#### V. BRIAN VIARD

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# **POSITIONS**

Associate Professor (with tenure) of Strategy and Economics, Cheung Kong Graduate School of Business, March 2012 to present

Associate Researcher, The University of Hong Kong, September 2020 to present.

Member, Asia Innovation and Entrepreneurship Association, November 2020 to present.

Visiting Associate Professor of Strategy and Economics, The University of Hong Kong, September 2019 to August, 2020.

Visiting Scholar, Stanford Institute for Economic Policy Research, April 2017 to October 2017 Assistant Professor of Strategy and Economics, Cheung Kong Graduate School of Business, July 2007 to February 2012

Visiting Assistant Professor of Strategy and Economics, Yale School of Management, April to May 2009.

Assistant Professor of Strategic Management, Stanford Graduate School of Business, July 2000 to July 2007

Visiting Assistant Professor of Economics, Yale School of Management, July 2005 to July 2006.

Fletcher Jones Faculty Scholar, Stanford Graduate School of Business, September 2001 – June 2002

Management Consultant, Deloitte & Touche, 1992-1995

Systems Consultant, Andersen Consulting, 1987-1990

# **EDUCATION**

Ph.D. Business Economics, University of Chicago Graduate School of Business, August 2000 M.B.A., Stanford Graduate School of Business, June 1992

B. S. Electrical Engineering, Yale University, May 1987, cum laude

# RESEARCH INTERESTS

Industrial Organization, Applied Microeconomics, Environmental Economics, Economics of Competitive Strategy, Telecommunications

#### FELLOWSHIPS AND AWARDS

Leading Member (Co-Principal Investigator), National Natural Science Foundation of China "Transboundary Environmental Pollution: Policy Design and Evaluation", Grant #72173105 (Principal Investigator Shihe Fu, Xiamen University).

Business School Research with Social Impact, Financial Times, 2020.

Inaugural recipient of the "MBA Best Teaching Award" at Cheung Kong Graduate School of Business, 2009.

NET Institute Research Grant, Summer 2003

Fletcher Jones Faculty Scholar, 2001-2002

State Farm Companies Foundation Doctoral Dissertation Award, 1999-2000 Oscar Mayer Fellowship, 1999-2000 University of Chicago GSB Fellowship, 1995-1999

# **PUBLICATIONS**

- "A Mayor's Perspective on Tackling Air Pollution," (with Shihe Fu) invited chapter in C.K.Y. Leung (Ed.). *Handbook of Real Estate and Macroeconomics* (413 437). Edward Elgar Publishing Ltd.
- "Trans-Boundary Air Pollution Spillovers: Physical Transport and Economic Costs by Distance" (with Shihe Fu and Peng Zhang) – Journal of Development Economics, Vol. 155, 102808, March 2022.
- "Air Quality and Manufacturing Firm Productivity: Nationwide Estimates for China," (joint with Shihe Fu and Peng Zhang), *The Economic Journal*, Vol. 131, 3241 3273, November 2021.
- "Commute Costs and Labor Supply: Evidence from a Satellite Campus," (with Shihe Fu) *Journal of Economic Geography*, Vol. 19, No. 3, 723 752, May 2019.
- "The Effect of Beijing's Driving Restrictions on Pollution and Economic Activity," (lead author with Shihe Fu) *Journal of Public Economics*, Vol. 125, 98 115, May 2015 (cited in "Business School Research with Social Impact," *Financial Times*, 2020.
- "Bayesian Estimation of Nonlinear Equilibrium Models with Random Coefficients," (lead author with Anne Gron and Nicholas Polson) *Applied Stochastic Models in Business and Industry*, Vol. 31, No. 4, 435 456, July/August 2015.
- "The Effect of Content on Global Internet Adoption and the Global 'Digital Divide," (lead author with Nicholas Economides) *Management Science*, Vol. 61, No. 3, 665 687, March 2015.
- "The Effect of Market Structure on Cellular Technology Adoption and Pricing" (with Katja Seim) American Economic Journal: Microeconomics, Vol. 3, No. 2, 221-251, May 2011.
- "Quantifying the Benefits of Entry into Local Phone Service," (with Nicholas Economides and Katja Seim) *The RAND Journal of Economics*, Vol. 39, No. 3, 699 730, Autumn 2008.
- "Do Frequency Reward Programs Create Switching Costs?," (with Wesley Hartmann) *Quantitative Marketing and Economics*, Vol. 6, No. 2, 109 137 (lead article), June 2008.
- "Do Switching Costs Make Markets More or Less Competitive?: The Case of 800-Number Portability" *The RAND Journal of Economics*, Vol. 38, No. 1, 146 163, Spring 2007.
- "Information Goods Upgrades: Theory and Evidence" *The B.E. Journal of Theoretical Economics*, Vol. 7, Issue 1 (Contributions), Article 3, 2007.
- "Recent Advances in Structural Econometric Modeling: Dynamics, Product Positioning and Entry," (with Jean-Pierre Dube, K. Sudhir, Andrew Chiang, Greg Crawford, Michaela Draganska, Jeremy Fox, Wesley Hartmann, Gunter Hitsch, Miguel Villas-Boas, and Naufel Vilcassim) – invited in *Marketing Letters*, Vol. 16, Issue 3 – 4, December 2005, 209 – 224.
- "Pricing of Complements and Network Effects" (with Nicholas Economides) in Regulation and the Economic Performance of Communication and Information Networks, edited by Gary Madden, Edward Elgar, 2011.

#### **UNPUBLISHED PAPERS**

- "The Dynamic Role of Subnational Regions in Firm Performance," (with Haibing Shu) revise and resubmit.
- "Evaluating Air Pollution Regulation: Separating Firm Competitiveness and Ambient Effects," (with Guanglai Zhang, Ning Zhang, and Peng Zhang).
- "Financial Deregulation and ESG: Impacts and Mechanisms," (with Gang Zhang) submitted.

# **WORK IN PROGRESS**

- "Competition and Broadband Internet Adoption" (with Nicholas Economides and Katja Seim).
- "Quantity-Based Price Discrimination using Frequency Reward Programs," (with Xing Li).
- "Bargaining for Access Rates in International Long Distance."

#### OTHER PUBLICATIONS

- "Countering Supplier Power: Can an Employee be Too Good?," Forbes India, June 15, 2016.
- "Market Entry: To Boldly Go where Others Have Gone Before," *South China Morning Post* (Education Post), April 21, 2016.
- "Price Wars and Why Companies Just Can't Get Along," *South China Morning Post (Education Post)*, January 28, 2016.
- "Externalities and Minding Other People's Business," Forbes India, October 9, 2015.
- "Alibaba, Tencent and Walled Gardens: History Repeats Itself on the Chinese Web," *South China Morning Post*, June 26, 2015.
- "China's Salt Monopoly: Cracking Down on Illegal Contraband," Forbes Asia, August 4, 2014.
- "A Physically-Based Navigation Strategy for Sonar-Guided Vehicles" (with Roman Kuc). *The International Journal of Robotics Research*, 10, 1991.

# PUBLICATIONS IN CHINESE

- "An Intentional Misprint," *Journal of Translation from Foreign Literature of Economics*, 2020 (2), 84-85. 有意设置的"打印故障《经济资料译丛》2020年第 2 期, 84-85.
- "Keep Your Customers Happy but Disorganized to Prevent Buyer Power," *Journal of Translation from Foreign Literature of Economics*, 2018 (1), 72-73. 避免买家力量的形成——让顾客满意但又无组织,《经济资料译丛》2018 年第 1 期, 72-73.
- "Countering Supplier Power: Can an Employee be too Good?" *Journal of Translation from Foreign Literature of Economics*, 2017 (4), 75 76. 员工太好非好事:如何制衡供应商的议价能力?《经济资料译丛》2017年第 4 期, 75-76。
- "Not Just Another Day in the Park?" *Journal of Translation from Foreign Literature of Economics*, 2017 (3), 58 59. 万达游乐园能否打败迪士尼乐园? 《经济资料译丛》2017 年第 3 期,58-59。
- "Who Benefits from Alibaba's Singles Day?" *Journal of Translation from Foreign Literature of Economics*, 2017 (2), 70 71. 谁从阿里巴巴光棍节中获利? 《经济资料译丛》2017 年第2期, 70-71。

- "Price Wars and Why Companies Just Can't Get Along," *Journal of Translation from Foreign Literature of Economics*, 2017 (1), 54 55. 价格战与为何公司间不能友好相处? 《经济资料译丛》2017 年第 1 期,54-55。
- "Creating Customer Value is Not Enough," *Journal of Translation from Foreign Literature of Economics*, 2016 (4), 40 42. 不能止步于创造客户价值,《经济资料译丛》2016 年第 4 期,40-42。
- "Alibaba, Tencent, and Walled Gardens: History Repeats Itself," *Journal of Translation from Foreign Literature of Economics*, 2016 (4), 9 10. 阿里巴巴、腾讯和围墙花园: 历史重演,《经济资料译丛》2016 年第 3 期,40-42。
- "Holding Up an Airline," *Journal of Translation from Foreign Literature of Economics*, 2015 (4), 66 67. 航空公司的"套牢"难题,《经济资料译丛》2016年第 2 期, 66-67。
- "Box Office Sales: It's All a Matter of Timing," *Journal of Translation from Foreign Literature of Economics*, 2015 (4), 83 84. 电影票房收益:排片博弈(下),《经济资料译丛》2016年第 1 期,83-84。
- "China Film Group and the Art of Playing Favorites in China's Movie Market," *Journal of Translation from Foreign Literature of Economics*, 2015 (4), 57 59. 中国电影集团的"优待艺术",《经济资料译丛》2015 年第 4 期, 57-59。
- "Putting a Price on Pollution?," Fortune China, December 12, 2015. 中国应如何征收环境污染税? 《财富》(中文版)201f5年12月14日。
- "Putting a Price on Pollution?," *Journal of Translation from Foreign Literature of Economics*, 2015 (3), 54 5. 中国的污染税: 对污染进行定价, 《经济资料译丛》2015 年第 3 期, 54 55。
- "Should China Tax Liquor More?," Fortune China, August 28, 2015. 中国是否该提高酒税
   ? 《财富》(中文版) 2015年8月28日。
- "Should China Tax Liquor More?," *Journal of Translation from Foreign Literature of Economics*, 2015 (2), 85 86. 中国的酒税应该更高点吗? 《经济资料译丛》2015 年第 2 期, 85 86。
- "China Film Group and the Art of Playing Favorites in China's Movie Market," Fortune China, August 19, 2015. 中国电影市场: "偏心眼"的艺术? 《财富》(中文版)2015年8月19日。
- "When Your Bank Interest is a Basketful of Vegetables," *Fortune China*, January 27, 2015. 储蓄送礼的经济学根源.《财富》(中文版)2015年1月27日。
- "When Your Bank Interest is a Basketful of Vegetables," *Journal of Translation from Foreign Literature of Economics*, 2015 (1), 77 78. 当银行利息变成一篮子蔬菜时,《经济资料译丛》2015 年第 1 期,77—78。
- "Railroaded? The Logic Behind Merging Two Chinese Train Manufacturers," *Fortune China*, December 7, 2014. 北车和南车合并背后的逻辑. 《财富》(中文版)2014年 12月 07日。
- "Learning from Market Entry: Keep Your Entrants Imaginary," *Fortune China*, November 5, 2014. 总有一股力量在引导新进入者进入市场,作为行业的现有从业者,你如何确保自己不会被取代?《财富》(中文版)2014年 11 月 05 日。
- "Holding Up an Airline," *Fortune China*, July 11, 2014. 如何为中国飞行员"解套"《财富》(中文版)2014年 07月 11日。

- "Restrictions on New Car Purchases: An Economist's Road Trip," *Journal of Translation from Foreign Literature of Economics*, 2014 (4), 82 83. 新车限购令: 经济学家的分析, 《经济资料译丛》2014 年第 4 期, 即将出版, 82—83。
- "Mobile Apps that Move Cabs," *Journal of Translation from Foreign Literature of Economics*, 2014 (3), 48 49.手机打车软件能帮乘客打车吗? 《经济资料译丛》2014 年第 3 期,48—49。
- "What is the Price of a Good Education at Chinese Universities? It Depends on Your Interests," *Journal of Translation from Foreign Literature of Economics*, 2014 (2), 92 93. 中国大学良好教育的价格是多少?——取决于你的兴趣,《经济资料译丛》2014 年第 2 期,92—93。
- "Tackling Excess Capacity in Industry: The Race Not Yet Run," *Journal of Translation from Foreign Literature of Economics*, 2014 (1), 99 100. 解决产能过剩问题: 竞赛尚未开始,《经济资料译丛》2014 年第 1 期,99—100。
- "Giving Credit Where it is Due: A Key Innovation Incentive," *Journal of Translation from Foreign Literature of Economics*, 2013 (4), 81 83. 论功行赏: 一个重要的创新激励, 《经济资料译丛》2013 年第 4 期, 81—83。
- "Getting Beijing's Taxis To Move, Not Sit," *Journal of Translation from Foreign Literature of Economics*, 2013 (3), 58 59. 北京出租车,如何才能不空驶?,《经济资料译丛》2013年第 3 期,58—59。
- "Pork Barrel Politics," Journal of Translation from Foreign Literature of Economics, 2013 (2), 51 52. "武钢"为何进入养猪业?,《经济资料译丛》2013 年第 2 期,51—52。

# PUBLICATIONS IN KOREAN

• "아시아 케이스 스터디: 블리자드의 중국 파트너 교체" ("Asia Case Study: Blizzard Choosing a Local Partner in China"), *Dong-A Business Review*, July 2014, Issue 2, No. 157, 94 – 100.

# TEACHING EXPERIENCE

# MBA Strategy Courses:

- "Competitive Strategy" (CKGSB MBA): June 2009, May 2010, March-May 2011, and May/June 2012.
- "Applied Game Theory" (CKGSB MBA): April 2010.
- "E-Commerce Strategy" (Yale): April/May 2009.
- "Business Strategy" (CKGSB MBA): January 2008.
- "Strategy in Information Goods Markets" (Stanford): Spring 2004 (newly-designed course), Spring 2005, Spring 2007.
- "Competitive Strategy" (Yale): Fall 2005.
- "Strategy and Organization in the Global Economy" (Stanford): Spring 2001, Spring 2002, Winter 2003, core course coordinator in Winter 2003.

# MBA Economics Courses:

• "Managerial Economics" (CKGSB MBA): November 2007 (newly designed course), November/December 2008, November/December 2009, November/December 2010, November/December 2011, October-December 2012, September-November 2013,

7/5/2023

- September-November 2014, September-November 2015, September-November 2016, November December 2017, January 2018, January 2019, March-April 2021.
- "Management Economics" (CKGSB Finance MBA): November 2009 (Beijing), November 2010 (Beijing), June/July 2011 (Beijing), June 2012 (Shanghai), July 2012 (Beijing), December 2012 (Shenzhen), June 2013 (Beijing), June/July 2013 (Shanghai), November/December 2013 (Shenzhen), June 2014 (Beijing), July 2014 (Shanghai), November/December 2014 (Shenzhen), May/June 2015 (Beijing), June/July 2015 (Shanghai), November 2015 (Shenzhen), May/June 2016 (Beijing), July 2016 (Shanghai), November 2016 (Shenzhen), November 2017 (Beijing), November 2017 (Shenzhen), January 2018 (Shenzhen), March 2018 (Shenzhen), March 2018 (Shenzhen), April 2018 (Shanghai), November 2018 (Beijing), November/December 2018 (Shenzhen), January 2019 (Shanghai), April 2021 (Shenzhen), October 2022 (Shenzhen), December 2022 (Shanghai).

# EMBA Economics Courses:

"Managerial Economics" (CKGSB-IMD Dual EMBA): June 2015 (Beijing) (newly designed course), June 2016 (Shenzhen).

# Ph.D. Economics Courses:

• "Economics of Strategy and Organizations" (Stanford): Spring 2003, Winter 2004, Winter 2005, Winter 2007.

### PROFESSIONAL ACTIVITIES

- Referee for American Economic Review, Journal of Political Economy, RAND Journal of Economics, National Science Foundation, Review of Economics and Statistics, American Economic Journal, Management Science, Journal of Public Economics, Economic Journal, International Economic Review, American Economic Journal: Economic Policy, Journal of Labor Economics, Journal of Industrial Economics, Journal of the Association of Environmental and Resource Economists, Journal of Economics & Management Strategy, Quantitative Marketing and Economics, Journal of Environmental Economics and Management, Journal of Health Economics, International Journal of Industrial Organization, Marketing Science, Review of Industrial Organization, China Economic Review, Journal of Business, Journal of Marketing Research, Research Policy, Telecommunications Policy, Journal of Applied Econometrics, Resource and Energy Economics, Journal of Sports Economics, Southern Economic Journal, Canadian Journal of Economics, Economic Inquiry, The B.E. Journals in Economic Analysis & Policy, Transportation Research Part A: Policy and Practice, Transportation Research Part B: Methodological, Transportation Research Part D: Transport and Environment, Scandinavian Journal of Economics, International Journal of Research in Marketing, NET Institute, Review of Network Economics, Naval Research Logistics, Journal of Environmental Management, Information, Industrial and Corporate Change, Contemporary Economic Policy, Empirical Economics, Economics and Policy, Journal of Industry, Competition and Trade, International Journal of Sustainable Transportation, American Law and Economics Review, Natural Hazards, and Social Sciences and Humanities Research Council of Canada.
- Organized the Stanford 2002 Conference on Strategic Management, Stanford, California.
- Co-organized the Applied Microeconomics Seminar, Stanford Graduate School of Business, Fall 2000, Spring 2001, Fall 2001, Spring 2002, Fall 2002, Spring 2003, Winter 2004.

# **PUBLISHED CASE STUDIES**

• "The Battle for China's Carbonated Beverage Industry" (supervised Christopher Hildner). Cheung Kong GSB Case #2012-02-1-232-2 (A) #2012-02-1-233-2 (B), and # 2012-09-1-244-2e (C), 2012. Available through CKGSB Case Center.

- "99Bill" (supervised Arar Han). Cheung Kong GSB Case #2011-09-1-214-1e (A) and #2011-09-1-215-1e (B), 2011. Available through CKGSB Case Center.
- "Blizzard Feels the Heat in China: Choosing a Local Partner for *World of Warcraft*" (supervised Richard Bethune). Cheung Kong GSB Case #2011-09-1-190-2e (A) and #2011-09-1-195-2e (B), 2011. Available through CKGSB Case Center.
- "Baidu: Searching for Truth?" (supervised Arthur Chengchun Qi). Cheung Kong GSB Case #2010-09-1-177-2e (A), #2010-09-1-179-2e (B), and #2010-09-1-189-2e (C), 2010. Available through CKGSB Case Center.
- "Gushan and the Biodiesel Market" (supervised Yunfei Feng). Cheung Kong GSB Case #2010-09-1-173-1e (A) and #2010-09-1-174-1e (B), 2010. Available through CKGSB Case Center
- "Third-Party Payment Systems in China" (with Arar Han). Cheung Kong GSB Case #2010-09-1-163-1e, 2010. Available through CKGSB Case Center.
- "The Instant Messaging Battle: New Enemies and Widening Conflict." Cheung Kong GSB Case #2010-09-1-162-1e, 2010. Available through CKGSB Case Center.
- "Blizzard v. bnetd.org: Managing Intellectual Property" (supervised Pamela Yatsko). Stanford GSB Cases #SM-154 (A) and (B), 2007. Available through Harvard Business School Publishing.
- "ezboard: Making Customers Pay" (supervised Pamela Yatsko). Stanford GSB Case #SM-142, 2005. Available through Harvard Business School Publishing.
- "The Long Battle for an Instant Messaging Standard" (supervised Steven Fan). Stanford GSB Case #SM-138, 2005. Available through Harvard Business School Publishing.
- "Netflix: Opening or Closing Credits in Online Movie Distribution?" (supervised Jessica Phillips Patrick). Stanford GSB Case #SM-131, 2004. Available through Stanford GSB.
- "Tata Consultancy Services: Globalization of Software Services" (with Sanjeev Dheer and John Roberts). Stanford GSB case #S-SM-18, 1993. Available through Harvard Business School Publishing.
- "EDS: Information Technology Outsourcing" (with Sanjeev Dheer and Garth Saloner). Stanford GSB case #S-SM-3, 1992. Reprinted in *Strategic Management of Technology and Innovation*, Robert A. Burgelman, Modesto A. Maidique and Steven C. Wheelwright, Irwin, 2<sup>nd</sup> edition, 1996.

# **CONFERENCE PRESENTATIONS**

- Presented "Trading-Up' and Trading-In' Durable Goods: Version and Competitive Upgrades in the Software Industry" at the 1999 Midwest Economics Association meetings, Nashville, Tennessee.
- Presented "Do Switching Costs Make Markets More or Less Competitive?: The Case of 800-Number Portability" at the 2000 Western Economics Association meetings, Vancouver, Canada.
- Discussant for "Search Costs, Prices and Price Dispersion in Monopolistically Competitive Markets: Some Empirical Evidence," (by Beck A. Taylor, John M. Barron and John R. Umbeck) at the 2000 Western Economics Association meetings, Vancouver, Canada.
- "Do Switching Costs Make Markets More or Less Competitive?: The Case of 800-Number Portability" discussed at the 2001 NBER Winter Industrial Organization meetings, Stanford, California.
- Presented "Do Switching Costs Make Markets More or Less Competitive?: The Case of 800-Number Portability" at the 2001 Telecommunications Policy Research Conference, Alexandria, Virginia.
- Presented "Do Switching Costs Make Markets More or Less Competitive?: The Case of 800-

- Number Portability" at the Stanford 2002 Conference on Strategic Management, Stanford, California.
- Presented "The Effect of Entry and Market Structure on Cellular Pricing Tactics" at the 2003 International Industrial Organization Conference, Boston, Massachusetts.
- Discussed "Welfare Effects of Third Degree Price Discrimination: Evidence from the Introduction of DVDs," (by Julie Holland Mortimer) at the 2003 International Industrial Organization Conference, Boston, Massachusetts.
- Presented "Bargaining for Access Rates in International Long Distance" at the 2003
   Telecommunications Policy Research Conference, Alexandria, Virginia.
- Presented "The Effect of Entry and Market Structure on Cellular Pricing Tactics" at the 2003 Quantitative Marketing and Economics Conference, Chicago, Illinois.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the 2003 NET Institute Conference, New York, New York.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the 2004 North American Winter Meeting of the Econometric Society, San Diego, California.
- Discussed "Does the New York Times Spread Apathy and Ignorance?" (by Lisa George and Joel Waldfogel) at the 2004 Workshop on the Media and Economic Performance, Palo Alto, California.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the 2004
   International Industrial Organization Conference, Chicago, Illinois.
- Discussed "Product Variety and Competition in the Retail Market for Eyeglasses" (by Randall Watson) at the 2004 International Industrial Organization Conference, Chicago, Illinois.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the 2004 Triennial Choice Conference, Boulder, Colorado.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the UBC 2004
   Summer Conference on Industrial Organization, Vancouver, British Columbia.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the 2004 Summer Institute in Competitive Strategy, Berkeley, California.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the CEPR Conference on The Economics of Electronic Communication Markets, Toulouse, France.
- Discussed "An Empirical Analysis of Cellular Voice and Data Services" (by Rahul Telang) at the 2005 NET Institute Conference, New York, New York.
- Presented "Quantity-Based Price Discrimination Using Frequency Reward Programs," at the 2005 International Industrial Organization Conference, Atlanta, Georgia.
- Automobile Industry," (by Johannes Van Biesebroeck) at the 2005 International Industrial Organization Conference, Atlanta, Georgia.
- Presented "Quantity Based Price Discrimination Using Frequency Reward Programs" at the 2005 Summer Institute in Competitive Strategy, Berkeley, California.
- Discussed "Do Entry Conditions Vary Over Time? Entry and Competition in the Broadband Market: 1999-2003," (by Mo Xiao and Peter F. Orazem) at the 2006 Annual Meeting of the American Economic Association, Boston, Massachusetts.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the 2006 Utah Winter Business Economics Conference, Salt Lake City, Utah.
- Presented "Quantifying the Benefits of Entry into Local Phone Service" at the 2006 International Industrial Organization Conference, Boston, Massachusetts.
- Presented "Quantity Based Price Discrimination Using Frequency Reward Programs" at the 2006 International Industrial Organization Conference, Boston, Massachusetts.

- Discussed "Forward Markets, Market Power, and Capacity Investment" (by Nodir Adilov) at the 2006 International Industrial Organization Conference, Boston, Massachusetts.
- Discussed "Competing Technologies in the Database Management Systems Market," (by Tobias Kretschmer) at the 2006 NET Institute Conference, New York, New York.
- "Do Frequency Reward Programs Create Switching Costs?" discussed at the 2006 NBER Summer Institute Industrial Organization meetings, Boston, Massachusetts.
- Presented "Determinants of the 'Digital Divides' in Internet Access" at the 2007
   International Industrial Organization Conference, Savannah, Georgia.
- Discussed "Network Effects, Compatibility Choice, and Industry Dynamics" (by Jiawei Chen, Ulrich Doraszelski, and Joseph Harrington) at the 2007 International Industrial Organization Conference, Savannah, Georgia.
- Presented "Competition and Broadband Internet Adoption" at the 2008 Summer Workshop in Industrial Organization and Management Strategy, Singapore.
- Presented "The Effect of Content on Global Internet Adoption" at the 2009 The Economics of the Software and Internet Industries, Toulouse, France.
- Presented "The Effect of Content on Global Internet Adoption" at the 2009 International Industrial Organization Conference, Boston, Massachusetts.
- Discussed "Is Multimedia Convergence to be Welcomed" (by John Thanassoulis) at the 2009 International Industrial Organization Conference, Boston, Massachusetts.
- Presented "The Effect of Beijing's Driving Restrictions on Pollution and Economic Activity" at the 2010 Five Star Forum, Beijing, China.
- Presented "The Effect of Content on Global Internet Adoption and the Global 'Digital Divide" at the Second Annual Internet Search and Innovation, Chicago, Illinois.
- Presented "The Effect of Beijing's Driving Restrictions on Pollution and Economic Activity" at the 2011 Zhejiang University Industrial Economics Conference, Hangzhou, China.
- Discussed "Road Investment and Inventory Reduction: Firm Level Evidence from China" (by Han Li and Zhigang Li) at the 2011 Public Finance Issues in China Conference, Beijing, China.
- "The Effect of Beijing's Driving Restrictions on Pollution and Economic Activity" discussed at the 2012 NBER Winter Industrial Organization meetings, Stanford, California.
- Presented "Commute Costs and Labor Supply: Evidence from a Satellite Campus" at the 2012 Zhejiang University Industrial Economics Conference, Hangzhou, China.
- Discussed "Privacy Externalities and 'Opt Out:' Theory and Evidence from Do Not Call" (by Kai-Lung Hui, Ivan Png, and Khim-Yong Goh) at the Fifth Workshop on the Economics of Advertising and Marketing, Beijing, China.
- Presented "Competition and Broadband Internet Adoption," at the 2013 Zhejiang University Industrial Economics Conference, Hangzhou, China.
- Presented "The Effect of Beijing's Driving Restrictions on Pollution and Economic Activity" at the 2014 American Economic Association Meeting, Philadelphia, Pennsylvania.
- Presented "The Role of Location in Chinese Firms' Profits," at the 2014 Zhejiang University Industrial Economics Conference, Hangzhou, China.
- Presented "Dynamics of the Subnational Regional Effect: Evidence from China," 2015
   China India Insights Conference, New York, New York.
- Presented "Dynamics of the Subnational Regional Effect: Evidence from China" at the 2016 International Industrial Organization Conference, Philadelphia, Pennsylvania.
- Discussed "Welfare Analysis of Equilibria with and without Early Termination Fees in the U.S. Cellular Wireless Industry," (by Joseph Cullen, Nicolas Schutz, and Oleksandr

- Shcherbakov) at the 2016 International Industrial Organization Conference, Philadelphia, Pennsylvania.
- Presented "Commute Costs and Labor Supply: Evidence from a Satellite Campus," 2016 China India Insights Conference, London, England.
- Presented "Dynamics of the Subnational Regional Effect: Evidence from China" at the 2016 Strategic Management Society Special Conference, Hong Kong.
- Presented "Air Quality and Manufacturing Firm Productivity: Comprehensive Evidence from China" at the 2017 China Meeting of the Econometric Society, Wuhan, China.
- Presented "Air Quality and Manufacturing Firm Productivity: Comprehensive Evidence from China" at the 2017 International Conference on Industrial Economics, Hangzhou, China.
- Presented "Air Quality and Manufacturing Firm Productivity: Nationwide Estimates for China" at the 2017 China India Insights Conference, New York, New York.
- Presented "Air Quality and Manufacturing Firm Productivity: Nationwide Estimates for China" at the 2018 American Economic Association Meeting, Philadelphia, Pennsylvania.
- Discussed "Air Pollution and Averting Behavior Disparities: Evidence from NYC Transportation," (by Hussain Alshammasi) at the WCERE 2018 - 6th World Congress of Environmental and Resource Economists, Gothenburg, Sweden.
- Presented "Air Quality and Manufacturing Firm Productivity: Nationwide Estimates for China" at the WCERE 2018 - 6th World Congress of Environmental and Resource Economists, Gothenburg, Sweden.
- Presented "How Extensive are Air Pollution Spillovers?: An Application to China's Manufacturing Productivity" at the 2019 International Conference on Industrial Economics, Hangzhou, China.
- Presented "How Extensive are Air Pollution Spillovers?: An Application to China's Manufacturing Productivity" at the Brookings-Jinan China Microeconomic Policy Forum 2019, Guangzhou, China.
- Presented "How Extensive are Air Pollution Spillovers?: An Application to China's Manufacturing Productivity" at The 2nd Symposium on Environmental Economics and Environmental Policy Evaluation, Xiamen, China.
- Presented "Transboundary Air Pollution Spillovers: Physical Transport and Economic Costs by Distance" at the 1st Hong Kong Empirical Microeconomics Workshop, Hong Kong, China
- Presented "Evaluating Air Pollution Regulation: Separating Firm Competitiveness and Ambient Effects:" at Chicago Booth PhD Program's 100th Anniversary Celebration, Chicago, Illinois.

# **SEMINARS**

- "Trading-Up' and Trading-In' Durable Goods: Version and Competitive Upgrades in the Software Industry:"
  - o Yale School of Management, Yale University, January 2000
  - o Johnson Graduate School of Management, Cornell University, January 2000
  - o The John F. Kennedy School of Government, Harvard University, January 2000
  - o Haas School of Business, University of California Berkeley, February 2000
  - o Stanford Graduate School of Business, Stanford University, February 2000
  - o Olin School of Business, Washington University in St. Louis, February 2000
  - o Sauder School of Business, The University of British Columbia, February 2000
  - o Kellogg School of Management, Northwestern University, February 2000
  - o Columbia Business School, Columbia University, February 2000

- "Do Switching Costs Make Markets More or Less Competitive?: The Case of 800-Number Portability:"
  - Haas School of Business Marketing Seminar, University of California Berkeley, November 2002
  - O Stanford Graduate School of Business Marketing Seminar, Stanford University, May 2002
  - o University of California at Davis Applied Microeconomics Seminar, May 2001
- "The Effect of Entry and Market Structure on Cellular Pricing Tactics:"
  - o Harvard Business School Strategy Seminar, Harvard University, October 2003
- "Quantifying the Benefits of Entry into Local Phone Service:"
  - o Stern School of Business, New York University, December 2003
  - o Harvard University/MIT Industrial Organization Seminar, February 2004
  - o Stanford Graduate School of Business OIT Seminar, February 2004
  - o University of California at Davis Applied Microeconomics Seminar, May 2004
  - Global Business Institute Seminars, Stern School of Business, New York University, November 2005.
  - O Department of Strategic Management Seminar, Guanghua School of Management, Peking University, November 2006.
  - O Department of Economics Seminar, Tsinghua School of Economics and Management, Tsinghua University, November 2006.
- "Quantity-Based Price Discrimination Using Frequency Reward Programs:"
  - o 2005 Joint Marketing Seminar, Santa Clara, California, May 2005.
  - o Yale University Applied Microeconomics Seminar, October 2005.
  - o Marketing Workshop, Rotman School of Management, February, 2006.
  - o Marketing Workshop, University of Chicago Graduate School of Business, April, 2006.
- "Do Frequency Reward Programs Create Switching Costs:"
  - O Department of Economics Seminar, Eller College of Management, University of Arizona, Tucson, Arizona, November 2006.
- "The Effect of Content on Global Internet Adoption:"
  - o Department of Applied Economics Seminar, Guanghua School of Management, Peking University, April 2009.
  - o Yale University Applied Microeconomics Seminar, April 2009.
  - o Economic Theory and Policy Seminar, China Center for Economic Research, May 2009.
  - o Research Institute of Economics and Management, Southwestern University of Finance and Economics, December 2009.
  - o Center for Research of Private Economy, Zhejiang University, June 2010.
  - ITO Seminar, Rady School of Management, University of California, San Diego, January 2011.
- "The Effect of Beijing's Driving Restrictions on Pollution and Economic Activity:"
  - Research Institute of Economics and Management, Southwestern University of Finance and Economics, October 2010.
  - Economics Seminar, University of International Business and Economics, December 2010.
  - O Department of Applied Economics Seminar, Guanghua School of Management, Peking University, December 2010.
  - o The Wang Yanan Institute for Studies in Economics, Xiamen University, April 2011.
  - o Microeconomics Seminar, Shanghai University of Finance & Economics, April 2011.
  - o Business School, National University of Singapore, May 2013.

- "Commute Costs and Labor Supply: Evidence from a Satellite Campus:"
  - o School of Labor and Human Resources, Renmin University of China, November 2012.
  - o Hangqing Institute, Renmin University of China, May 2013.
  - o School of Economics and Management, Tsinghua University, October 2013.
- "Competition and Broadband Internet Adoption:"
  - o The Wang Yanan Institute for Studies in Economics, Xiamen University, April 2013.
  - Research Institute of Economics and Management, Southwestern University of Finance and Economics, April 2014.
- "Dynamics of the Subnational Regional Effect: Evidence from China:"
  - o Research Institute of Economics and Management, Southwestern University of Finance and Economics, April 2015.
  - o Economics Seminar, Hong Kong University of Science and Technology, May 2015.
- "Air Quality and Manufacturing Firm Productivity: Nationwide Estimates for China:"
  - o Shantou University Business School, March 2018.
  - o Antai College of Economics & Management, Shanghai Jiao Tong University, March 2018.
- "Trans-Boundary Air Pollution Spillovers: Physical Transport and Economic Costs by Distance:"
  - o National University Singapore, October 2018.
  - o The University of Hong Kong, October 2019.
  - o National School of Development, Beijing University, October 2019.
  - o University of Macau, October 2021.
  - o Lingnan University, November 2021.
- "Evaluating Air Pollution Regulation: Separating Firm Competitiveness and Ambient Effects:"
  - o Hong Kong University of Science and Technology, March 2023.
  - o The Chinese University of Hong Kong, March 2023.