

**EMPLOYMENT**

<b>Robert H. Smith School of Business, University of Maryland</b> Associate Professor (with tenure) Decision, Operations and Information Technologies (DO&IT)	Aug 2020–
<b>Columbia Graduate School of Business</b> Visiting Assistant Professor Decision Risk & Operations	Fall 2016
<b>London Business School, London, UK</b> Assistant Professor Management Science & Operations	Jul 2012 – Jul 2020

**CURRENT EDITORIAL ROLES**

Associate Editor, <i>Operations Research Letters</i>	2021–
Associate Editor, <i>M&amp;SOM</i>	2021–
Associate Editor, <i>Management Science</i>	2019–

**EDUCATION**

Ph.D. Operations Research, University of California, Berkeley.	May 2012
M.A. Statistics, University of California, Berkeley.	May 2011
M.Sc. IEOR, University of California, Berkeley.	May 2008
B.Sc. (Hons.), University of Sydney, Australia. <i>Majors: Physics &amp; Mathematics. 1st Class Hons. with University Medal.</i>	May 2007

**MAJOR HONOURS & AWARDS**

2021 Best OM Paper in *Operations Research* Award  
(chosen amongst publications in the past three years)  
2021 Britannica's 20 under 40 Young Shapers of the Future (Education)  
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

**PUBLICATIONS IN REFEREED JOURNALS**

1. Gah-Yi Ban & N. Bora Keskin. "[Personalized Dynamic Pricing with Machine Learning: High Dimensional Features and Heterogeneous Elasticity](#)", *forthcoming in Management Science*.

**-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 Best OM Paper in *Operations Research* Award**
5. Gah-Yi Ban, Nouredine 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).

## WORKING PAPERS

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

## IN PROGRESS

1. “Robust Structural Estimation of Combinatorial Auctions.” (with Caleb J.H. Park & Richard Steinberg)
2. “Models and Analytics for Sustainable Fashion.” (with Wedad J. Elmaghraby & L. Beril Toktay)
3. “Personalized Promotions for Online and Offline Grocery Shopping” (with M. Hichame Benbitour & Boxiao Beryl Chen)

## 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 Robert H. Smith Business School, UMD:**

- *Part-Time Evening MBA*

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**

M. Hichame Benbitour	Postdoctoral Associate	April–Dec 2020
Zhenyu Gao	Visiting PhD Student (from Tsinghua U)	2018–9
Fabian Taigel	Visiting PhD Student (from Würzburg U)	Summer 2018
Caleb J.H. Park	Co-advisor (LBS)	Fall 2016–present
Christopher J. Chen	Project advisor (LBS)	Spring 2014–7
Xiaoling Mei	External Examiner (U Carlos III de Madrid)	2015
Alberto Martin-Utrera	External Examiner (U Carlos III de Madrid)	2013

#### **RESEARCH GRANTS/FELLOWSHIPS/SCHOLARSHIPS**

2012–2020 Research And Materials Development Fund, London Business School  
2015 Deloitte Institute of Innovation & Entrepreneurship Research Award  
2009 IEOR Faculty Fellowship, UC Berkeley  
2008–2011 University of Sydney Alumni Traveling Scholarship  
2007–2008 UC Berkeley College of Engineering Fellowship  
2003–2006 Kwanjeong Educational Foundation Scholarship  
2003–2006 University of Sydney Scholarship of Merit

#### **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), Georgia Tech (Industrial & Systems Engineering '19, Scheller College of Business '19), Hong Kong University Business School ('17), Hong Kong University of Science & Technology (Industrial Engineering and Decision Analytics '17), Imperial College Business School ('13), INSEAD ('16), Korea University Business School ('11), London Business School ('12, internal '14, internal '15), London School of Economics (Operations '13, Statistics '19), 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), 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)

#### INVITED INDUSTRY PRESENTATIONS

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:** Virtual 2020 (2 talks); 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:** 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:

- European Conference in Stochastic Optimization (ECISO) and Computational Management Science (CMS), Venice, July 2022 (scheduled; **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-ACOFI, 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 <i>Algebraic, Geometric &amp; Combinatorial Optimization</i>	Summer 2010

## 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 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
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### Past editorial roles:

Guest Associate Editor, <i>M&amp;SOM</i>	2020
Associate Editor, <i>M&amp;SOM</i> Special Issue on OpsFinTech	2020
Associate Editor, <i>Management Science</i> Special Issue on Data-Driven Prescriptive Analytics	2019–2021
Associate Editor, <i>Service Science</i>	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:

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

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