

# So Yeon Chun

INSEAD  
Boulevard de Constance 77300  
Fontainebleau, France, Singapore

Phone : +33 1 60 72 40 00  
Email : soyeon.chun@insead.edu  
<https://soyeonchun.com>

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**Academic Appointments** **INSEAD**, France, Singapore  
Associate Professor of Technology and Operations Management 2019–Present

**Georgetown University**, Washington, D.C.  
McDonough School of Business  
Assistant Professor of Operations and Information Management 2012–2019

**Research Interests**

- Operations management of point currency and loyalty programs
- Revenue management, risk management, operations and marketing interface
- Data analytics, statistics inference, stochastic optimization algorithms
- Behavioral experiments and field studies

**Education** **Georgia Institute of Technology**, Atlanta, Georgia  
School of Industrial and Systems Engineering  
*Ph.D.*, Operations Research

- Dissertation:  
“Hybrid is Good: Stochastic Optimization and Applied Statistics for OR”

*M.S.*, Applied Statistics

**Seoul National University**, Seoul, Korea  
Department of Industrial Engineering  
*B.S.*, Industrial Engineering

- Admitted with highest honors
- Graduated with highest honors (*summa cum laude*)

**Professional Experience** **JDA Software Group, Inc.**, Atlanta, Georgia  
*Operations Research Analyst* 2011

- Analyzed hotel and cruise line booking and sales data and developed price elasticity estimation and demand forecasting systems for a price optimization solution

**IBM Thomas J. Watson Research Center**, Yorktown, New York  
*Researcher* 2010

- Analyzed time-series traffic data and developed a decision support system architecture and optimization algorithms for real-time traffic management centers

**IBM Thomas J. Watson Research Center**, Hawthorne, New York  
*Researcher* 2009

- Analyzed retail sales data for promotion planning and developed spatial-temporal data mining statistics techniques and optimization models for road user congestion charging

## Publications      Published/Accepted Articles

Lim, F., Chun, S.Y., Satopaa, V., “Loyalty Currency and Mental Accounting: Do Consumers Treat Points Like Money?,” forthcoming at *Manufacturing & Service Operations Management*.

Chun, S.Y., and Hamilton, R., “Paying with Money or Paying with Points: How Variable vs. Fixed of the Exchange Rate Influence Loyalty Point Redemption,” *Journal of Marketing Research*. Advance online publication. <https://doi.org/mxkj>

Chung, H., Ahn, H.S., and Chun, S.Y., 2022, “Dynamic Pricing with Point Redemption,” *Manufacturing & Service Operations Management*, 24(4), pp. 2134–2149.

Chun, S.Y., and Boer, E., 2021, “How Loyalty programs are Saving Airlines,” *Harvard Business Review (online)*.

Stourm, V., Neslin, S., Bradlow, E., Breugelmans, E., Chun, S.Y., Gardete, P., Kannan, P.K., Kopalle, P., Park, Y.H., Restrepo Amariles, D., Thomadsen, R., Liu-Thompkins, Y., Venkatesan, R., 2020, “Refining Loyalty Programs in the Era of Big Data: A Societal Lens Paradigm,” *Marketing Letters, Special Issue: 11th Triennial Invitational Choice Symposium*, 31, pp. 405–418.

Chun, S.Y., and Lejeune, M., 2020, “Risk-based Loan Pricing: Portfolio Optimization Approach with Marginal Risk Contribution,” *Management Science*, 66(8), pp. 3735–3753.

Chun, S.Y., Iancu, D., and Trichakis, N., 2019, “Loyalty Program Liabilities and Point Values,” *Manufacturing & Service Operations Management*, 22(2), pp. 223–428.

Chun, S.Y., and Ovchinnikov, A., 2019. “Strategic Consumers, Revenue Management, and the Design of Loyalty Programs,” *Management Science*, 65(9), pp. 3949–4450.

- “Optimal Design of Loyalty Programs,” *INSEAD Knowledge*, August 2, 2019
- “Who’s Afraid of the Strategic Consumer?,” featured in *Smith Business Insight*, July 27, 2018
- “Why Loyalty Programs Based on Consumer Spending Can be a Win-Win” by Palmquist, featured in *Strategy+Business* published by PwC Strategy& LLC, December 10, 2015
- “Customer-Friendly Skies” by Lubell, featured in *Georgetown Business Magazine*, Fall 2015

Chun, S.Y., Browne, M., and Shapiro, A., 2018, “Modified Distribution-Free Goodness-of-Fit Test Statistic,” *Psychometrika*, 83(1), pp. 48–66.

Chun, S.Y., Kleywegt, A.J., and Shapiro, A., 2016, “When Friends Become Competitors: the Design of Resource Exchange Alliances,” *Management Science*, 63(7), pp. 2127–2145.

Chun, S.Y., Shapiro, A., and Uryasev, S., 2012, “Conditional Value-at-Risk and Average Value-at-Risk: Estimation and Asymptotics,” *Operations Research*, 60(4), pp. 739–756.

Chun, S.Y., and Shapiro, A., 2010, “Construction of Covariance Matrices with a Specified Discrepancy Function Minimizer, with Application to Factor Analysis,” *SIAM Journal on Matrix Analysis and Applications*, 31(4), pp.1570–1583.

Chun, S.Y., and Shapiro, A., 2009, “Normal Versus Noncentral Chi-square Asymptotics of Misspecified Models,” *Multivariate Behavioral Research*, 44(6), pp. 803–827.

### **Working Papers**

Ozkaya, E., Chun, S.Y., and Keskinocak, P., “Seasonality for New Product Diffusions,” working paper (dormant).

### **Research in Progress**

Lim, F. and Chun, S.Y., “Algorithmic Pricing and Consumer Payment Choices.”

Rodriguez, P., Chun, S.Y., and Mihm J., “The Overwork Paradox.”

Zheng, Y. and Chun, S.Y., “Digital Parenting and Gender Roles.”

Rodriguez, P. and Chun, S.Y., “Flexible Work and Operational Resilience.”

Chun, S.Y., “Virtual Currency Partnership.”

Chun, S.Y., “Fashioning a Sustainable Future.”

### **Patents**

Appel, T.M., Ashby, D.A., Chun, S.Y., Naphade, M.R., Nash, R.J., Sheopuri, A., Thornqvist, A., and Vuyk, M., International Business Machines Corporation, 2016, “Anomaly Detection for Road User Charging Systems,” U.S. Patent 9,261,375.

Chun, S.Y., and Wynter, L., International Business Machines Corporation, 2013, “Decision Support System Optimizer for a Real-Time Command Center,” U.S. Patent 8,458,113.

Appel, T.M., Ashby, D.A., Chun, S.Y., Naphade, M.R., Nash, R.J., Sheopuri, A., Thornqvist, A., and Vuyk, M., International Business Machines Corporation, 2011, “Targeted Enforcement For Road User Charging,” U.S. Patent Application 12/752,578.

Chun, S.Y., and Menich, R. “Demand Analysis and Price Elasticity of Demand Estimation System for Revenue Management and Pricing,” submitted for filing.

<b>Teaching Experience</b>	INSEAD, France, Singapore	
	ART of AI Leadership: Future Playbook Co-Lab (EMBA)	2024–Present
	ART of Why: Creating Real Business Impact with Analytics (EMBA)	2023–Present
	Research Method (Ph.D.)	2023–Present
	Research Topics in TOM (Ph.D.)	2021–Present
	Fundations of Operations Management B (Ph.D.)	2020–Present
	Analytics for Real Business Impact: The Art of Why (MIM, MBA)	2019–Present

**Georgetown University**, Washington, D.C.  
 McDonough School of Business  
 OPIM 173 Business Statistics                          Spring 2013, 2014, 2015, 2016, 2017, 2018

**Georgia Institute of Technology**, Atlanta, Georgia  
 School of Industrial and Systems Engineering  
 ISYE 2028 Basic Statistical Methods                          Spring 2010  
 ISYE 6402 Time Series Analysis (TA)                          Spring 2007  
 ISYE 3770 Probability and Statistics (TA)                          Fall 2006, Spring 2008, Fall 2009

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| <b>Professional Service</b> | <ul style="list-style-type: none"> <li>• Associate Editor, <i>Manufacturing &amp; Service Operations Management</i>, 2021–Present</li> <li>• Associate Editor, <i>Operations Research</i>, 2021–Present</li> <li>• Award Committee for the Best Service Science Cluster Paper, 2023</li> <li>• Judge for MSOM Student Paper Competition, 2014–Present</li> <li>• Judge for POMS College of SCM Best Student Paper Competition, 2023</li> <li>• RMP Section DEI (Diversity and Inclusion) committee, 2022–Present</li> <li>• MSOM Society DEI (Diversity and Inclusion) committee, 2021–Present</li> <li>• Session Chair, INFORMS Annual Conference, 2011–Present</li> <li>• MSOM Cluster Organizer (53 sessions with over 200 talks), INFORMS Annual Conference, 2021</li> <li>• Secretary/Treasurer, INFORMS Revenue Management and Pricing Section, 2015–2016</li> <li>• Revenue Management and Pricing Track Organizer (13 sessions with 54 talks), POMS Annual Conference, 2016</li> <li>• Revenue Management and Pricing Cluster Organizer (48 sessions with 185 talks), INFORMS Annual Conference, 2015</li> <li>• Session Chair, POMS Annual Conference, 2015</li> <li>• Invited Reviewer for <i>Management Science</i>, <i>Operations Research</i>, <i>Manufacturing &amp; Service Operations Management</i>, <i>Production and Operations Management</i>, <i>Transportation Science</i>, <i>IIE Transactions</i>, <i>Naval Research Logistics</i>, <i>Psychometrika</i>, <i>European Journal of Operational Research</i>, <i>Annals of Operations Research</i></li> </ul> |
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| <b>Honors Awards</b> | <ul style="list-style-type: none"> <li>• Dean’s Commendation for Excellence in MBA Teaching, INSEAD 2020-2021, 2021-2022, 2022-2023</li> <li>• INFORMS Future Academician Doctoral Colloquium, Austin, Texas</li> </ul> |
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- Thank a Teacher recipient, Georgia Institute of Technology
- Award for top performance on Ph.D. comprehensive exam, Georgia Institute of Technology (perfect score)
- Presidential honor recipient, Seoul National University (ranked first in the industrial engineering department class)
- Best Student Scholarship, Seoul National University

## **Presentations    Invited Seminars/Workshops**

- Singapore Management University, Lee Kong Chian School of Business, expected
- University College London, School of Management, expected
- National University of Singapore, Business School, expected
- University of Pennsylvania, The Wharton School, Consortium for Operational Excellence in Retailing, June 2023
- INSEAD, January 2019
- University of Toronto, Rotman School of Management, January 2019
- Dartmouth University, Tuck School of Business, October 2018
- University of Chicago, Booth School of Business, March 2018
- University of Navarra, IESE Business School, December 2017
- Ramon Llull University, ESADE Business School, December 2017
- Northwestern University, Kellogg School of Management, May 2017
- Uber, Marketplace Optimization Data Science Symposium, March 2017
- Workshop in Management Science, Puerto Varas, Chile, January 2017
- University of British Columbia, Sauder School of Business, November 2016
- Washington University, Olin Business School, February 2016
- Cornell University, School of Industrial and Systems Engineering, February 2016
- MIT, Sloan School of Management, November 2015
- University of Maryland, Robert H. Smith School of Business, October 2015
- Harvard University, Harvard Business School, Consortium for Operational Excellence in Retailing, June 2015
- George Washington University, School of Business, April 2015
- University of Florida, Department of Industrial and Systems Engineering, February 2012
- Rensselaer Polytechnic Institute, Department of Industrial and Management Engineering, February 2012
- University of Minnesota, Department of Industrial and Systems Engineering, February 2012
- Georgetown University, McDonough School of Business, February 2012
- London Business School, January 2012

- Indiana University, Kelley School of Business, January 2012

### **Invited/Refereed Conference Presentations**

- The 12th Triennial Invitational Choice Symposium, France, August 2023
- MSOM Conference, Montreal, Canada, June 2023 (Ph.D. Student Presentation)
- INFORMS Conference, Indianapolis, IN, October 2022 (Ph.D. Student Presentation)
- Revenue Management and Pricing Section Conference, Virtual (Sponsored by The University of Chicago Booth School of Business), June 2022 (Ph.D. Student Presentation)
- MSOM Conference, Munich, Germany, June 2022 (Ph.D. Student Presentation)
- INFORMS Conference, Anaheim, California (Hybrid) October 2021 (Ph.D. Student Presentation)
- Revenue Management and Pricing Section Conference, Virtual, June 2021 (Ph.D. Student Presentation)
- MSOM Conference, Virtual, June 2021 (Ph.D. Student Presentation)
- INFORMS Conference, Seattle, Washington, October 2019
- Revenue Management and Pricing Section Conference, Stanford, California, June 2019
- The 11th Triennial Invitational Choice Symposium, Maryland, May 2019
- INFORMS Conference, Phoenix, Arizona, November 2018
- Revenue Management and Pricing Section Conference, Toronto, Canada, June 2018
- INFORMS Conference, Houston, Texas, October 2017
- Revenue Management and Pricing Section Conference, Amsterdam, Netherlands, June 2017
- MSOM Conference, Chapel Hill, North Carolina, June 2017
- INFORMS Conference, Nashville, Tennessee, November 2016
- Revenue Management and Pricing Section Conference, New York, New York, June 2016
- INFORMS Conference, Philadelphia, Pennsylvania, November 2015
- MSOM Conference, Toronto, Canada, June 2015
- Revenue Management and Pricing Section Conference, New York, New York, June 2015
- POMS Conference, Washington, D.C., May 2015
- INFORMS Conference, San Francisco, California, November 2014
- MSOM Conference, Seattle, Washington, June 2014
- Revenue Management and Pricing Section Conference, Istanbul, Turkey, June 2014
- INFORMS Conference, Minneapolis, Minnesota, October 2013
- MSOM Conference, Fontainebleau, France, July 2013
- INFORMS Conference, Phoenix, Arizona, October 2012

- INFORMS Conference, Charlotte, North Carolina, November 2011
- MSOM Conference, Ann Arbor, Michigan, June 2011
- Revenue Management and Pricing Section Conference, New York, New York, June 2011
- INFORMS Conference, Austin, Texas, November 2010

**Skills**

- Six Sigma Green Belt recipient (Samsung Advanced Institute of Technology)
- R, SQL, SPSS, Matlab, Mathematica, C/C++, HTML, SAS, SAS Enterprise Miner, GAUSS, Minitab, UNIX

**Membership**

- INFORMS, INFORMS MSOM Society, INFORMS Revenue Management Section, INFORMS Analytics Society, INFORMS Marketing Science Society, INFORMS Optimization Society, INFORMS Aviation Applications Section