

Curriculum Vitae

Van-Anh Truong

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Personal

- Canadian citizen. U.S. permanent resident.
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Research Interests

- Business analytics
- Healthcare operations.
- Service systems.
- Supply-chain management.

Positions Held

- Columbia University, Department of Industrial Engineering and Operations Research, New York, NY, Jul 2018-present. Associate Professor (with tenure).
- Columbia University, Department of Industrial Engineering and Operations Research, New York, NY, Jul 2010-Jun 2018. Assistant Professor.
- Google Inc., Mountain View, CA, Dec 2008-Jun 2010. Quantitative Researcher.
- Credit Suisse Securities, New York, NY, 2007-2008. Quantitative Associate.

Education

- Cornell University, Ithaca NY, 2002-2007. Ph.D. degree in Operations Research.
- Dissertation: Approximation Methods for Supply-Chain Problems
 - Major in Manufacturing. Dissertation Advisor: Robin Roundy.
 - Minor in Optimization. Minor Advisor: Mike Todd.
 - Minor in Finance. Minor Advisor: Robert Jarrow.

- University of Waterloo, Canada, 1997-2002. Bachelor's degree in Mathematics
 - Double major in Pure Mathematics and Combinatorics and Optimization.
 - Graduated with distinction - Dean's Honors List.

Papers under Review or Revision

- R1.** Wang, S., Z. Xu and V.A. Truong. Adaptive Influencer Marketing with Intermediary Constraints (2019).
- R2.** Zhao, J., V.A. Truong, X. Pan, Jie Song and Z. Xu. Learning to Rank under Evolving Consumer Reviews (2019).
- R3.** Pan X., J. Song, V. A. Truong, and J. Zhao. Online Contextual Learning and Resource Allocation with Perishable Resources (2018).
- R4.** Truong, V.A. and Z. Xu. Re-optimization Algorithms for Contextual Bandits with Knapsack Constraints (2018).
- R5.** Truong, V.A. and S. Li. Online Resource Allocation for Services with Variable Durations (2018).
- R6.** Truong, V.A. and X., Wang. Prophet Inequality with Correlated Arrival Probabilities, with Application to Two-Sided Matchings (2017).
- R7.** Wang, X., V.A. Truong, S. Zhu, Q. Zhang. Dynamic Optimization of Mobile “Push” Advertising Campaigns. Under review (2016). (The first author led the work. The second author advised. The last two authors are secondary authors.)
- R8.** Gallego, G., A. Li, V. A. Truong, and X., Wang. Online Probabilistic Matching, with Application to Dynamic Assortment Optimization and Multi-Product Pricing. Under revision (2016). (All authors are equal contributors, listed in alphabetical order.)
- R9.** Stein, C., V.A. Truong, and X., Wang. Advance Reservations with Heterogeneous Customers. Under review (2016). (All authors are equal contributors, listed in alphabetical order.)
- R10.** Gallego, G., A. Li, V. A. Truong, and X., Wang. Approximation Algorithms for Product Framing and Pricing. Under review (2016). (All authors are equal contributors, listed in alphabetical order.)
- R11.** Wang, X., V. A. Truong and D. Bank. Online Advance Admission Scheduling for Services, with Customer Preferences. Under review (2015). (The first author led the work. The second author advised. The last two authors are secondary authors.)
- R12.** Liu, N., V.A. Truong, X., Wang, and B. Anderson. Integrated Scheduling and Capacity Planning with Considerations for Patients’ Length-of-Stays. Under revision (2015). (The first three authors are equal contributors, listed in alphabetical order. The last author is a secondary contributor.)

Papers Published in Journals

- J1.** Gallego, G., A. Li, V. A. Truong, and X., Wang. Approximation Algorithms for Product Framing and Pricing, *Operations Research*, to appear (2019).
- J2.** Liu, N., V.A. Truong, X., Wang, and B. Anderson. Integrated Scheduling and Capacity Planning with Considerations for Patients’ Length-of-Stays, *Production and Operations Management*, to appear (2019).
- J3.** Stein, C., V.A. Truong, and X., Wang. Advance Reservations with Heterogeneous Customers, *Management Science*, to appear (2018).

- J4.** Wang, X. and V. A. Truong. Multi-priority Online Scheduling with Cancellations. *Operations Research*, Articles in Advance (2017). (The first author led the work. The second author advised.)
- J5.** Levi, R., R. O. Roundy, V. A. Truong, and X., Wang. Provably Near-Optimal Balancing Policies for Stochastic Multi-Echelon Inventory Control Models. *Mathematics of Operations Research*, 42(1):256-276 (2016). (The first three authors are equal contributors, listed in alphabetical order. The last author is a secondary contributor.)
- J6.** Mueller, R., F. Dexter, V. A. Truong, and R. Wachtel. Case Sequencing of Diagnostic Imaging Studies Performed under General Anesthesia or Monitored Anesthesia Care during Nights and Weekends. *Anesthesia & Analgesia Case Report*, 5(9):162-6 (2015). (All authors are equal contributors, listed in alphabetical order.)
- J7.** V.A. Truong. Optimal Advance Scheduling. *Management Science*, 61(7):1584-1597 (2015).
- J8.** V.A. Truong. The Multi-period Stochastic Inventory Problem: Approximation Algorithm via a Look-Ahead Optimization Approach. *Mathematics of Operations Research*, 39(4):1039-1056 (2014).
- J9.** Huh, Tim, Nan Liu, and V. A. Truong. Multi-resource Allocation Scheduling Problem for Emergency and Elective Surgeries in Dynamic Environments. *Manufacturing & Services Operations Management*, 15(2):280-291 (2013). (All authors are equal contributors, listed in alphabetical order.)
- J10.** Truong, V. A. Optimal Selection of Medical Formularies. *Journal of Pricing & Revenue Management*, 13(2):113-132 (2014).
- J11.** Truong, V. A. The Pediatric Vaccine Stockpiling Problem. *Vaccine*, 30(43):6175-9 (2012).
- J12.** Truong, V. A. and R. O. Roundy. Multi-Dimensional Approximation Algorithms for Capacity-Expansion Problems. *Operations Research*, 59(2):313-327 (2011). (The first author led the work. The second author advised.)
- J13.** Sapra A., V. A. Truong and R. Q. Zhang. How much Demand Should be Fulfilled? *Operations Research* 58(3):719-733 (2010). (All authors are equal contributors, listed in alphabetical order.)
- J14.** Levi, R., R. O. Roundy, D. Shmoys and V. A. Truong. Approximation Algorithms for Capacitated Stochastic Inventory Models. *Operations Research* 56(5):1184-1199 (2008). (All authors are equal contributors, listed in alphabetical order.)
- J15.** Truong, V. A. and L. Tuncel. Geometry of Homogeneous Cones, Duality Mapping and Optimal Self-Concordant Barriers, *Mathematical Programming* 100(2):295-316 (2004). (The first author led the work. The second author advised.)

Papers Published in Conference Proceedings

- C1.** Ford, D., Labelle, F., Popovici F., Stokely, M., Truong, V. A., Barroso, L., Grimes, C. and S. Quinlan. Availability in Globally Distributed Storage Systems. *Proceedings of the 9th USENIX Symposium on Operating Systems Design and Implementation* (2010). (All authors are equal contributors, listed in alphabetical order.)

Unpublished Papers

1. Truong, V. A. and C. Ruzal-Shapiro. Optimal Advanced Scheduling, with Expediting (2014). (All authors are equal contributors, listed in alphabetical order.)
2. Truong, V. A. and D. Yao. Analytical Models for Designing Pharmaceutical Contracts (2013). (All authors are equal contributors, listed in alphabetical order.)
3. Truong, V. A. and R. Roundy. Data-driven Approximation for Joint Pricing and Inventory-Control (2008). (The first author led the work. The second author advised.)

Book Chapter

1. Chapter on Inpatient Operations, *Handbook of Healthcare Analytics: Theoretical Minimum for Conducting 21st Century Research on Healthcare Operations*. Edited by Sridhar Tayur and Tinglong Dai. Written by Mustafa Akan, Itai Ashlagi, Baris Ata, Soo-Haeng Cho, Tinglong Dai, Sarang Deo, Nagesh Gavirneni, Joel Goh, Diwakar Gupta, Donald Fischer Highmark, Diwas KC, Retsef Levi, Nan Liu, Rema Padman, Alan Scheller-Wolf, Jay Swaminathan, Van-Anh Truong, Willem-Jan Van Hoeve, and Senthil Veeraraghavan. In preparation (2017).

Prizes and Fellowships

- NSF CAREER Award, 2017.
- IBM Research Fellowship, 2004.
- Cornell Graduate Fellowship, School of OR&IE, Cornell University, 2002.
- Schum Award, School of OR&IE, Cornell University, 2002-2004.
- Natural Science and Engineering Research Council of Canada (NSERC) Post Graduate Scholarship, 2002-2006.
- Mike Vangoch Memorial Award, Department of Pure Mathematics, University of Waterloo, 2002.
- Senate Mathematics Scholarship, Faculty of Mathematics, University of Waterloo, 1998-2002.
- NSERC Undergraduate Research Assistantship Award, Department of Combinatorics & Optimization, University of Waterloo, 2000-2001.
- Rene Descartes Scholarship, Faculty of Mathematics, University of Waterloo, 1997.
- Canadian Open Math Challenge Competition gold medalist, 1997.

Invited and Refereed Presentations

1. Tuck School of Business, Dartmouth University, Hanover, 2019 (scheduled).
2. Symposium on Data-driven Decision Making: Modeling, Algorithms and Implementations, Carey School of Business, John Hopkins University, Washington DC, 2019 (scheduled).
3. Sauder School of Business, University of British Columbia, Vancouver, Canada, 2019.

4. NYC OPS Day, Columbia University, New York, 2019.
5. Department of Industrial and Enterprise Systems Engineering, University of Illinois at Urbana-Champaign, Champaign, 2018.
6. Department of Industrial Engineering, Rutgers University, New Jersey, 2018.
7. Manufacturing & Services Operations Management Conference, University of North Carolina, Chapel Hill, 2017.
8. Institute for Operations Research and the Management Sciences Applied Probability Conference, Northwestern University, Evanston, 2017.
9. Mostly OM Workshop, Tsinghua University, Beijing, 2017.
10. Amazon Supply Chain Management Summit, Seattle, 2016.
11. MIT Operations Research Center, Boston, 2016.
12. Revenue Management Conference, New York, 2016.
13. Service Systems Special Interest Group and Manufacturing & Services Operations Management Conference, Auckland, New Zealand, 2016.
14. MIT Sloan School of Management, Boston, 2016.
15. Department of Industrial Engineering, Rutgers University, New Jersey, 2016.
16. University of Toronto Rotman School of Management, Toronto, 2015.
17. IBM TJ Watson Research Center, Yorktown, 2015.
18. Institute for Operations Research and the Management Sciences Healthcare Conference, Nashville, 2015.
19. Manufacturing & Services Operations Management Conference, Toronto, 2015.
20. University of Chicago Booth School of Management, Chicago, 2015.
21. National Science Foundation Health Systems Optimization Workshop, Chicago, 2014.
22. Department of Industrial Engineering, Rutgers University, New Jersey, 2014.
23. New York University Stern School of Management, New York, 2014.
24. Manufacturing & Services Operations Management Conference, Seattle, 2014.
25. Cornell University Johnson Graduate School of Management, Ithaca, 2014.
26. Department of Industrial and Operations Engineering, University of Michigan, Ann Arbor, 2013.
27. Informatics Intervention Research Collaboration (I2RC) Group, Columbia University, New York, 2013.
28. Institute for Operations Research and the Management Sciences Healthcare Conference, Chicago, 2013.

29. Healthcare Special Interest Group, Manufacturing & Services Operations Management Conference, New York, 2012.
30. Columbia School of Public Health, New York, 2012.
31. Department of Industrial Engineering, Rutgers University, New Jersey, 2012.
32. Rutgers School of Business, New Jersey, 2011.
33. Department of Industrial Engineering and Operations Research, Columbia University, New York, 2009.
34. Cornell University Johnson Graduate School of Management, Ithaca, 2006.
35. New York University Stern School of Management, New York, 2006.
36. Northwestern University Kellogg School of Management, Evanston, 2006.
37. Multi-Echelon Conference, Atlanta, 2006.

Research Grants

- National Science Foundation Award CMMI 1653770. CAREER: Optimization Methods to Support Real-time Personalized Consumer Transactions, Amount \$500,000.00, 2017-2022.
- National Science Foundation Award CMMI 1538088, Online algorithms for service systems, (sole) Principal Investigator, Amount \$300,000.00, 2015-2018.
- Provost's Grants Program for Junior Faculty who Contribute to the Diversity Goals of the University, Columbia University, Amount \$25,000.00, 2015.

Teaching Experience

- Dynamic Pricing and Revenue Management (IEOR 4601), Columbia University, 2018-2019.
- Network Analytics (IEOR 8100), Columbia University, 2019.
- Operations Management (IEOR 4000), Columbia University, 2017.
- Logistics and Transportation Management (IEOR 4418), Columbia University, 2014-2016.
- Healthcare Operations Management (IEOR 4507), Columbia University, 2012-2018.
- Production Planning (IEOR 3402), Columbia University, 2011-2017.
- Approximate Dynamic Programming with Application to Healthcare (IEOR 8100), Columbia University, Fall 2011.
- Supply Chain Management (IEOR 4210), Columbia University, Spring 2011.

Teaching Evaluations

Semester	Course Number	Course Name	Enrollment	Course Median (5.00)	Instructor Median (5.00)
Spring 2019	IEOR 4601	Dynamic Pricing and Revenue Management	13	textn/a	n/a
Spring 2019	IEOR 8100	Network Analytics	8	n/a	n/a
Fall 2018	IEOR E4000	Operations Management	15	4.0	4.0
Spring 2018	IEOR 4601	Dynamic Pricing and Revenue Management	26	4.0	4.0
Spring 2018	IEOR 4507	Healthcare Operations Management	19	n/a	n/a
Fall 2017	IEOR E4000	Operations Management	23	4.0	4.1
Fall 2015	IEOR E4418	Logistics and Transportation	25	3.80	3.58
Fall 2014	IEOR E4418	Logistics and Transportation	8	4.83	4.00
Spring 2014	IEOR E4418	Logistics and Transportation	15	3.70	n/a
Fall 2016	IEOR E4507	Healthcare Operations Management	46	4.29	4.57
Fall 2015	IEOR E4507	Healthcare Operations Management	40	4.21	4.17
Fall 2014	IEOR E4507	Healthcare Operations Management	50	3.79	3.75
Fall 2013	IEOR E4507	Healthcare Operations Management	29	4.00	4.00
Fall 2012	IEOR E4507	Healthcare Operations Management	29	4.00	4.00
Spring 2012	IEOR E4507	Healthcare Operations Management	12	1.5	1.5
Spring 2017	IEOR E3402	Production Planning	88	2.6	2.3
Spring 2016	IEOR E3402	Production Planning	92	3.14	2.96
Spring 2015	IEOR E3402	Production Planning	79	3.33	3.20
Spring 2014	IEOR E3402	Production Planning	88	3.77	n/a
Spring 2012	IEOR E3402	Production Planning	79	3.00	3.00
Spring 2011	IEOR E3402	Production Planning	95	3.00	3.00
Spring 2011	IEOR E4210	Supply Chain Management	66	3.00	3.00

External Service

- Associate Editor, *Operations Research*, 2018-.
- Associate Editor, *IIE Transactions*, 2018-.
- Judge, INFORMS Health Application Society Student Paper Competition, 2019.
- Judge, POMS Paper Competition, 2017.
- Session Chair, 2018 INFORMS Annual Conference, Phoenix.
- Session Chair, 2017 INFORMS Annual Conference, Houston.
- Session Chair, 2016 INFORMS Annual Conference, Nashville.
- Session Chair, 2015 INFORMS Annual Conference, Philadelphia.
- Session Chair, 2015 INFORMS Healthcare Conference, Nashville.
- Session Chair, 2014 Annual INFORMS Conference, San Francisco.

- Panelist, Junior Faculty Interest Group's Session on Career Grant Writing, 2018 INFORMS Annual Conference, Phoenix.
- Panelist, INFORMS 2014 Doctoral Student Colloquium, San Francisco.
- Panelist, National Science Foundation Review Session, 2014, 2016, 2017.
- Organizing Committee, 2012 MSOM Conference, Columbia University, New York.
- Reviewer
 1. Operations Research.
 2. Management Science.
 3. Mathematics of Operations Research.
 4. Manufacturing & Services Operations Management.
 5. Naval Research Logistics.
 6. Operations Research Letters.
 7. Annals of Operations Research.
 8. Production and Operations Management.
 9. INFORMS Journal of Computing.

Internal Service

- Co-Director, Center for Engineering in Columbia University College of Dental Medicine, 2018.
- Chair of Undergraduate Programs, Columbia IEOR, 2019.
- Panelist, Society of Women Engineers, 2018.
- Engineering the Next Generation (E.N.G) summer sessions for high school students, 2018.
- Society for Women in Engineer's Exploration Experience Workshop for high school students, 2018.
- Panelist, Women in Science and Engineering Conference, 2017.
- Johnson and Johnson Scholars Summer Lunches for Undergraduate Women, 2017.
- Women of Columbia Engineering Annual Banquet, 2017.
- Women of Columbia Engineering Lunch, School of Engineering and Applied Science, 2015, 2017.
- Internal Advisory Committee, Columbia University College of Physicians and Surgeons' curriculum in Systems, Leadership, Integration and Management, 2013-present.
- Faculty consultant, Scheduling and Patient Flow, Department of Radiology, Morgan Stanley Children's Hospital, New York, 2011-2012.
- Faculty consultant, Scheduling and Patient Flow, Department of Cardiology, Morgan Stanley Children's Hospital, New York, 2013-2014.

- Faculty facilitator, Engineering EngAGE program for prospective graduate students from under-represented groups, Columbia University, 2014.
- Host, IEOR Session at Columbia Engineering Women’s Forum, 2012.
- Speaker, Industrial Engineering and Operations Research Junior Colloquium, 2011-2012.
- Mentor to undergraduate and Master’s students
 1. Zeynep Can Sayin (2010-2011).
 2. Frederick Lee (2010-2011).
 3. Minjie Kang (2010-2011).
 4. Yi Xu (2012-2013).
 5. Hao Li (2014).
 6. Wei Xiong (2014).
 7. Andelyn Russell (2015).
 8. Runxin Ding (2015).
 9. Zijian Zheng (2015).
 10. Yuzhe Zhou (2017).
 11. Sicong Li (2017).
 12. Hanzhao Wang (2017-2018).
 13. Jingya Bi (2018).
 14. Jipeng Chen (2019).

Student Supervision

- Doctoral Committees
 1. Xiaopei Zhang (2019).
 2. Anran Li (2017).
 3. Daniel Guetta (2015).
 4. Song-Hee Kim (2014).
 5. Tulia Plumettaz (2014).
 6. Ruxian Wang (2012).
 7. Cecilia Zenteno (2012).
 8. Min Wang (2011).
- Doctoral advising
 1. Xinshang Wang. Graduated 2017. First position: post doctoral researcher at MIT Operations Research Center.
 2. Shatian Wang. Expected graduation year 2021.
 3. Yuan Gao. Expected graduation year 2021.

4. Jingtong Zhao. Expected graduation year 2020.
 5. Shuoguang Yang. Expected graduation year 2020.
- Post doctoral Advising
 1. Zhen Xu, 2018-2010.
 - Visiting Students
 1. Ana Batista Germain, Catholic University of Chile, 2017.
 2. Pan Xin, Peking University, scheduled for Spring 2018.
 3. Annalaura Di Mauro, Politecnico di Torino, 2019.
 4. Jiajun Dai, Shanghai Jiao Tong University, 2018-2019.
 - Current Research Group
 1. Zhen Xu, postdoctoral researcher.
 2. Shatian Wang, PhD candidate.
 3. Jingtong Zhao, PhD candidate.
 4. Shuoguang Yang, PhD candidate.
 5. Jipeng Chen, master's student.
 6. Annalaura Di Mauro, visiting undergraduate student.