

Ahmed Doha, PhD

Associate Professor of Supply Chain Management and Business Analytics

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PROFILE

I am an Associate Professor whose research asks how artificial intelligence is reshaping the way businesses create and capture value — and then builds the systems that put the answer to work. Spanning operations management, information systems, and innovation, my program pairs deep domain theory with a design-science, builder's craft: I do not only study emerging technologies such as large language models, knowledge graphs, and AI agents, but design, develop, and deploy the platforms that operationalize them, and evaluate their impact in the field.

My path to management science began in engineering: before my PhD in Operations Management and Information Systems at York University, I trained as an electrical and computer engineer and worked in industry as a wireless networks design engineer at Nortel Networks and a regional project manager at Lucent Technologies. That technical foundation continues to distinguish my scholarship, which I lead from solid engineering ground — writing the code and building the AI systems my empirical questions require. My work appears in leading journals including the Journal of Product Innovation Management, R&D Management, and the Journal of Retailing and Consumer Services, and has been funded by SSHRC, NSERC, and CANARIE — most recently by an Insight Grant that ranked first in Canada in its adjudication committee.

RESEARCH & PRACTICE INTERESTS

My research advances theory across four connected domains — supply chain management, e-commerce and recommendation systems, business model innovation, and technology and innovation management — and, increasingly, the science of science: how research knowledge itself is produced and consumed, and how the trajectories of breakthrough ideas can be modeled and accelerated. My current interests center on applied AI in the enterprise: AI agents and robotics for productivity and decision-making, the design of domain-specialized Expert AI agents, value creation in AI and e-commerce, and the design of supply chains for an AI-dominated era.

Methodologically, my work is computational and multi-method, combining applied artificial intelligence and large language models, data science and analytics at the scale of millions of documents and billions of data points, graph and network methods, empirical quantitative methods (econometric and survey-based), field experimentation, and design-science / action research — integrated within a design-research framework that validates theoretical contributions in working systems, not only in datasets.

ACADEMIC APPOINTMENTS

2018–present	Associate Professor of Supply Chain Management and Business Analytics , Sprott School of Business, Carleton University
2012–2018	Assistant Professor of Supply Chain Management , Sprott School of Business, Carleton University
2010–2012	Lecturer in Supply Chain Management , Sprott School of Business, Carleton University

EDUCATION

2012	PhD, Operations Management and Information Systems (Strategy minor) — Schulich School of Business, York University.
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Dissertation: The Dynamics between Imitation and Innovation within the Firm. Committee: Mark Pagell (Chair) (York U), Morgan Swink (Michigan State U), Ajay Agrawal (U of Toronto), David Johnston (York U).

2005 **MSc, Electrical and Computer Engineering** — Queen's University.

Thesis: Performance Evaluation and Enhancement of Multiple Access Control in IEEE 802.16 Networks. Supervisor: Hossam Hassanein (Queen's U).

1996 **BSc, Electrical and Computer Engineering** — Mansoura University. Thesis: "Neural Networks Applications in Artificial Intelligence."

Thesis: Character Recognition using Neural Networks Circuit Design and Implementation. Supervisor: Mohy Eldin Aboulseoud (Mansoura U & Technical Military Academy)

INDUSTRY & TECHNICAL EXPERIENCE

2006–2010 **Research Assistant & Instructor of Supply Chain Courses**, Schulich School of Business, York University.

2003–2006 **Research & Teaching Assistant, Electrical & Computer Engineering** — Queen's University and University of Waterloo.

1999–2002 **Regional Project Manager**, Lucent Technologies Inc.

1997–1998 **Wireless Networks Design Engineer**, Nortel Networks Inc.

TECHNICAL SKILLS

- **Artificial intelligence & ML:** large language models, generative AI, deep learning, natural language processing, knowledge graphs, embeddings, recommender systems.
- **Data science & analytics:** large-scale data engineering (corpora of millions of documents and billions of data points), scientometric and bibliometric analytics, econometrics, survey and structural-equation modeling.
- **Research methods:** empirical quantitative methods (econometric and survey-based), graph and network methods, field and lab experimentation, design-science / action research, stochastic modeling and performance optimization.
- **Programming & platforms:** Python; full-stack web and application development; Shopify SDK; GPU / high-performance computing.

SOFTWARE & PLATFORMS DEVELOPED

2024 **LitDig.com** — the first Business & Management domain-specialized knowledge-graph data infrastructure and analytics platform; uses deep learning to extract and interrelate the literature's ontological assets (theoretical constructs, hypotheses) into a knowledge graph and delivers scientometric analytics; covers the Financial Times 50 journals.

2020 **DeepGraph** — an AI-based literature-review platform that reduces the time and effort to conduct business and management literature reviews.

2014 **bndler.com** — a B2C e-commerce platform enabling supplier- and buyer-community collaboration to aggregate supply and demand for revenue-management applications.

2013 **kwinka.com** — a C2B2C e-commerce platform enabling consumers to group for customized services and providers to form consumer groups.

2008 **IxxoRestaurant** — an end-to-end marketing–operations interface for restaurant order fulfillment.

PATENTS

- Doha, A.. Method and System for Bundling Heterogeneous Demand at Discount. Pending U.S. utility patent application, United States Patent and Trademark Office.

GRANTS & FUNDING

2025	Principal Investigator , SSHRC Insight Grant (5-year) — “Empowering Canadian SMEs to Compete with E-Commerce Giants.” (\$200,000) Ranked 1st in Canada in the Business and Management adjudication committee (Committee B, large grants) . With Rasha Kashef (Toronto Metropolitan U) and Khaled Hassanein (McMaster U).
2022–2023	Principal Investigator , SSHRC Explore/Bridge Grant — “The Pursuit of Breakthroughs: Trajectories, Antecedents, and Consequences in Traversing the Map of Knowledge in Business and Management Research” (\$10,000).
2020–2023	Principal Investigator , SSHRC Insight Development Grant — “DeepGraph: Beyond Domain-Agnostic Search in Business and Management Literature” (\$60,000).
2013–2016	Principal Investigator , SSHRC Insight Development Grant — “Supply Chain Disintegration: Understanding the Dissolution of Supply Chain Social Capital” (\$65,000). With Khaled Hassanein (McMaster U).
2014–2015	Co-Investigator , CANARIE — “Green 2.0: A Middleware Platform for Enabling Socio-Technical Analysis of Green Buildings” (\$500,000 total; \$42,000 portion). PI: Tamer El-Deraby (U of Toronto).

PUBLICATIONS

Refereed Journal Articles

- Doha, A., Elnahla, N., & McShane, L. (2019). Social commerce as social networking. *Journal of Retailing and Consumer Services*, 47, 307–321. (ABDC A)
- Doha, A., Pagell, M., Swink, M., & Johnston, D. (2018). The imitator’s dilemma: Why imitators should break out of imitation. *Journal of Product Innovation Management*, 35(4), 543–564. (ABDC A*)
- Doha, A., Ghasemaghaei, M., & Hassanein, K. (2017). Social bundling: A novel method to enhance consumers’ intention to purchase online bundles. *Journal of Retailing and Consumer Services*, 35, 106–117. (ABDC A)
- Doha, A., Pagell, M., Swink, M., & Johnston, D. (2016). Measuring firms’ imitation activity. *R&D Management*, 47(4), 522–533. (ABDC A)
- Doha, A., Das, A., & Pagell, M. (2013). The influence of product life cycle on the efficacy of purchasing practices. *International Journal of Operations & Production Management*, 33(4), 470–498. (ABDC A)
- Doha, A., Hassanein, H., & Takahara, G. (2009). On the effect of reservation period on performance of the IEEE 802.16 R-MAC protocol. *International Journal of Wireless Communications and Mobile Computing*, 9(9), 1251–1263.

Refereed Conference Proceedings

- Jobinpicard, P., & Doha, A. (2022). Towards the design of effective whistleblowing systems. *Proceedings of the 55th Hawaii International Conference on System Sciences (HICSS)*.
- Doha, A. (2020). Domain-specific knowledge graphs: The case for literature discovery in social sciences and humanities. *ACM International Conference on Software and Information Engineering (ICSIE)*. Best Presentation Award.
- Elnahla, N., Doha, A., & McShane, L. (2017). Group formation in reverse auction service e-commerce. *International Conference on Business & Entrepreneurship, Supply Chain Management & Information Systems (ICBESI)*.

- Doha, A., Ghasemaghaei, M., & Hassanein, K. (2016). Group bundling versus traditional bundling in e-commerce: A field experiment. *Proceedings of the 49th Hawaii International Conference on System Sciences (HICSS)*.
- Doha, A., Hassanein, K., & Mahmood, K. (2015). An electronic clearance marketplace leveraging collaborations in supplier and buyer communities: A design science research study. *Proceedings of the 48th Hawaii International Conference on System Sciences (HICSS)*.
- Doha, A., Biehl, M., & Mahmood, K. (2014). Framework for evaluating approaches to poverty alleviation. *Best Paper Proceedings, Social Issues in Management Division, Academy of Management*.
- Doha, A. (2012). The dynamics between imitation and innovation within the firm. *Best Paper Proceedings, Technology and Innovation Management Division, Academy of Management*.
- Doha, A., Das, A., & Pagell, M. (2009). Does product life cycle impact the relationship between purchasing practices and purchasing performance? *Decision Sciences Institute Annual Meeting*.
- Doha, A. (2009). Product innovations: The missing cost dimension. *International Association for Management of Technology (IAMOT) Conference*.
- Earlier engineering proceedings (2004–2007): IEEE Local Computer Networks; IEEE BROADNETS; ACS/IEEE AICCSA — on reservation-based medium-access control for IEEE 802.16 networks.

Book Chapters

- Doha, A., & Hassanein, H. (2007). IEEE 802.16 multiple access control: Resource allocation for reservation-based traffic. In *WiMAX Technologies, Performance Analysis, and QoS*. CRC Press (Taylor & Francis).

TEACHING

Course development and delivery, Sprott School of Business:

- BUSI 6306 — Artificial Intelligence Research Methods in Business (PhD)
- BUSI 4301 — Applied Artificial Intelligence and Business Decision Models
- BUSI 4331 — Industry 4.0 Technologies and Management
- BUSI 4607 — Management of Technology and Innovation
- BUSI 4431 — e-Supply Chain Management Technologies
- BUSI 2301 — Introduction to Supply Chain and Operations Management
- BUSI 4302 — Quality Management
- BUSI 2300 — Introduction to Management Science
- BUSI 4309 — Practicum in Supply Chain Management

PROFESSIONAL & ACADEMIC SERVICE

2024	Co-Chair, AI Applications in Business Track, International Conference on Information Resources Management (Conf-IRM), Cairo.
2021	Adjudicator, SSHRC Insight Development Grant competition.
2014	Member, SSHRC Insight Development Grant Funding Review Panel.
2011–2017	Carleton / Sprott committees: Tenure & Promotion (Standards Committee; Member-Elect), Intellectual Property, Entrepreneurship, and Technology & Innovation Management Council.
Ongoing	Reviewer for operations-management and computer-engineering journals and conferences, including the Academy of Management and the Decision Sciences Institute.

HONOURS & AWARDS

2025	Ranked 1st in Canada — SSHRC Insight Grant competition, Business & Management Committee (Committee B, large grants), for “Empowering Canadian SMEs to Compete with E-Commerce Giants.”
2020	Best Presentation Award, ACM International Conference on Software and Information Engineering (ICSIE), for “Domain-Specific Knowledge Graphs: The Case for Literature Discovery in Social Sciences and Humanities.”
2014	Best Paper Proceedings, Social Issues in Management Division, Academy of Management, for “Framework for Evaluating Approaches to Poverty Alleviation.”
2012	Best Paper Proceedings, Technology and Innovation Management Division, Academy of Management, for “The Dynamics between Imitation and Innovation within the Firm.”
2010	Best Reviewer Award, Technology and Innovation Management Division, Academy of Management.
2006–2009	Alexander Graham Bell Canada Graduate Scholarship (\$105,000), NSERC.
2003–2006	Ontario R&D Creativity / Bell Scholarship; McLaughlin Fellowship; Graduate Awards, Queen's University; Best Honours Project TA Award (Procter & Gamble).

INVITED TALKS & MEDIA

2020	“Artificial Intelligence in Business and Management,” Sprott School of Business, Carleton University.
2016	“Reinventing Bundling for the Future of eTail,” invited talk, eTail Canada, Toronto.
2012	“Service Supply Chain: Opportunities and Challenges for Innovation and Export,” invited talk, PMAC Ontario; guest appearances on “All in a Day,” CBC Radio.