Abdelhalim **Hiassat**

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Interests

Research Interests

Healthcare systems optimization
Stochastic optimization models
Location models
Data analytics in healthcare
Healthcare policy evaluation
Healthcare economics

Teaching Interests

Linear programming
Stochastic programming
Stochastic models and methods
Probability and statistics
Data analytics
Facility planning and work design

Summary of Qualifications

- 7+ years of academic research experience in operations research models and methods, with focus on healthcare systems modeling, policy evaluation, and healthcare economics.
- 5+ years of teaching experience in industrial engineering and management sciences at the undergraduate and graduate levels, including online teaching.
- Published author in JMS and submitted to IISE Transactions.
- Multiple academic awards, including full scholarships, totaling more than C$200,000.
- Exceptional analytical skills and a strong drive to solve problems.
- Resourceful and creative, with solid verbal and written communication skills.
- Proven leadership skills as demonstrated in leading student organizations and co-organizing an academic conference.

Education

Ph.D. in Management Sciences — *Aug 2017*

University of Waterloo — *Waterloo, Ontario, Canada*

- Thesis: *Resource Allocation Models in Healthcare Decision Making*
- Co-Supervisors: Dr. F. Safa Erenay & Dr. Osman Ozaltin

M.Sc. in Engineering Systems and Management — *2012*

Masdar Institute of Science and Technology — *Abu Dhabi, UAE*

- Thesis: *An Integrated Location-Inventory-Routing Problem: Metaheuristics and Environmental Extensions*
- Supervisor: Dr. Ali Diabat

B.Sc. in Industrial Engineering — *2010*

University of Jordan — *Amman, Jordan*

- Senior Project: *Predicting Stock Price Trend*
- Supervisor: Dr. Sameh Shihabi

Research Experience

Doctoral Researcher
2012 – 2017

University of Waterloo — *Waterloo, Ontario, Canada*

- Efficiently managed the design and implementation of multiple research projects by prioritizing tasks and adapting to changes in project timelines as they arose.
- Comprehensively analyzed and modeled healthcare systems, such as the colorectal cancer screening system, and examined areas of improving efficiency.
- Implemented course research projects in collaboration with other graduate students in the Department in areas of data analytics and operations management.

Master's Researcher
2010 – 2012

Masdar Institute of Science and Technology — *Masdar City, Abu Dhabi, UAE*

- Integrated multiple level of supply chain decisions into a single model.
- Formulated a green supply chain model to account for the carbon footprint of the system.
- Developed metaheuristics to solve the models efficiently.
- Conducted experiments to test the performance of the algorithms using GAMS, Matlab, and CPLEX.

Undergraduate Research Assistant
2009 – 2010

University of Jordan — *Amman, Jordan*

- Proposed methods to gather data regarding stock prices for international companies.
- Developed a framework to study the then-current methods of predicting stock price trends.
- Analyzed different statistical tools and chose the software with suitable features to use in testing and analysis.
- Wrote technical report and orally presented the finding before a jury.
- Received, with other team members, praise for the maturity of work and professionalism of presentation.

Teaching Experience

Instructor
2016 – Ongoing

University of Waterloo — *Waterloo, Ontario, Canada*

Work Design and Facility Planning (Undergrad)	Upcoming Winter 2018
Introduction to Optimization (Undergrad)	Upcoming Winter 2018/Fall 2017
Quantitative Data Analytics (Grad)	Fall 2016
Probability and Statistics (Undergrad)	Summer 2016

- Taught undergrad and grad classes of sizes ranging 40 to 85.
- Designed courses, including lecture notes, homework assignments, quizzes, and exams.
- Assessed students learning and progress through analysis of deliverables and formal and informal feedback.
- Developed in-class interactive activities, including peer instruction, game-based learning, and poll-style questions.
- Managed and mentored multiple teaching assistants and maintained communication among students and the teaching team throughout the class term.
- Received high evaluation scores/feedback from students, and praise from TAs and colleagues.

Online Instructor
2017 – Ongoing

University of Waterloo — *Waterloo, Ontario, Canada*

Principles of Operations Research (Grad)	Fall 2017

- Developed an interactive online learning environment using Adobe Connect, Brightspace, and Crowdmark software solutions.
- Maintained an active online discussions through live sessions and online forums/discussion boards.

Teaching Assistant

2012 – 2017

University of Waterloo

Waterloo, Ontario, Canada

Statistical Methods for Data Analytics (Grad)	Spring 2017
Work Term Report Marking (Undergrad)	Winter 2017/Fall 2016/Fall 2015
Stochastic Models and Methods (Undergrad)	Winter 2016/Winter 2015
Decision Making Under Uncertainty (Undergrad)	Spring 2014
Principles of Operations Research (Grad)	Fall 2013
Introduction to Optimization (Undergrad)	Spring 2013

- Designed and delivered weekly interactive tutorials (weekly for undergrads, and occasionally for grads) to classes of size 15-95 students.
- Developed in-class activities, including interactive games, and group exercises.
- Explained challenging concepts in probability, statistics, and operations research in a simplified, easy-to-understand manner.
- Developed some course content, including lecture slides, assignments, and exams.
- Marked students work and provided constructive written feedback.
- Provided weekly individual instruction and guidance during office hours.
- Received high praise from students and supervising instructors.

Teaching Assistant

2011 – 2012

Masdar Institute of Science and Technology

Abu Dhabi, UAE

Foundations of Probability (Grad)	Winter 2012
Systems Optimization (Grad)	Fall 2011

- Provided weekly group and individual instruction and guidance during office hours.
- Mentored students in their homework assignments and course projects and gave constructive feedback on their work.
- Marked students work and provided written feedback.
- Received praise from students and supervising instructors.

Service and Leadership Experience

Reviewer, Computer and Industrial Engineering Journal — *2017 – Ongoing*

Co-Organizer, Southwestern Ontario Operations Research Day (SWORD) 2017 — *2017*

President, Waterloo Student Chapter, Canadian Operational Research Society — *2016 – 2017*

Representative for the Department of Management Sciences, Engineering Graduate Studies Consortium Tour — *2016*

Panelist, Management Sciences PhD Student Focus Group — *2016*

Vice-President, Student Government Association, Masdar Institute of Science and Technology — *2011*

Teaching Training

Certificate in University Teaching

2012 – 2013

Centre for Teaching Excellence, University of Waterloo

Waterloo, Ontario, Canada

- Attended four workshops on assessing student learning, course design, interactive teaching activities, and understanding the learner and wrote response paper for each.
- Prepared for two teaching teaching practicum and incorporated the feedback given in future course design and delivery.
- Conducted research on student evaluation of teaching and presented findings before peers.

Fundamentals of University Teaching *2012 – 2013*

Centre for Teaching Excellence, University of Waterloo *Waterloo, Ontario, Canada*

- Attended six 2-hour teaching workshops, including: effective lesson plans, classroom delivery, giving quality feedback, teaching methods, effective question strategies, and assessing and improving your teaching.
- Delivered three 15-minutes lessons to peers and CTE staff, and received feedback.
- Developed teaching skills and methodologies through feedback and interaction with peers and instructors.

ExpecTAtions Communications Workshop *Sep 2012*

Faculty of Engineering, University of Waterloo *Waterloo, Ontario, Canada*

- Attended two-day workshop on skills needed to be a teaching assistant, including online components.
- Delivered oral presentation and submitted exercises on successful marking and giving feedback.

Publications

Peer-Reviewed Journal Articles

A. Hiassat, A. Diabat, and I Rahwan, "A genetic algorithm approach for location-inventory-routing problem with persihable products", *Journal of Manufacturing Systems*, vol. 42, pp. 90–103, Jan 2017.

Peer-Reviewed Journal Submissions

A. Hiassat, Osman Ozaltin, and F. S. Erenay, "Reliable facility location with customer preferences", submitted to the IISE Transactions, First Review May 2017.

Conference Proceedings

A. Hiassat and Ali Diabat, "A location-inventory-routing problem with perishable products", *Proceedings of the 41st International Conference on Computers and Industrial Engineering*, Los Angeles, California, USA, Nov 2011.

Presentations

A. Hiassat, "Population-based allocation of CRC screening resources", 21st Conference of the International Federation of Operations Research Societies/Annual Meeting of the Canadian Operational Research Society (IFORS/CORS), Quebec City, Quebec, Canada, Jul 2017.

A. Hiassat, "Reliable Facility Location Model with Customer Choice Integration", Institute for Operations Research and the Management Sciences (INFORMS) Meeting, Philadelphia, PA, USA, Nov 2015.

A. Hiassat, "Reliable Facility Location Model with Customer Preferences", Joint International Meeting of the Canadian Operational Research Society and the Institute for Operations Research and the Management Sciences (CORS/INFORMS), Montreal, Quebec, Canada, Jun 2015.

Scholarships, Awards & Grants

Scholarships

C$90k	**Graduate Research Studentship (GRS),** University of Waterloo	*2012 – 2017*
C$50k	**International Doctoral Student Award (IDSA),** University of Waterloo	*2012 – 2016*
C$70k	**Graduate Student Scholarship,** Masdar Institute of Science and Technology	*2010 – 2012*
C$4,000	**Academic Excellence Scholarship,** University of Jordan	*2005 – 2010*

Institutional Awards

C$3,000	**Faculty of Engineering Award,** University of Waterloo	*2013*
—	**Outstanding Master Thesis Award,** Department of Engineering Systems and Management, Masdar Institute of Science and Technology	*2012*
—	**Student Leadership Award,** Masdar Institute of Science and Technology	*2012*
—	**Excellent Rating – Second in Class,** Industrial Engineering Department, University of Jordan	*2010*

Travel Grants

C$250	**Graduate Student Funding,** Canadian Operational Research Society	*2017*
C$450	**Graduate Studies Research Travel Assistantship,** University of Waterloo	*2017*
C$300	**Research Travel Assistantship,** University of Waterloo	*2017*
C$450	**Graduate Studies Research Travel Assistantship,** University of Waterloo	*2015*
C$500	**Research Travel Assistantship,** University of Waterloo	*2015*
C$1,500	**Student Support Grant,** Summer School on Optimization, University of Calgary	*2013*
C$3,000	**Student Travel Grant,** Masdar Insitute of Science and Technology	*2011*
C$2,500	**Members Travel Grant,** Young Future Energy Leaders, Masdar Institute of Science and Technology	*2011*

Professional Development

Summer School on Optimization *2013*

Department of Mathematics and Statistics, University of Calgary *Calgary, Alberta, Canada*

- Attended workshops and submitted assignments on Combinatorial, Geometric, and Computational Aspects of Linear Optimization, Convex Analysis: Monotone Operators, Variational Analysis, Derivative-Free Optimization, and Computer-Aided Convex Analysis, and Conic Relaxations for Discrete Optimization.
- Delivered a presentation on conic optimization with a partner.

Student Leadership Program Courses *2013*

Student Success Office, University of Waterloo *Waterloo, Ontario, Canada*

- Attended interactive workshops on Exploring the Principles of Leadership, Communication and Leadership Styles, Unleashing your Creative Potential, Motivating Others and Building on your Group's Diversity, and Personality Dimensions.

Young Future Energy Program *2010 – 2012*

Masdar Institute of Science and Technology *Waterloo, Ontario, Canada*

- Attended technical Workshops on: sustainability, solar energy, and wind energy.
- Led debate teams and group discussions on sustainability and alternative energy.
- Traveled to Geneva, Switzerland, to attend the European Future Energy Forum 2011, and co-delivered a presentation on the exhibitors' value.

Technical Skills

Engineering Tools	MATLAB, GAMS, CPLEX, Minitab, WEKA, Primavera
Programming	C/C++, R, Python, LaTeX
Technical Writing	LaTeX, Microsoft Word, Apache Open Office
Technical Drawing	LaTeX, Microsoft Visio

Industry Experience

Research Analyst *2010*

Arab Advisors Group *Amman, Jordan*

- Researched telecommunications companies' financial and technical status and updates.
- Contacted experts in the telecommunications industry in different countries in the Middle East and North Africa and summerized their insights in presentations and reports.
- Wrote reports on the telecommunications industry across the Middle East and North Africa.
- Co-organized a regional telecommunications and media conference in Amman, Jordan, with 200+ attendees.

Industrial Engineering Intern *2009*

Royal Jordanian Airlines *Amman, Jordan*

- Developed process maps for different functions at the human resources department.
- Verified the quality of a new compensation software by reporting the consistency of information across different platforms.
- Co-administered the contract renewal for air crew.

Memberships & Affiliations

Member, Institute for Operations Research and the Management Sciences (INFORMS) *2015 – Ongoing*

Member, Canadian Operational Research Society (CORS) *2013 – Ongoing*