EMPLOYMENT

Imperial College Business School Sept 2022–
Associate Professor of Analytics & Operations (with tenure)

Amazon Aug 2021–
Amazon Visiting Academic (virtual, flex-time)
Last Mile Science, Seattle WA
(Maternity leave: Dec 2021–Mar 2022)

Robert H. Smith School of Business, University of Maryland Aug 2020–Aug 2022
Associate Professor (with tenure)
Decision, Operations and Information Technologies (DO&IT)
(Maternity leave: 4 months in 2021–2022 academic year)

Columbia Graduate School of Business Fall 2016
Visiting Assistant Professor
Decision Risk & Operations

London Business School, London, UK Jul 2012 – Jul 2020
Assistant Professor
Management Science & Operations

CURRENT EDITORIAL POSITIONS

Associate Editor, *Operations Research Letters* 2021–
Associate Editor, *M&SOM* 2021–
Associate Editor, *Management Science* 2019–

EDUCATION

Ph.D. Operations Research, University of California, Berkeley. May 2012

M.A. Statistics, University of California, Berkeley. May 2011

M.Sc. Industrial Engineering & Operations Research (IEOR) May 2008
University of California, Berkeley.

B.Sc. (Hons.), University of Sydney, Australia. May 2007
Majors: Physics & Mathematics. 1st Class Hons. with University Medal.

MAJOR HONOURS & AWARDS

2022, 2021 Britannica's 20 under 40 Young Shapers of the Future in Education
2021 Best Operations Management Paper in *Operations Research* Award
2020 Poets & Quants World's Best 40 Under 40 MBA Professor
2020, 2019 *M&SOM* Meritorious Service Award
2019 Finalist, INFORMS Data Mining Section Best Paper Award
2019, 2018 *Management Science* Distinguished Service Award
2018 Honorable Mention, INFORMS Junior Faculty Interest Group Paper Competition
2018 Best Teacher Award, Masters in Management, LBS

2011 Katta Murty Best Paper Prize in Optimization, UC Berkeley
2007 University Medal in Physics, University of Sydney, Australia
2002 Korean Ministry of Education Prize for Academic Excellence
2002 Australian Student Prize

MAJOR RESEARCH GRANTS/FELLOWSHIPS/SCHOLARSHIPS

2012–2020 Research And Materials Development Fund, London Business School (£57,500)
2015 Deloitte Institute of Innovation & Entrepreneurship Research Award (£7,500)
2008–2011 University of Sydney Alumni Traveling Scholarship (AU$60,000)
2007–2008 UC Berkeley College of Engineering Fellowship (US$45,000)
2003–2006 Kwanjeong Educational Foundation Scholarship (AU$100,000)
2003–2006 University of Sydney Scholarship of Merit (AU$20,000)

CURRENT RESEARCH INTERESTS

- Analytics for sustainable operations
- Machine learning for Operations Management
- Data-driven decision-making/optimization

PUBLICATIONS IN REFEREED JOURNALS

1. Gah-Yi Ban & N. Bora Keskin. "Personalized Dynamic Pricing with Machine Learning: High Dimensional Features and Heterogeneous Elasticity", *Management Science*, Vol. 67 No. 9 (Sept 2021) pp. 5549–5568.
-Honorable Mention, INFORMS Junior Faculty Interest Group Paper Competition 2018
-Finalist, INFORMS Data Mining Section Best Paper Award 2019

2. Gah-Yi Ban. "Confidence Intervals for Data-driven Inventory Policies with Demand Censoring", *Operations Research*, 68(2):309-326 (2020).

3. Gah-Yi Ban, Jérémie Gallien & Adam J. Mersereau. "Dynamic Procurement of New Products with Covariate Information: The Residual Tree Method", *Manufacturing & Service Operations Management*, Fall 2019, 21(4):798-815.

4. Gah-Yi Ban & Cynthia Rudin. "The Big Data Newsvendor: Practical Insights from Machine Learning", *Operations Research*, 67(1):90–108 (2019).
- 2021 M&SOM Best OM Paper in *Operations Research* Award
- Coverage by Amazon Science

5. Gah-Yi Ban, Noureddine El Karoui & Andrew E.B. Lim. "Machine Learning & Portfolio Optimization", *Management Science*, Vol. 64 No. 3 (March 2018) pp. 1136–1154.

6. Andrew E.B. Lim, J. George Shanthikumar & Gah-Yi Vahn. "Robust Portfolio Choice with Learning in the Framework of Regret: Single Period Case", *Management Science*, Vol. 58 No. 9 (September 2012) pp. 1747–1760.

7. Andrew E.B. Lim, J. George Shanthikumar & Gah-Yi Vahn. "Conditional Value-at-Risk in Portfolio Optimization: Coherent but Fragile", *Operations Research Letters*, Vol. 39 No. 3 (2011) pp. 163–171.

8. Gah-Yi Vahn, Thomas P. White, Michael J. Steel, C. Martijn de Sterke, Kokou Dossou & Lindsay C. Botten. "Modeling Light Propagation in Photonic Crystal Devices", *Journal of Applied Physics*, 102, 053103 (2007).

BOOK CHAPTERS

    1. G-Y. Ban. "Pricing in High Dimensions". In Chen, Jasin & Shi (eds.). The Elements of Joint Learning and Optimization in Operations Management, Springer, 2022. https://doi.org/10.1007/978-3-031-01926-5

WORKING PAPERS & WORK-IN-PROGRESS

    1. "Model Mis-specification in Newsvendor Decisions: A comparison of Frequentist Parametric, Bayesian Parametric and Nonparametric approaches." (with Zhenyu Gao & Fabian Taigel)

    2. "Selling Personalized Upgraded Substitutes and Complements in Online Grocery Retail" (with M. Hichame Benbitour & Boxiao Beryl Chen)

    3. "Structural Estimation of Combinatorial Auctions." (with Caleb J.H. Park & Richard Steinberg)

    4. "Models and Analytics for Sustainable Rental Fashion." (with Wedad J. Elmaghraby, L. Beril Toktay & Jiannan Xu)

    5. "Deep Reinforcement Learning for Joint Inventory and Pricing Optimization with Censored Demand" (with Korel Gundem & Zhengling Qi)

    6. "Multi-period Newsvendor Optimization for Capacity Planning" (with Abhilasha Katariya, Chinmoy Mohapatra & Liron Yedidsion)

OTHER PUBLICATIONS

    1. G-Y. Ban. "Can Machine Learning Save the Planet?" *London Business School Review*, June 2017.

    2. G-Y. Ban. "Business Analytics in the Age of Big Data," *Business Strategy Review*, Autumn 2014, Vol. 25, Issue 3, pp. 8-9.

TEACHING

At Imperial:
- *Weekend MBA*
  Decision Analytics   Summer 2023 (sch.)
- *PhD*
  Topics in Operations Management and Analytics   Summer 2023 (sch.)
- *MSc. Business Analytics*
  Digital Marketing Analytics   Summer 2023 (sch.)
- *Full-Time MBA*
  Business Analytics   Autumn 2022

At Robert H. Smith Business School, UMD:
- *PhD*
  Machine Learning for Decision-Making & Causal Inference   Spring 2022
- *Part-Time Evening MBA/Flex MBA*
  Data Mining & Predictive Analytics   Summer 2022
  Data-Driven Decision Making II   Fall 2020

At London Business School:
- *Executive MBA*
  Core EMBA Global-Asia: Decision Models   Fall 2017–2019
  Core EMBAJ London: Decision & Risk Analysis   Summer 2018
- *MBA*
  Core MBA: Data, Models & Decisions   Fall 2012,3
- *Masters in Management*

Core MIM: Decision & Risk Analysis		Spring 2016–2020
Core MIM: Management Analysis & Systems		2014-5
Core MIM: Data Analytics for Management		Fall 2015

- *PhD*

PhD Advanced Optimization (5–10 sessions)	Summer 2013,5,7,9
PhD Inventory Theory (2 of 10 sessions)	Summer 2019

- *Other programs*

Co-lead, EMBA/Sloan Global Business Assignment — SF/Silicon Valley	July 2018–
Coordinator, London Business Experience in Big Data	Summer 2015,6,7
Custom Executive Education (Sberbank)	June 2015,6

At Columbia GSB

PhD mini-course, Machine Learning for Operations	Fall 2016

PHD/POSTDOC SUPERVISION & FIRST POSITIONS

Jiannan Xu (UMD)	1st Year PhD Faculty Mentor	2021–2022
Caleb J.H. Park (LBS)	Co-advisor	2016–2023
First position:	J.P. Morgan	
M. Hichame Benbitour (Centrale Supelec)		
	Postdoctoral Associate	April–Dec 2020
First position:	Assistant Professor, EM Normandie Business School	
Zhenyu Gao (Tsinghua)	Visiting PhD Student	2018–9
First position:	Algorithm Engineer, JD.com	
Fabian Taigel	(Würzburg)	
	Visiting PhD Student	Summer 2018
First position:	Co-founder, BäckerAI	

PHD EXAMINATION COMMITTEES

Xiaoling Mei	External Examiner (U Carlos III de Madrid)	2015
Alberto Martin-Utrera	External Examiner (U Carlos III de Madrid)	2013

INVITED RESEARCH SEMINARS

Cambridge (Judge Business School '13, Mathematics '16), Chicago Booth Business School ('15), Columbia (Graduate School of Business/Industrial Engineering & Operations Research joint seminar '14, Graduate School of Business DRO Brown Bag '16), Cornell (SC Johnson College of Business, '20) Duke Fuqua School of Business ('14), Georgetown U (McDonough School of Business '23) Georgia Tech (Industrial & Systems Engineering '19, Scheller College of Business '19), HEC Montreal (Decision Sciences '23), Hong Kong University Business School ('17), Hong Kong University of Science & Technology (Industrial Engineering and Decision Analytics '17), Imperial College Business School ('13, '22), INSEAD ('16), Korea University Business School ('11), London Business School ('12, internal '14, internal '15), London School of Economics (Operations '13, Statistics '19), Machine Learning NeEDS Mathematical Optimization ('23), Massachusetts Institute of Technology (Simchi-Levi group '14, Sloan School of Management '14, Computer Science & Artificial Intelligence Laboratory '16, Laboratory for Information & Decision Sciences '19), Northwestern (Kellogg School of Management '15), New York University (Stern School of Business '14, '16), Seoul National University (Industrial Engineering '11), Stanford (Graduate School of Business '14), TU Eindhoven (OPAC group, '21), UC Berkeley (Industrial Engineering & Operations Research '14), University College London (School of Management '13, '19), University of British Columbia (Sauder School of Business, '19), University of Maryland (Robert H. Smith School of Business DO&IT '19, School-wide Seminar Series '20), University of North Carolina (Kenan-Flagler Business School '16), University of Texas

at Austin (McCombs Business School '13), University of Texas at Dallas (Naveen Jindal School of Management '13), University of Virginia (Darden; '22), Wilfrid Laurier University (Lazaridis School of Business & Economics '23)

INVITED INDUSTRY PRESENTATIONS

AMZL Research Science Workshop ('22); Amazon Tech Talk ('21); Blue Yonder ('16); IBM TJ Watson Research Center ('11); SAMSI ('11)

ACADEMIC CONFERENCE & WORKSHOP PRESENTATIONS

* given by co-author; ** by selection or sponsored invitation

INFORMS Annual Meeting: Hybrid 2021 (1+1* talks); Virtual 2020 (1 talk + 1 panel member); Seattle 2019 (3 talks); Phoenix 2018 (1 session chair, 2+2* talks); Houston 2017 (**Applied Probability Society Tutorial Speaker****, 2 session chairs, 1+2* talks); Nashville 2016 (1 talk); Philadelphia 2015 (2 talks, 1 session chair), San Francisco 2014 (1 talk*), Minneapolis 2013 (2 talks, 1 session chair), Phoenix 2012 (1 talk, 1 session chair), INFORMS Charlotte 2011 (1 talk), Austin 2010 (1 talk, 1 session chair), San Diego 2009 (1 talk);

MSOM: Munich 2022 (1 flash talk*), Singapore 2019 (1 talk + 1 discussant), UNC 2017 (1 SC SIG talk**, 1+1* main), Foster School of Business, U of Washington 2014 (1 talk);

Others:
- Third Online Doctoral Workshop on Supply Chain Analytics, Rutgers Business School (panelist on "Getting the right job!")
- European Conference in Stochastic Optimization (ECSO) and Computational Management Science (CMS), Venice, July 2022 (**Plenary Speaker****)
- INFORMS Revenue Management Conference 2021 (spotlight paper discussant**), 2019 (1 talk*), 2017 (1 talk*)
- AI & Machine Learning Colloquium, Kelley School of Business, Indiana University, June 2020**
- Workshop on Information and Learning, IESE Business School, Barcelona, Sept 2019**
- Workshop in Management Science, University of Chile, Jan 2019
- Digital Transformation Briefings, London Business School, Feb 16, 2018
- Institute of Innovation & Entrepreneurship (IIE) Research Symposium, Ditchley, 7-8 Mar, 2018
- 5th NUS-USPC Workshop on Machine Learning and FinTech 2017**
- INFORMS Healthcare 2017 (1 talk, 1 session chair)
- Marketplace Innovation Workshop, Stanford 2017 (1 talk*)
- POMS: Orlando 2016 (1 talk); INFORMS International 2016 (3 talks, 2 session chair)
- IOS Princeton 2016 (1 talk, 1 session chair)
- EURO Conference, July 2018 (1 talk); EURANDOM Workshop on Data-driven Operations Management, Oct 2016**
- ISMP, Pittsburg 2015 (1 talk)
- Applied Probability Society Conference, Istanbul 2015 (1 talk)
- Wharton EMPOM 2014 (1 talk)
- ICCOPT Lisbon 2013 (1 talk)

- Industrial-Academic Workshop on Optimization in Finance and Risk Management, Fields Institute, Toronto Oct 2011 (1 talk)
- CUDOS Workshop, Batemans Bay, Australia Feb 2007 (1 talk); COIN-ACOFT, Melbourne, Australia Jun 2007 (1 talk)

INVITED WORKSHOP PARTICIPATION

Prairie Artificial Intelligence Summer School, INRIA, Grenoble	July 2018
INFORMS Future Academician Colloquium	INFORMS 2011
Mathematical Sciences Research Institute (MSRI) Graduate Student Workshop	Summer 2010
Algebraic, Geometric & Combinatorial Optimization	

PROFESSIONAL AFFILIATIONS

Member of INFORMS, M&SOM, Mathematical Optimization Society (MOS), Applied Probability Society (APS), Royal Statistical Society (RSS), The Econometric Society and American Statistical Association (ASA)

PROFESSIONAL SERVICE – INTERNAL

At Imperial

AOM Group rep, Research Committee	2022–
Module Leader (Analytics) MBA programs	2022–
Organizing committee, INFORMS RMP Conference	2022–2023

At UMD

Organizing committee, "Doing Good with Analytics" workshop	2021–2022
PhD Student Admissions Committee	2020–2021

At London Business School

Faculty IT group MSO Subject Area rep	2019–2020
PhD Student Qualifying Examination (Optimization) Committee	2013–2020
PhD Student Admissions Committee	2013–2020
Junior Faculty Recruitment Committee	2013–2020
MIM/MFA Orientation Day Speaker	Aug 2018
MSO Subject Area seminar coordinator	2015–2018
Internal Examination Board (MSc)	2015–2018
LBS New Faculty Induction Day speaker	Sept 2013

PROFESSIONAL SERVICE – SOCIETY

Society roles:

Chair, Supply Chain Special Interest Group, M&SOM Society	2019–2021

Past editorial roles:

Guest Associate Editor, *M&SOM*	2020
Associate Editor, *M&SOM* Special Issue on OpsFinTech	2020
Associate Editor, *Management Science* Special Issue on Data-Driven Prescriptive Analytics	2019–2021
Associate Editor, *Service Science*	2019–2021

Reviewer for: Management Science, Operations Research, Annals of Statistics, M&SOM, M&SOM SIG 2015–present, Mathematical Programming, INFORMS Journal on Optimization, Journal of Optimization Theory & Applications, POMS, IISE Transactions, European

Journal of Operations Research, Naval Research Logistics, Journal of Computational Finance, OMEGA, Research Grants Council of Hong Kong, SIAM Journal on Mathematics of Data Science (SIMODS)

Judge for:
- INFORMS George Nicholson Student Paper Competition Prize (2020–2021)
- M&SOM Student Paper Competition (2016–2020)
- Decision Science Institute Elwood S. Buffa Doctoral Dissertation Award (2019)

EXTERNAL ENGAGEMENTS

Nov 2019 Panel speaker, event on "Artificial intelligence and ethics in investment management", CFA Society UK

May 2019 Invited Speaker, TEDxLBS. "The Power and Perils of Algorithms"

Apr 2019 External judge, Young Enterprise Company of the Year

Mar 2019– World Economic Forum Expert Network in AI and Robotics, Supply Chain and Transportation, and Fourth Industrial Revolution

Sept 2018 Workshop host and panel speaker, European Financial Information Summit, London

May 2018 Feature article interview, Tharawat Magazine, "Growing Opportunities for Efficiency Gains Through Big Data."

Mar 2018 External judge, Young Enterprise Company of the Year

Aug 2015 Expert panel member, roundtable discussion on digital transformation in business hosted by Computer Weekly

Dec 2013 Discussant in NHS Safe Staffing Round Table, POLITEIA, London.

Nov 2013 Participation in High School Outreach Video, CUDOS, University of Sydney.

PAST NON-ACADEMIC EMPLOYMENTS

Scientific Advisor, Alpha Advanced Solutions	2019–2020
Member, Advisory Board, Tata iQ	Apr 2016 – Oct 2016
Global Modeling and Analytics Group, Credit Suisse Securities, NY	Summer 2008
Quantitative Associate	

OTHER

Personal: Citizen of South Korea and UK ILR (permanent resident)

Married, 1 child (born Dec 2021)

Also known as: Gah-Yi Vahn (different spelling of same surname)