

So Yeon Chun

INSEAD
Boulevard de Constance 77300
Fontainebleau, France

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

Academic Appointment **INSEAD**, Fontainebleau, France
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

- Data-driven revenue management and risk management
- Operations and marketing interface with a focus on consumer loyalty programs
- Consumer choice behavior and substitution patterns
- Behavioral experiments and field studies
- Statistics and stochastic optimization algorithms with large-scale datasets

Education

Georgia Institute of Technology, Atlanta, Georgia
School of Industrial and Systems Engineering
Ph.D., Operations Research 2012

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

M.S., Applied Statistics 2008

Seoul National University, Seoul, Korea
Department of Industrial Engineering
B.S., Industrial Engineering 2005

- 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
Summer Intern 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
Summer Intern 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

Refereed Journal Articles

Chun, S.Y., and Lejeune, M., “Risk-based Loan Pricing: Portfolio Optimization Approach with Marginal Risk Contribution,” Forthcoming at *Management Science*.

Chun, S.Y., Iancu, D., and Trichakis, N., “Loyalty Program Liabilities and Point Values,” Forthcoming at *Manufacturing & Service Operations Management*.

Chun, S.Y., and Ovchinnikov, A., “Strategic Consumers, Revenue Management, and the Design of Loyalty Programs,” *Management Science*, Published Online: 7 Jun 2019.

- Featured in *Strategy+Business* published by PwC Strategy& LLC, Dec. 2015
- 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.

Papers under Review/Revision

Chun, S.Y., and Hamilton, R., “Should I Pay with Money or Redeem Points for This Purchase? How Exchange Rate Stability Influences Loyalty Point Redemption,” invited for fourth-round review at *Journal of Marketing Research*.

Chung, H., Ahn, H.S., and Chun, S.Y., “Dynamic Pricing with Point Redemption,” invited for resubmission at *Management Science*.

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., “Refining Loyalty Programs in the Era of Big Data: A Societal Lens Paradigm,” invited for revision at *Marketing Letters, Special Issue: 11th Triennial Invitational Choice Symposium*.

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

Research in Progress

Chun, S.Y., “Gamification of Loyalty Program and Consumer Behavior, Evidence from Airline Frequent Flyer Program Data.”

Chun, S.Y., Hamilton, R., and Dev, C., “Intrinsic vs. Extrinsic Value of Loyalty Points, Evidence from Hotel Reward Program Data.”

Chun, S.Y., and Walker, F., “Empirical Analysis of Loyalty Point Redemption Behavior for Experience Products.”

Chun, S.Y., and Xu, Y., “Political Campaign Advertisement Pricing and Regulation: Evidence from Political Advertising Spot Sales Data.”

Chun, S.Y., and Parker, C., “Net Neutrality and Internet Service Pricing: Evidence from Internet Service Sales Data.”

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.

Teaching Experience

INSEAD, France, Singapore

ART: Analytics for Retail and Travel (MBA) 2019–

Fondations of Operations Management B (PhD) 2020–

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

Professional Service

- Secretary/Treasurer, INFORMS Revenue Management and Pricing Section, 2015–2016
- Revenue Management and Pricing Track Organizer (13 sessions with 54 talks), POMS Annual Conference, 2016
- Revenue Management and Pricing Cluster Organizer (48 sessions with 185 talks), INFORMS Annual Conference, 2015
- Session Chair, POMS Annual Conference, 2015
- Session Chair, INFORMS Annual Conference, 2011–Present
- Judge for MSOM Student Paper Competition, 2014–Present
- Invited Reviewer for *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *Production and Operations Management*, *Transportation Science*, *IIE Transactions*, *Naval Research Logistics*, *Psychometrika*, *European Journal of Operational Research*, *Annals of Operations Research*

Honors Awards

- INFORMS Future Academician Doctoral Colloquium, Austin, Texas, 2010
- Thank a Teacher recipient, Georgia Institute of Technology, 2010
- Award for top performance on Ph.D. comprehensive exam, Georgia Institute of Technology, 2007 (perfect score)
- Scholarship recipient from Dongbu Group, 2006, 2007
- Presidential honor recipient, Seoul National University, 2004 (ranked first in the industrial engineering department, class of 2004)
- Best student scholarship, Seoul National University, 2001, 2002, 2003, 2004
- Math Olympiad, Seoul, Korea, 1993 (honorable mention)

Presentations **Invited Seminars/Workshops**

- INSEAD, 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

- INFORMS Conference, Seattle, Washington, October 2019
- Revenue Management and Pricing Section Conference, Stanford, California, June 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, C/C++, HTML, SAS, SAS Enterprise Miner, GAUSS, Minitab, UNIX

Membership

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