Rouba Ibrahim

Contact Information	School of Management at University College London One Canada Square London E14 5AB, U.K. *E-mail:* rouba.ibrahim@ucl.ac.uk *Web:* http://www.roubaibrahim.com

Academic Positions

University College London, School of Management

2012–2016	Assistant Professor
2016–2020	Associate Professor
2020–	Professor
2021-	Head, Operations & Technology Group

Education

American University of Beirut

2002	B.S., Mathematics

Stony Brook University

2004	M.S., Applied Mathematics and Statistics

Columbia University

2010	Ph.D., Operations Research

Research Interests

Methodology: Queueing theory; stochastic modelling; data analytics.
Application areas: Service operations; healthcare; sharing economy.

Journal Publications

1. Ibrahim, R. and W. Whitt. Real-Time Delay Estimation Based on Delay History. *Manufacturing and Service Operations Management*, 11(3), 2009, pp. 397–415.

2. Ibrahim, R. and W. Whitt. Real-Time Delay Estimation in Overloaded Multiserver Queues with Abandonment. *Management Science*, 55(10), 2009, pp. 1729–1742.

3. Ibrahim, R. and W. Whitt. Real-Time Delay Estimation Based on Delay History with Time-Varying Arrivals. *Production and Operations Management*, 20(5), 2011, pp. 654–667.

4. Ibrahim, R. and W. Whitt. Wait-Time Predictors for Customer Service Systems with Time-Varying Demand and Capacity. *Operations Research*, 59(5), 2011, pp. 1106–1118.

5. Ibrahim, R. and P. L'Ecuyer. Forecasting Call Center Arrivals: Fixed-Effects, Mixed-Effects, and Bivariate Models. *Manufacturing and Service Operations Management*, 15(1), 2013, pp. 72–85.

6. Ibrahim, R., L'Ecuyer, P., Shen, H. and M. Thiongane. Inter-Dependent, Heterogeneous, and Time-Varying Service-Time Distributions in Call Centers. *The European Journal of Operational Research*, 250(2), 2016, pp. 480–492.

7. Ibrahim, R., Kucukyazici, B., Verter, V., Gendreau, M. and M. Bolstein. Designing Individualized Treatment: An Application to Anticoagulation Therapy. *Production and Operations Management*, 25(5), 2016, pp. 902–918.

8. Ibrahim, R., Ye, H., L'Ecuyer, P. and H. Shen. Modeling and Forecasting Call Center Arrivals: A Literature Survey and a Case Study. *The International Journal of Forecasting*, 32(3), 2016, pp. 865–874.

9. Ibrahim, R., Armony, M. and A. Bassamboo. Does the Past Predict the Future? The Case of Delay Announcements in Service Systems. *Management Science*, 63(6), 2017, pp. 1762–1780.

10. Ibrahim, R. Managing Queueing Systems where Capacity is Random and Customers are Impatient. *Production and Operations Management*, 27(2), 2018, pp. 207–383.

    • Honorable mention, 2015 Informs JFIG paper competition

11. Ibrahim, R. Sharing Delay Information in Service Systems: A Literature Survey. *Queueing Systems,* 89(1-2), 2018, pp. 49–79.

12. Ibrahim, R. and S. Kim. Is Expert Input Valuable? The Case of Predicting Surgery Duration. *Seoul Journal of Business*, 25(2), 2019, pp. 1–34.

13. Dong, J. and R. Ibrahim. Managing Supply in the On-Demand Economy: Flexible Workers, Full-Time Employees, or Both? *Operations Research*, 68(4), 2020, pp. 965–1284.

14. Bassamboo, A. and R. Ibrahim. A General Framework to Compare Announcement Accuracy: Static vs. LES-based Announcement. *Management Science*, 67(7), 2021, pp. 3985–4642.

15. Ibrahim, R., Kim, S. and J. Tong. Eliciting Human Judgment for Prediction Algorithms. *Management Science*, 67(4), 2021, pp. 1993-2656.

16. Dong, J. and R. Ibrahim. On the SRPT Scheduling Discipline in Many-Server Queues with Impatient Customers. *Management Science*, 67(12), 2021, pp. 7291-7950.

17. Ibrahim, R. Personalized Scheduling in Service Systems. *Queuing Systems: 100 Views on Queueing (SI)*, 100, 2022, pp. 445–447.

18. Momesso, T., B. Gokpinar, R. Ibrahim, and A. Boyle. The Effect of Removing the Four-Hour Access Standard in the ED: A Retrospective Observational Study. *Emergency Medicine Journal*, 40, 2023, pp. 630-635.

19. Estrada, A., Ibrahim, R. and D. Zhan. On Customer (Dis)honesty in Priority Queues: The Role of Lying Aversion. *Management Science*, forthcoming.

    • Second place, 2021 Behavioral Operations Management Best Working paper
    • Finalist, 2021 Service Science IBM Best Student Paper (A. Estrada)

REFEREED PROCEEDINGS AND BOOK CHAPTERS

20. Ibrahim, R. and W. Whitt. Real-Time Delay Estimation in Call Centers. *Proceedings of the 40th Winter Simulation Conference*, 2008, pp. 2876–2883.

21. Ibrahim, R. and W. Whitt. Delay Predictors for Customer Service Systems with Time-Varying Parameters. *Proceedings of the Winter Simulation Conference*, 2010, pp. 2375–2386.

22. Ibrahim, R., L'Ecuyer, P., Regnard, N. and H. Shen. On the Modeling and Forecasting of Call Center Arrivals. *Proceedings of the Winter Simulation Conference*, 2012, pp. 23–35.

23. Ibrahim, R. On Queues with a Random Capacity: Theory and Application. In: Hu M. (eds) *Sharing Economy,* Springer Series in Supply Chain Management, 6, 2019, pp. 279-316.

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<tr><td>UNDER
REVIEW</td><td>24. Afeche, P., Hu, J., Ibrahim, R. and V. Sarhangian. The Effects of Information Granularity on Abandonment and Congestion in Non-Stationary Priority Queues. Reject & Resubmit at *Management Science.*</td></tr>
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24. Afeche, P., Hu, J., Ibrahim, R. and V. Sarhangian. The Effects of Information Granularity on Abandonment and Congestion in Non-Stationary Priority Queues. Reject & Resubmit at *Management Science.*

25. Dong, J. and R. Ibrahim. Shortest-Job-First Scheduling in Many-Server Queues with Impatient Customers and Noisy Service-Time Estimates. Major revision at *Operations Research.*

26. Tuncalp, F., Ibrahim, R., Kim, S-H., and J. Tong. When Should Doctors and Patients Use Shared Decision-Making Under Bounded Rationality?

27. Estrada, A., Ibrahim, R. and M. Kremer. Persuasive Communication in Operations.

PROFESSIONAL
ACTIVITIES

- **Associate editor**

2017–	*Management Science (Stochastic Models and Simulation)*
2018–2024	*Operations Research (Stochastic Models; Operations and Supply Chain Management)*
2018–2024	*IISE Transactions (Stochastic Modelling)*
2019–2024	*Manufacturing and Service Operations Management*
2022-	*Queueing Systems*

- **Area editor**

2024–	*Operations Research (Operations and Supply Chain Management)*

- **Guest editor**

2023	*Queueing Systems: SI on Queues in Operations Management*

- **Organizing committees**

2015	9th Young European Queueing Theorists workshop, Eurandom, Eindhoven, The Netherlands (with Fabio Cecchi and Florian Simatos)
2016	Applied Probability Society cluster, INFORMS, Nashville, USA (with David Goldberg)
2018	StochMod, conference of the EURO working group on stochastic modeling, Lancaster, U.K. (with Peter Jacko)
2018	Service Management SIG workshop, MSOM, University of Texas at Dallas, USA (with Ming Hu)
2020	MSOM Service Operations Track, INFORMS, Maryland, USA (with Jing Dong)
2022	Service Management SIG workshop, MSOM, TU Munich, Germany (with Jing Dong)
2022-2023	SNAPP seminar series (with Chang-Han Rhee, Seva Shneer, Kuang Xu, and Yuan Zhong)

2023	Applied Probability Society conference (Nancy, France)	
2024	Stochastic Networks conference (Stockholm, Sweden)	
2024-2026	European Technology & Operations Management (TOM) seminar series (with Anna Saez de Tejada Cuenca, Spyros Zoumpoulis, and Alex Yang)	

- **Professional society roles**

2015-2017	Applied Probability Society council (member)
2019-2020	MSOM Society (secretary/ treasurer)
2023-2025	INFORMS publications committee (member)
2023-2025	Service Management Special Interest Group Chair for the MSOM Society

- **Ad-hoc referee**

Operations Research, Management Science (Distinguished service award 2014, 2018), Manufacturing and Service Operations Management (Meritorious service award 2017), Production and Operations Management, etc.

INVITED TALKS AT ACADEMIC INSTITUTIONS	2009	University of Montreal, The George Washington University (School of Business), University of British Columbia (Sauder)
	2010	University of Michigan (Ross), University of Rochester (Simon)
	2012	University of Alberta (School of Business), University of Groningen (Faculty of Economics and Business), Erasmus University (Rotterdam School of Management), Vrije Universiteit Amsterdam (Mathematics), Delft University (Applied Mathematics), London Business School, City University London (Cass), University College London (Management Science & Innovation)
	2013	Vrije Universiteit Amsterdam (Mathematics)
	2014	Eindhoven University of Technology (YEQT Workshop)
	2016	Durham University (Business School), Frankfurt School of Finance and Management, Oxford University (Said), London Business School, Northwestern University (Kellogg), University of Manchester (Mathematics)
	2017	Lancaster University (Management School), University of Edinburgh (Mathematics), Columbia University (IEOR, Applied Proability Day), University of Chicago (Booth), Indiana University (Kelley), University of Illinois at Urbana Champaign (College of Business), University of North Carolina at Chapel Hill (Kenan-Flagler, discussant at MSOM Service SIG)
	2018	MIT (Sloan), University of Texas at Austin (OR & IE), University of Southern California (Marshall), Stanford (GSB)
	2019	Imperial College London (Business School)
	2020	Birkbeck, University of London (Maths & Stats)
	2021	University of Toronto (Rotman), University of Luxembourg (Economics & Management), CUNY (Baruch College), European TOM Seminar Series, Indiana University (Kelley, discussant at MSOM Service SIG)
	2022	Chinese University of Hong Kong (DSE), VU Amsterdam (Mathematics), University of Western Ontario (Ivey), Cornell University (Stochastic Networks conference), UCLA (Anderson), Johns Hopkins University (Carey), Data-Driven Queueing Challenges II (multi-continent online workshop).
	2023	University of Bath (School of Management), University of Bristol (Mathematics), Imperial College London (Business School), Oxford (Said), Durham (Business school).

	2024 (invited)	INSEAD (TOM), Carnegie Mellon University (Tepper), Royal Statistical Society (workshop on Queues and Applications), London Business School (London Operations Day).

KEYNOTE PRESENTATIONS	2023	CORS Virtual Micro-Event, Canadian Operations Research Society.
	2024	Dutch conference on the Mathematics of Operations Research, Soesterberg, The Netherlands.
	2024	New2OR Conference, London, U.K.

TEACHING

Stony Brook University
Precalculus (undergraduate)

Columbia University
Probability (undergraduate)

University College London
Mathematical Foundations of Management (undergraduate)
Stochastic Modelling (Ph.D.)

London Business School (as Guest Lecturer)
Operations Management (MBA, core course)

SUPERVISION

Doctoral students
Arturo Estrada (2018 -)
Tomas Momesso (2020 -)

Postdoctoral students
Junqi Hu (2020 -), joint with Philipp Afeche and Vahid Sarhangian
Feray Tuncalp (2021 -), joint with Song-Hee Kim and Jordan Tong

PATENTS "Method for predicting call waiting times." 2012. US Patent 8,311,208 (with P. Tendick).

INTERNAL SERVICE (AT UCL)	2012–2013	Coordinator of the Management Science program (Mathematics track) Departmental representative for Integrated Engineering Program (IEP)
	2013	Internal examiner, PhD of Ioannis Fragkos
	2015–2020	Seminar series organizer
	2016	OM area reading group organizer
	2018	Internal examiner, PhD of Ryan Palmer
	2020	Internal examiner, PhD of Xiaojia Guo

PREVIOUS POSITIONS	2007	Deutsche Bank, summer associate, Global Markets
	2009	Avaya Research Labs, research scientist, Data Analysis department
	2010–2011	Bell Canada, consultant
	2010	University of Montreal, postdoctoral fellow (with P. L'Ecuyer)
	2011	McGill University, postdoctoral fellow (NSERC CREATE Program)