, 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*, 36(2): 205 – 210, March 2008 (with D. Bertsimas and J. Lasserre)

### CONFERENCE PROCEEDINGS

“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.), 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), *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

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
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

Reviewer for Management Science, Operations Research, Mathematical Programming, SIAM Journal on Optimization, and Journal of Optimization Theory and Applications

Member of EPSRC Peer Review College, Oct 2016 - 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)