

Vusal Babashov, PhD Candidate

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Education

- 2016 - **Doctor of Philosophy in Management**
Telfer School of Management, University of Ottawa
Ottawa, Canada
Dissertation Title: *Advanced Analytics Applications in Healthcare*
Supervisors: Prof. Jonathan Patrick and Prof. Antoine Sauré
- 2010 - 2012 **Master of Science**
Department of Epidemiology and Biostatistics, Western University
London, Canada
Dissertation Title: *Economic evaluation of brentuximab vedotin for treatment of relapsed Hodgkin lymphoma: An early look model based on phase II clinical trial results*
Supervisors: Prof. Gregory Zaric and Prof. Mehmet Begen
- 2008 - 2010 **Master of Science**
Department of Industrial Engineering, University of Pittsburgh
Pittsburgh, US
- 2003 - 2007 **Bachelor of Science**
Department of Industrial Engineering, Qafqaz University
Baku, Azerbaijan
Graduated with Honors

Research Interests

I am interested in solving challenging real-world service operations problems that involve decision making under uncertainty using advanced analytical approaches. I use methodologies such as dynamic programming, simulation, statistics, optimization, multi-criteria decision analysis, and health economics to build models to tackle the challenges we face in our daily lives.

Publications

Articles in Refereed Journals

- ◊ Babashov V, Ben Amor S & Reinhardt G. "A Multi-Criteria Decision Analysis Approach For the Design of Drug Formularies" *Medical Decision Making*. 2020

- ◇ Babashov V, Aivas I, Begen MA, Cao JQ, Rodrigues G, D’Souza D, Lock M, Zaric, GS. (2017). “Reducing Patient Wait Times for Radiation Therapy and Improving Treatment Planning Efficiency: A Discrete-Event Simulation Model”. *Clinical Oncology* 29 (6): 385–391.
- ◇ Babashov V, Begen MA, Mangel J, Zaric, GS. (2017). “Economic evaluation of brentuximab vedotin for persistent Hodgkin lymphoma”. *Current Oncology* 24(1): e6–e14.
- ◇ Piwko C, Koren G, Babashov V, Vicente C, Einarson TR. (2013). “Economic Burden of Nausea and Vomiting of Pregnancy in the USA”. *Journal of Population Therapeutics and Clinical Pharmacology* 20(2): e149-e160

Technical Reports

- ◇ Babashov V, Palimaka S, Blackhouse G, O’Reilly D (2015). “Magnetic Resonance-Guided High-Intensity Focused Ultrasound (MRgHIFU) for Treatment of Symptomatic Uterine Fibroids: An Economic Analysis”. *Ontario Health Technology Assessment Series* 15(5): 1–61

Under Review

- ◇ “Setting Wait Time Targets in a Multi-Priority Patient Setting: An Inverse Optimization Approach”

Working Project

- ◇ “Dynamic Advance Patient Scheduling with Intermediate Term Follow-up Appointments”

Conference Presentations

- ◇ Babashov V, Sauré A, Ozturk O and Patrick J. “Setting Wait Time Targets and Capacity in a Multi-Patient Clinical Setting: An Inverse Optimization Approach”. INFORMS Annual Meeting, Seattle, WA, 2019
- ◇ Babashov V, Sauré A, Ozturk O and Patrick J. “Dynamic Advance Patient Scheduling with Intermediate Term Follow-up Appointments”. INFORMS Healthcare, Boston, MA, 2019
- ◇ Babashov V, Sauré A and Patrick J. “Setting Wait Time Targets and Capacity in a Multi-Class Clinical Environment”. INFORMS Annual Meeting, Houston, TX, 2017
- ◇ Babashov V, Ben Amor S and Reinhardt G. “Multi-Criteria Decision Analysis Approach For the Design of Drug Formularies (Poster presentation)”. INFORMS Annual Meeting, Houston, TX, 2017
- ◇ Babashov V, Sauré A and Patrick J. “Setting Wait Time Targets and Capacity in a Multi-Class Clinical Environment”. IFORS/CORS Annual Meeting, Quebec City, QC, 2017
- ◇ Babashov V, Ben Amor S and Reinhardt G. “Optimal Design of Multi-tiered Drug Formularies”. MCDM, Ottawa, ON, 2017
- ◇ Babashov V, Begen MA, Mangel J, Zaric, GS. “Preliminary Economic Evaluation of Brentuximab Vedotin in Relapsed and Refractory Hodgkin Lymphoma”. CORS Annual Meeting, Niagara Falls, ON, 2011

- ◊ Babashov V, Aivas I, Begen MA, Lock M, Zaric GS. “Reducing Wait Times and Improving Treatment Planning Process For Radiation Therapy”. INFORMS Annual Meeting, Charlotte, NC, 2011
- ◊ Babashov V, Begen MA, Mangel J, Zaric, GS. “Economic Evaluation of Brentuximab Vedotin in Relapsed and Refractory Hodgkin Lymphoma (Poster presentation)”. INFORMS Annual Meeting, Charlotte, NC, 2011

Teaching Experience

Instructor

- ◊ University of Ottawa (Undergraduate):

ADM 4307	Business Forecasting Analytics	(Fall 2020)
ADM 2302	Business Analytics	(Fall 2018 & Fall 2019)

Assistantships

- ◊ University of Ottawa (Undergraduate):

ADM 2304	Application of Statistical Methods in Business	(Summer & Winter 2016, Winter 2017, & Summer 2020)
ADM 2303	Statistics for Management	(Fall 2017 & Summer 2019)
ADM 2302	Business Analytics	(Winter 2018)
ADM 3305	Business Simulation Analytics	(Fall 2016)

- ◊ University of Pittsburgh (Undergraduate):

IE 1083	Simulation Modelling with Arena	(Spring 2009)
BUSQOM 0050	Quantitative Methods	(Fall 2008)

Professional/Industry Experience

- ◊ Senior Analyst, Currency Department, Bank of Canada, Ottawa, ON (September 2019 - Present)
- ◊ Health Economist, Health Quality Ontario, Toronto, ON (2013-2014)
- ◊ Health Economics Associate, Pivina Consulting Inc., Mississauga, ON (2012-2014)
- ◊ Data Analyst, Planner & Scheduler, British Petroleum (BP), Baku, Azerbaijan (2006-2008)

Relevant Graduate Coursework

- ◊ University of Ottawa: Applied Probability, Systems Optimization and Management, Simulation and Modelling, Methodological Foundations of Management Research, Theoretical Foundations of

Management, Current Issues In Health Systems Management: Systems, Informatics, and Analytics, Stochastic Optimization

- ◇ Western University: Introduction to Epidemiology, Principles of Biostatistics, Clinical Epidemiology, Multivariable Statistical Methods, Health Economics, Analytic Epidemiology, Health Services Research
- ◇ University of Pittsburgh: Linear Optimization, Simulation Modelling and Applications, Stochastic Processes, Statistics and Data Analysis, Probability, Manufacturing Processes, Supply Chain Analysis, Decision Analysis, Non-linear Optimization, Data Structures, Participatory Modelling & Simulation in Public Health

Service to Profession

- ◇ **Conferences**

Organizing committee member, The 24th International MCDM Conference, July 10-14, 2017, Ottawa, ON, Canada

- ◇ **Ad-hoc reviewer**

Production and Operations Management

Awards and Distinctions

- ◇ National Capital Region Thesis & Poster Competition Second Place Winner, Ottawa, ON, 2019.
- ◇ Ontario Graduate Scholarship (OGS), Telfer School of Management, 2016 - 2017.
- ◇ Graduate Research Fellowship”, Department of Epidemiology and Biostatistics, Western University Canada, 2010-2012.
- ◇ Government of Azerbaijan Graduate Fellowship, Department of Industrial Engineering, University of Pittsburgh, 2008-2010.
- ◇ British Petroleum Undergraduate Scholarship, Department of Industrial Engineering, Qafqaz University, 2005-2008.
- ◇ Ranked First, Department of Industrial Engineering, Qafqaz University, 2007.

Professional Skills

- ◇ General Purpose Programming Languages: Python, Java , SQL
- ◇ Statistical Software: SAS, R, Minitab
- ◇ Simulation Software: Simul8, Simio
- ◇ Optimization Software: Gurobi, CPLEX
- ◇ Language: Fluent in Turkish, English, conversational understanding of Russian

Professional/Academic Affiliations

- ◊ Student Member, The Institute for Operations Research and the Management Sciences (INFORMS).
- ◊ Student Member, Canadian Operational Research Society (CORS).

References

Available upon request.

Ottawa, May 10th 2020.