

# Curriculum Vitae of Frank (Youhua) CHEN 陈友华

## OFFICIAL ADDRESS:

Dept of Decision Analytics & Operations (formally, Management Sciences)  
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## EDUCATIONAL BACKGROUND

Univ. of Toronto, PhD (Management)  
Univ. of Waterloo, M.A. (Economics)  
Tsinghua University, BE (Mech. Eng.)

## WORKING EXPERIENCE

May 2012 – Now: Professor/Chair Professor  
7/2001-May 2012: Associate Professor, Dept of System Engg & Engg Mgt., the Chinese,  
Univ. of Hong Kong  
7/1997-6/01: Assistant Professor, Department of Decision Sciences, NUS Business, School,  
National Univ. of Singapore  
9/1996-6/97: Postdoc., Northwestern Univ.

## I. TEACHING/EDUCATION

### Teaching Interests

Logistics, Supply Chain Management, Operations Management, Business Analytics

### Courses Taught

- \* Supply Chain Management, Operations Management, Logistics, Strategic Sourcing and Procurement, at all levels (including EMBA); Doctoral Seminars (College Course)
- \* Supply Chain Management, Logistics Management, Service Operations Management, Inventory & Revenue Management, and Simulation (at CUHK)
- \* Supply Chain Management, Operations Management, Management of Advanced Manufacturing Technologies (at National Univ. of Singapore)
- \* EDP (most recent): Nov. 2024, Developments in SCM for Huawei Terminal Co.

## noindent I. RESEARCH

### Research Interests

Healthcare Management, Applications of Machine Learning/LLM in Management, and Supply Chain Management, Driving Risk Assessment & Behavior-based Insurance.

### Research Funding (as Principle Investigator (PI) or Project Coordinator (PC))

1. HK RGC Earmarked Research Grant, Oct. 2024- Sept. 2027: *Healthcare Resources Allocation: Targeting “The Right Intervention to the Right Population*, \$1.03M. Funding Year 2024/25.
2. HK RGC Earmarked Research Grant, Jan. 2023- Dec. 2025: *Multi-product Procurement Decisions: Feature-based Substitution, Data-driven and Preference Learning*, \$860K. Funding Year 2022/23.
3. HK RGC-CRF Research Grant, co-PI, 2021-2024: *Resilient PPE Supply Chains for Hong Kong Health Systems: Current and Post Covid-19 Pandemic*, Amount: \$4.3M, Project Coordinator: YAN Houmin, Co-PIs CHEN Youhua Frank, LI Yanzhi David, S Joe QIN, SHUM Stephen, TSO Geoffrey, ZHANG QP, FUNG Hong, WONG Eliza.
4. HK RGC Earmarked Research Grant, Nov. 2020- Oct. 2022: *New and Short-life-cycle Product Procurement Decisions: Machine Learning and Risk Control*, \$ 500K.
5. HK RGC Earmarked Research Grant, Nov. 2019- Oct. 2021: *On Demand Estimation and Newsvendor Ordering Decisions under Stockout-based Substitution*, \$396K.
6. Theme-based Research Scheme (TRS) - Research Grant Council (RGC), 2014-2019: *Delivering 21st Century Healthcare in Hong Kong – Building a Quality-and-Efficiency Driven System*; Project Coordinator; Participating Institutions: CityU, CUHK, PolyU, HKU, Columbia. (Grant No: T32-102/14N) [Amount: HKD 20.45M]
7. HK RGC Earmarked Research Grant, 2014-2017: *On a Random Yield Problem with Nonzero Leadtimes*, \$ 881K.
8. HK RGC Earmarked Research Grant, 2013-2016: *Distribution Requirement Planning and Inventory Policies for a Distribution Supply Chain with a Minimum Order Quantity*, \$363K.
9. HK RGC Earmarked Research Grant, 2012-2015: *Models for Production Operations and Emissions Permits Purchasing Decisions in the Presence of Emissions Trading Market*, \$500K.
10. HK RGC Earmarked Research Grant, 2011-2014: *Optimal Inventory Control Policy for Periodic-Review Inventory Systems With Inventory-Level-Dependent Demands*.
11. HK RGC Earmarked Research Grant, 2010-2013: *Dynamic Pricing and Inventory Control in a Continuous Review System with Batch Ordering and Random Leadtimes*.
12. HK RGC Earmarked Research Grant, 2007-2010: *Procurement-Inventory Models in the Presence of Commodity Spot Markets and Hedging Instruments*.
13. HK RGC Earmarked Research Grant, 2006-2008: *Dynamic Pricing Problems for Seasonal Products with Inventory-Record Inaccuracy: a Revenue Management Approach to Exploring the Value of RFID*.
14. HK RGC Earmarked Research Grant, 2005-2008: *Weather Risk, Hedging and Operations Management/Decisions*.
15. HK RGC Earmarked Research Grant, 2004-2006: *Studies of Combined Segmental-dynamic Pricing and Production/Replenishment Decisions*.

#### Other Projects

1. NFSC International Collaboration Project, 2026 - 2030.12: "Equipment Manufacturing Operational Management Based on Generative Artificial Intelligence" as Overseas PI, PC: Wang D.J. (Sichuan Univ.).
2. Donation - Project-in-charge: "Home-based Aging for Transformative Community Care", BOCHK Centenary Charity Programme - Bank of China HK, Amount: \$23.8M. C-PIs: EK Yeoh (CUHK), Eliza Wong (CUHK), Stephen Shum, Hera Leung, et al. (10.2020-09.2024).
3. National Natural Science Foundation of China, Major Project, 2014-2018: "Theoretical Foundations of Contemporary Logistics Management for Harmonized Development of Economy, Society and Environment" as a C-PI (RMB2.8M), PC: Wang Shouyang (Chinese Academy of Science) (total funding: RMB15M).

PhD Graduates (sole supervised - CityU & CUHK)

Fei X.Y. (2024), Sun Yat-sen University; Zheng Y.J. (2023), RAP/PolyUHK ; Zhang W. (2023), Zhejiang Univ.; Yang Yang, Shanghai Univ. of Finance & Econ.; Lin S.C., HKU (2019); Taiwo S. (2018), Univ of Winnipeg; Liu Xing (2018), in industry; Han Zhu (2017), Dongbei Univ. of Finance and Econ.; Quan Yuan (2012), Zhejiang University; Yi Yang (2011), Zhejiang University; Fei Guo (2008); Weili Xue (2007), Southeast University; Ying Wei (2006), Ji Nan University.

III. LIST OF JOURNAL PAPERS (refereed, in chronicle order)

1. Chen, Y., V. Kanetkar, and D. L. Weiss: "Forecasting Market Shares with Disaggregate or Polled Data: a Comparison of Attractive Models." *Int'l J. of Forecasting*, 10 (2), 1994.
2. Chen Y. F., Drezner, J.K.Ryan, and D. Simchi-Levi: "Quantifying the Bullwhip Effect in a Simple Supply Chain: The Impact of Forecasting, Leadtimes and Information." *Management Sciences*, 46(3), 2000.
3. Chen Y. F., J.K.Ryan, and D. Simchi-Levi: "The Impact of Exponential Smoothing Forecasts on the Bullwhip Effect." *Naval Research Logistics*, 47(4), 2000.
4. Chen, Y. F., Mark Goh, Jacob Lee, Jihong Ou, M. Sharafali, C.P. Teo, P. G. Goh and P. Savannah: "ST Logistics: Distributing Consumer Goods in China." *J. of IFOR*, 8, 2001.
5. Chen, Y. F, Sin Hoon Hum and Jie Sun: "Third-Party Warehousing Contract with Commitments and Adjustment Options." *European J. of Oper. Res.*, 131(3), 2001.
6. Chen, Y. F. and D. Krass: "Analysis of Supply Contracts with Minimum Quantity Commitment." *European J. of Oper. Res.*, 131 (2), 2001.
7. Chen, Y.F. and D. Krass: "Service Level Constraints in Inventory Models." *European J. of Oper. Res.*, 134 (1), 2001.
8. Chen, Y. F., Y. Feng and D. Simchi-Levi: "Uniform Distribution of Inventory Positions in Two Level Systems with Interdependent Demands and Batch Ordering Policies." *European J. of Oper. Res.*, 140 (3), 2002.
9. Chen, Y. F., H. Yan, and L. Yao: "Newsvendor Pricing Game." *IEEE Transactions on Systems, Man and Cybernetics - Part A*, 34(4), 2004.

10. Wang T., Chen, Y. and Y. Feng: "On the Time-Window Fulfillment Rates in a Single Item, Min-Max Inventory System." *IIE Transactions*, 37 (7), 2005.
11. Chen, Y., T. Wang, and T. Z. Xu: "On Two Models for Integrated Inventory Replenishment and Temporal Shipment Consolidation." *Annals of Operations Research*, 135, 2005.
12. Chen, Y., Y. Feng, and J. Ou: "Management of Inventory Replenishment and Available Offerings for Goods Sold with Optional Value-Added Packages." *IIE Trans.*, 37 (5), 2005.
13. Chen, Y. F.: "Fractional Programming Approach to Two Stochastic Inventory Problems." *European J. of Oper. Res.* , 160 (1), 2005.
14. Chao, X.L., and Frank Y. Chen: "Optimal Production and Shutdown Strategy when Supplier Offers Incentives." *Manufacturing & Service Oper. Management*, 7 (2), . 2005.
15. Bish, E.B., Frank Y. Chen, Y. T. Leong, Barry L. Nelson, J. Ng, and David Simchi-Levi: "Dispatching vehicles in a mega container terminal." *OR Spectrum*, 27, 2005.
16. Chen, Y., S. H. Hum and C. H. Sim: "On Inventory Strategies of Online Retailers." *J. of Systems Science and Engineering*, 14 (1), 2005.
17. Chen, Y. and Y. Feng: "Optimization of Stochastic, Single-Item Inventory Models with Non-Quasiconvex Costs." *Probability in the Engineering and Information Sciences*, 20 (2), 2006.
18. Xiao, Y.B., J. Chen, and Y. Chen: "On a Semi-Dynamic Pricing and Seat Inventory Allocation Problem." *OR Spectrum*, 29(1), 2006.
19. Chen, H., J. Chen and Y. Chen: "A Coordination Mechanism for a Supply Chain with Demand Information Updating." *Int'l J. of Production Economics*, 103(1), 2006.
20. Yao, L., Y. Chen and H. Yan: "The newsvendor problem with pricing: Extensions." *Int'l J. of Management Sci. & Engineering Management*, 1(1), 2006.
21. Chen, Y., S. Ray, and Y. Song: "Joint Pricing and Inventory Control in Periodic Review Systems - Case of Loss Sales." *Naval Research Logistics*, 53 (2), 2006.
22. Chen, Y. and Stephen Disney: "The Myopic Order-Up-To Policy with a Proportional Feedback Controller." *International J. of Production Research*, 45 (2), 2007.
23. Chen, Y. and M. Parlar: "Value of a Put Option to the Risk-averse Newsvendor." *IIE Trans.*, 39(5), 2007.
24. Chen, Y., S. Sethi, and H. Zhang: "A Production-Inventory Problem for an Energy Buy-back Program." *IEEE Trans. on Automation Sci. and Engg.*, 4(3), 2007.
25. Chen, F.Y., J. Chen, and Y. Xiao: "Optimal Control of Selling Channels for an Online Retailer with Cost-per-Click Payments and Seasonal Products." *Production and Operations Management (POM)*, 16(3), 2007.
26. Xiao, Y., Chen, F. Y. and J. Chen: "Optimal Inventory and Dynamic Admission Policies for a Retailer of Seasonal Products with Affiliate Programs and Drop-Shipping." *Naval Res. Logistics*, 56(4), 2009.
27. Chen, Y., M.H. Xu, and G. Zhang: "A Risk-Averse Newsvendor Model Under CVaR Decision Criterion." *Oper. Res.*, 57(4), 2009.
28. Yang Y. and Y. Chen: "On information quality ranking and its managerial implications." *J. of Industrial and Management Optimization (JIMO)*, 6(4), 2010.
29. Wei, Y. and Y. Chen: "Joint Determination of Inventory Replenishment and Sales Effort with Uncertain Market Responses. *Int'l J. of Production Economics.* , 134 (2), 2011.

30. Chen, H., Y. Chen, C. Chu, T. M. Choi, and S. Sethi: "Coordination Mechanism for the Supply Chain with Leadtime Consideration and Price-Dependent Demand." *European J. of Oper. Res.*, 203(1), 2010.
31. Chen, Y. and C. Yano: "Improving Supply Chain Performance and Managing Risk Under Weather-Related Demand Uncertainty." *Management Sci.*, 56 (8), 2010.
32. Chen, L., Y. Chen and Z. Pang: "Dynamic Pricing and Inventory Control in a Make-to-Stock Queue with Information on the Production Status." *IEEE Tran. on Automation Sci. and Engg.*, 8(2), 2011.
33. Caliskan-Demirag, O., Y. Chen and J. Li: "Channel Coordination under Fairness Concerns and Nonlinear Demand." *European J. of Oper. Res.*, 207(3), 2010.
34. Xu, M., Y. Chen and X. Xu: "The Effect of Demand Uncertainty in a Price-setting Newsvendor Model." *European J. of Oper. Res.*, 207(2), 2010.
35. Chen, Y., J. Chen, M. Parlar and Y. Xiao: "Optimal Inventory and Admission Policies for Drop-Shipping Retailers Serving In-Store and Online Customers." *IIE Trans.*, 43(5), 2011.
36. Zhang, W., Y. F. Chen, Z.H. Hua, and W. Xue: "Optimal Policy with a Total Order Quantity Commitment Contract in the Presence of Spot Market." *J. Syst. Sci. Syst. Eng.*, 20 (1), 2011.
37. Feng, Y. and Y. Chen: "A Computational Approach for Optimal Joint Inventory-Pricing Control in an Infinite-Horizon Periodic-Review System: a Note." *Oper. Res.*, 59 (5), 2011.
38. Chen X., Sean Zhou and Y. Chen: "Integration of inventory and pricing decisions with costly price adjustment." *Oper. Res.*, 59 (5), 2011.
39. Gao F., Y. Chen and Xiuli Chao: "Joint Optimal Ordering and Weather Hedging Decisions: A Newsvendor Model." *Int'l J. of Flexible Manuf. and Service* (formally Int'l J. of Flexible Manuf.), 23 (1), 2011.
40. Xu, X.L., Cai X. Q. and Y. Chen: "Unimodality of Price-setting Newsvendor's Objective Function with Multiplicative Demand and its Application." *Int'l J. of Production Economics.*, 133(2), 2011.
41. Caliskan-Demirag O., Y. Chen, J. Li: "Customer and Retailer Rebates under Risk Aversion." *Int'l J. of Production Economics.*, 133(2), 2011.
42. Gao F., Caliskan-Demirag O., Y. Chen: "Early Sales of Seasonal Products by Weather-Conditional Rebates." *Production and Operations Management*, 21(4), 2012.
43. Caliskan-Demirag, O., Y. Chen and Y. Yang: "Optimal Policy for a Periodic-Review Inventory System With Quantity-Dependent Setup Costs." *Oper. Res.*, 60(4),2012.
44. Pang, Z., Y. Chen and Y. Feng: "A Note on the optimal structure of joint inventory-pricing control with leadtimes." *Oper. Res.*, 60(3), 2012.
45. Chen, Y, Y. Lu, and M. Xu: "Optimal Inventory Control Policy for Periodic-Review Inventory Systems with Inventory-Level-Dependent Demand." *Naval Research Logistics*, 59(6), 2012.
46. Caliskan-Demirag, O., Y. Chen and Y. Yang: "Production-inventory control policy under warm/cold state-dependent fixed costs and stochastic demand: partial characterization and heuristics." *Ann. Operations Research*, 208, 2013.

47. Chen, Y., W. Xue and J. Yang: "Optimal Inventory Policy in the Presence of a Long-term Supplier and a Spot Market: a Note." *Oper. Res.*, 61(1), 2013.
48. Yang, Yi, Y. Chen and Yun Zhou [random order of author sequence, equal contribution]: "Coordinating Inventory Control and Pricing Strategies Under Batch Ordering." *Operations Research*, 62(1), 2014.
49. Lu, Y., Chen Y., Song, M., Yan, X.: "Optimal Pricing and Inventory Control Policy with Quantity-Based Price Differentiation." *Operations Research*, 62(3), 2014.
50. Pang, Z. and Y. Chen: "Coordinated Pricing and Inventory Control with Batch Production and Erlang Leadtimes." *Probability in the Engineering and Information Sciences*, 28(4), 2015.
51. Qin, K, Frank Chen, L. Ma: "Cutting down the travel distance of put systems at Kunming International Flower Auction Market." *International Journal of Production Research*, 53(12), 2015.
52. Yuan, Q., G. Chua, X. Liu and Y. Chen: "Unsold versus Unbought Commitment: Minimum Total Commitment Contracts with Nonzero Setup Costs." *Production and Operations Management*, 24(11), 2015.
53. Chen, Y., Leung K.S., Poon K. K., Su, Yiwen: "Statistical study of the impact of the basis effect on futures hedging : evidence from China." *Applied Mathematical Sciences*, 10(25), 2016.
54. Zhu, H., X. Liu, and Y. Chen: "Effective inventory control policies with a minimum order quantity and batch ordering", *Int. J. of Production Economics*, 168, 2015.
55. Xue, Weili; Caliskan Demirag , Ozgan ; CHEN, Youhua Frank; Yang, Yi: "Managing Retail Shelf and Backroom Inventories When Demand Depends on the Shelf-Stock Level." *Production and Operations Management*, 26(9), 2017..
56. Zhu, H., and Youhua (Frank) Chen and Eman Leung and Xing Liu: "Outpatient appointment scheduling with unpunctual patients." *International Journal of Production Research*, 56(5), 2018.
57. Wang, J., Chen, Y. F. & Xu, M.: "Optimization and approximation methods for dynamic appointment scheduling with patient choices." *Computers and Operations Research*, 92, 2018.
58. Yuan Quan, Frank Chen, Jian Yang & Yun Zhou: "Joint Control of Emissions Permit Trading and Production Involving Fixed and Variable Transaction Costs." *Production and Operations Management*, 27(8), 2018.
59. Xue, Y., Caliskan-Demirag, O., Chen, Y. & Yu, Y.: "Supporting customers to sell used goods: Profitability and environmental implications." *Int. J. of Production Economics*, 206, 2018.
60. Yin, Y., Chen, Y., Qin, K. & Wang, D.: "Two-agent scheduling on unrelated parallel machines with total completion time and weighted number of tardy jobs criteria." *Journal of Scheduling*, 22(3), 2019.
61. Lin, S., Zhang, Q., Chen, F., Luo, L., Chen, L. & Zhang, W.: "Smooth Bayesian network model for the prediction of future high-cost patients with COPD." *Int'l J. of Medical Informatics*, 126, 2019.
62. Yuan, Z., Chen, F. Y., Yan, X. & Yu, Y.: "Operational implications of yield uncertainty

- in mergers and acquisitions.” *Int’l J. of Production Economics*, 219, 2019.
63. Yang Y, Wang J, Chen Y, Chen Z, Liu Y. “Optimal procurement strategies for contractual assembly systems with fluctuating procurement price.” *Annals of Operations Research*, 291(1), 2020.
  64. Taiwo ES, Chen FY, Chin KS. “Outpatient appointment scheduling with walk-ins in fixed arrival periods.” *IIEE Transactions on Healthcare Systems Engineering*, 19, 2020.
  65. Ji, D.L, Caliskan-Demirag, Y.F Chen & Huang M. “Omnichannel retailers’ return policy strategies in the presence of competition.” *Int’l J. of Production Economics*, 225, 2020.
  66. Shen, H.X, Li, Y.Z., Y. F. Chen, & Pan., K. “Integrated Ad Delivery Planning for Targeted Display Advertising.” *Operations Research*, 69(5), 2021.
  67. Wang, Haolin; Zhang, Qingpeng; Chen, Frank Youhua; Leung, Eman Yee Man; Wong, Eliza Lai Yi; Yeoh, Eng Kiong. “Tensor Factorization-based Prediction with an Application to Estimate the Risk of Chronic Diseases”. *IEEE Intelligent Systems*, 36(5), 2021.
  68. Guo M, Zhang Q, Liao X, Chen FY, Zeng DD. “A hybrid machine learning framework for analyzing human decision-making through learning preferences.” *Omega*, 101, 2021.
  69. Zhu M, Chen FY, Kong XT, Qin K. “Data-driven storage location method for put system in Chinese flower auction centres”. *Int’l J. of Production Research*, 60 (4), 2021.
  70. Zhu, H., Y.F. Chen, Hu, M & Yang Y. “A Simple Heuristic Policy for Stochastic Distribution Inventory Systems with Fixed Costs.” *Operation Research*, 69 (6), 2021.
  71. Huang, W.X., Li Y. D. and Chen YF. “User Data Trading and Tariff Design” (formally “Overage Disutility, User Trading and Tariff Design”), *Production and Operations Management*, 30(10), 2021.
  72. Wong EL, Ho KF, Dong D, Cheung AW, Yau PS, Chan EY, Yeoh EK, Chien WT, Chen FY, Poon S, Zhang Q. “Compliance with standard precautions and its relationship with views on infection control and prevention policy among healthcare workers during COVID-19 pandemic”. *Int’l J. of Environmental Research and Public Health*, 18(7), 2021.
  73. Gong, X.T., Chen Y.F., Yuan Q. “Coordinating Inventory and Pricing Decisions Under Total Minimum Commitment Contracts”, *Production and Operations Management*, 31(2), 2022.
  74. Pan, H., Zhao, Y., Wang, H. Li, X., Leung, E., Chen, Y.F. Cabrera, J. & TSUI, K. L. “Influencing factors of Barthel index scores among the community-dwelling elderly in Hong Kong: a random intercept model”, *BMC Geriatrics*, 21(484), 2021.
  75. Hsu, Yu-Cheng, Hailiang Wang, Yang Zhao, Frank Chen, Kwok-Leung Tsui. “Automatic Recognition and Analysis of Balance Activity in Community-dwelling Older Adults: Algorithm Validation”, *J Med Internet Res.*, 12, 2021.
  76. Lin, S.C., Chen, Y.F., Li, Y.Z. & Max. Shen. “Data-driven Newsvendor Problems Regularized by a Profit Risk Constraint”, *Production and Operations Management*, 31(4), 2021.
  77. Ye Y, Zhang Q, Cao Z, Chen FY, Yan H, Stanley HE et al. “Impacts of Export Restrictions on the Global Personal Protective Equipment Trade Network During COVID-19”. *Advanced Theory and Simulations*, 5(4), 2022.

78. Wong, E.L., Chin-Man Poon, Annie Wai-Ling Cheung, Frank Youhua Chen (MS), & Eng-Kiong Yeoh, "Relationship between patient experience and hospital readmission: system-level survey with deterministic data linkage method", *BMC Medical Research Methodology*, 22, 2022.
79. Zhang Yin, Frank Y. Chen, Geoffrey K.F. Tso, Lin Yang, "Meteorological Factors Facilitated Increased Legionnaires' Disease Notifications and Mortality Pre-COVID-19 and COVID-19 in Hong Kong", *Journal of Infectious Diseases and Treatment*, 8(8), 2022.
80. Taiwo, E. S., Savin, S., Chen, Y. & Chin, K. "Patient-controlled use of nonphysician providers: Appointment scheduling in mixed-provider settings," *Production and Operations Management*, 32(8), 2023.
81. Guan, J., Leung, E., Kwok, K. & Chen, F. Y., "A hybrid machine learning framework to improve prediction of all-cause rehospitalization among elderly patients in Hong Kong", *BMC Medical Research Methodology*. 23(1), 2023.
82. Wong, E. L., Qiu, H., Cheung, A. W., Leung, H., Chen, F. Y. & Yeoh, E., "Association of social isolation with health status among community-dwelling Chinese older adults living with homecare services: a cross-sectional survey in Hong Kong". *Frontiers in Public Health*. 11, 2023.
83. Leung, Eman, Jingjing Guan, Amanda MY Chu, Sam CC Ching, Yilin Liu, and Frank Youhua Chen. "The valuation of older adult homecare services under a joint medical-social budgetary perspective." *Frontiers in Public Health*, 12 2024.
84. Chung, Edwin KH, Eliza Lai-Yi Wong, Hera Hiu-Wah Leung, Dannii Y. Yeung, Eng-Kiong Yeoh, and Frank Youhua Chen. "Lay health coaching intervention for older adults with chronic diseases: study protocol for a pragmatic randomised controlled trial." *Trials*, 25(1), 2024.
85. Leung, E., Guan, J., Zhang, Q., Ching, C.C., Yee, H., Liu, Y., Ng, H.S., Xu, R., Tsang, H.W.H., Lee, A. and Chen, F.Y. "Screening for frequent hospitalization risk among community-dwelling older adult between 2016 and 2023: machine learning-driven item selection, scoring system development, and prospective validation." *Frontiers in Public Health*, 12, 2024.
86. Yao, Yao, Youhua Frank Chen, and Qingpeng Zhang. "Optimized patient-specific immune checkpoint inhibitor therapies for cancer treatment based on tumor immune microenvironment modeling." *Briefings in Bioinformatics*, 25(6), 2024.
87. Long Gao, W. Zhang (former PhD), Y. F. Chen & X.Y. Fei (former PhD), "Optimal Payment for Dynamic Treatment Regimes". *Production and Operations Management*, 34 (7), 2025.
88. Wong, E.L., Hong Qiu, Kin-Fai Ho, Annie Wai-Ling Cheung, Hera Leung, Frank Youhua Chen, Eng-Kiong Yeoh. "Association of ambient temperature with social isolation among the community-dwelling Chinese older adults: A cross-sectional study in Hong Kong." *Heliyon*, 11.1, 2025.
89. Chung EK, Leung HH, Yeung DY, Leung EY, Wong EL, Yeoh EK, Chen FY. "Health Coaching Enhanced Older Adults' Self-Efficacy in Managing Their Chronic Diseases: A Randomized Controlled Trial." *Journal of Applied Gerontology*, 2025.

90. Yan, X.L., Y.F. Chen, H. Yu & S. Li. 2025. “Newsvendor Problems with Product Unbundling: An Approach Combining Robust Optimization with Deep Reinforcement Learning.” *Production and Operations Management*, 34(11), 3629-3646.
91. Taiwo, E. S., Savin, S., Y.F. Chen & K.S. Chin. 2024. “Mixed Appointment Scheduling: Managing Routine and Same-Day Appointments for Outpatient Clinics.” First published online in *Production and Operations Management*, August 2025.
92. Yan Y, Chen FY, Fu Z, Bi W. 2025. “Heuristics and deep reinforcement learning for the inventory problem with an all-or-nothing yield pattern and non-zero leadtimes.” *Computers & Operations Research*.
93. Wang, Dujuan; Cheng, Tao; Wang, Sutong; Chen, Youhua (Frank); Yin, Yunqiang. 2026. “SMR-agents: Synergistic medical reasoning agents for zero-shot medical visual question answering with MLLMs.” Forthcoming *Information Processing & Management*. 63 (1).
94. Guo, M., Li, Y., Xu, X., Zhang, Q., Zeng, D. D., & Chen, F. Y. 2025. “Learning User Play-then-Pay Behaviors in Digital Games: A Dynamic Perspective.” First published online 12 Nov. in *Production and Operations Management*, Dec. 2025.
95. Jiang, Shuo; Xie, Min; Chen, Frank Youhua; Ma, Jian; Luo, Jianxi / Intelligent Design 4.0: Paradigm Evolution Toward the Agentic Artificial Intelligence Era. December 2025; In *Journal of Computing and Information Science in Engineering*. Vol. 25, No. 12.
96. Zhang, Xinbo(Postdoc), Montserrat Guillen, Lishuai Li, Xin Li, & Frank Youhua Chen. 2025. “A Group Zero-Inflated Poisson Model for Automobile Near-Miss Event Risk Prediction.” Proc. IEEE Big Data 2025 (Dec.) (acceptance rate: 18.7% ).
97. Chen Frank, Qi Feng, J. George Shanthikumar, and Yang Yang (former PhD). 2026. “Appointment Scheduling of Outpatient Clinical Services under Uncertain Patient Flows.” Accepted, Oper. Research.
98. Leung, Eman; Guan, Jingjing; Chen, Youhua Frank; Ching, Sam CC; Tsang, Hector; Wong, Martin CS; Lam, Olivia; He, Yinan; Yau, Sarah TY; Liu, Yilin; Law, C B; Chan, N Y; Wong, Y F; Chow, Y H; Hung, C T; Yeoh, E K; Lee, Albert. 2026. Profiling unmet post-acute care needs of an inpatient population in Hong Kong: can real-world data and machine learning algorithms bring precision to tertiary prevention in the community?. December 2025; In *Hong Kong Medical Journal*. Vol. 31, No. 6, pp. 462-473.
99. Zheng Y.; Youhua (Frank) Chen; Carl Philip T. Hedenstierna; Jian Yang. 2026. “Multi-product Inventory System Involving Probabilistic Substitutions and Lost Sales: Demand Estimation and Ordering Decisions.” accepted *Production and Operations Management*.

#### *Selected Working Papers*

1. X.Y. Fei (former PhD), Y. F. Chen, Long Gao, W. Zhang (former PhD). Nov. 2024. “The Theory and Practice of ACC Payment Models”, under major revision for Management Sci.
2. Huang, Y.L., Y. F. Chen, S.C. Lin & Q. Yuan. Feb. 2025. “Hedging Newsvendor’s Profit Risk with Financial Instruments: A SURPASS Framework”, under major revision for Management Sci.
3. Lin, S.C, Y.F. Chen, Frank Y., Y. Li, & Max. Shen. “Dynamic Inventory Control with

- Covariates: Risk Constraints, Regularization, and Folding-horizon Plan.” 2023. R&R by Oper. Res. Available at SSRN:<https://ssrn.com/abstract=3893102> (under revision).
4. Zheng Y. (former PhD); Y. Chen; S.C. Lin (former PhD), Y. Yang (former PhD) & Max Shen. 2025. “Preference Learning for Dynamic Assortment and Inventory Planning.” Under revision, R&R at Oper. Res.
  5. Chen, F. Y, L. Gao, S. Savi, & W. Zhang (former student). 2025. “Paying for Long-Term Hospital Care: Contract Design under Dynamic Information Asymmetry.” (October 14), under review at Oper. Res.
  6. Chen, Du and Chen, Frank (Youhua) and Chua, Geoffrey A. 2025. “Design and Analysis of Algorithms for Privacy-Aware Online Allocation under Heterogeneous Privacy Expectations” (October 14), under review at Oper. Res.
  7. Fu, Z. (PhD student), Song G, Chen FY, Guo M. 2025. LLM as Agent: A Reinforcement Learning Framework for Interactive Voice Response Systems (Aug 1).
  8. Zhang, Xinbo (Postdoc), Montserrat Guillen, Xin Li, & Frank Youhua Chen. 2025. “Automobile Insurance Pricing based on Near-Miss Event Risk Prediction using Telematics Data.”
  9. Cao S.Y. (Former Postdoc), F. Y. Chen, S.M. He. “Optimal Healthcare Resource Allocation with Aggregated Information.”
  10. Shen H.X., Y. Chen, Q.P. Zhang, X.L. Yan & Z.L. Yong. 2025. “Allocating the Right Intervention to the Right Patient: A Robust Approach Using Stratified Clinical Evidence”.
  11. Wang, D.J, et al. F. Y. Chen. “DroneORLM: A Multi-Agent Large Model for Auto-Modeling of Drone Routing Problems.”
  12. Wu C., H Chen, C Yuan, Q Yang, G Song, Y Gao, L Luo, FY Chen, & M Guo. 2026. “AgentLTV: An Agent-Based Unified Search-and-Evolution Framework for Automated Lifetime Value Prediction”.
  13. FU Z.(PhD student), G Song, FY Chen, M Guo. 2025. “LLM as Agent: A Reinforcement Learning Framework for Interactive Voice Response Systems.”

#### *Selected Work-in-Progress Projects*

1. Luo, J.D. (PhD student), F. Y. Chen, S. Lin. “Data-Driven Decisions for Capital-Constrained Newsvendor Problems under Censored Demand.”
2. Fu, Z. (PhD student), F. Y. Chen. “A Transformer Approach for a Class of Periodic Review Inventory Problems.”
3. Luo, C.B. (PhD student), X. Yan, F.Y. Chen, W.L. Xue. “SAA-based Batch Ordering Policies.”
4. Fu, Z.(PhD student), F.Y. Chen, M. Guo & S. Lin. “LLM for the Newsvedor”.

#### IV. AWARDS (selected)

1. Huawei ITC Supply Chain Division: Honorary Chief Expert, 2024.
2. President Award, 2016, CityU.
3. Best Paper Competition (Third prize) - The 7th Int’l Conf. of CSMSE: Ye Lu, Youhua

(Frank) Chen, Miao Song, and Xiaoming Yan: “Optimal Pricing and Inventory Control Policy with Quantity-Based Price Differentiation”, 2014.

4. 2008 best paper in IIE Transactions on Scheduling and Logistics for “Value of a Put Option to the Risk-averse Newsvendor”, co-authored with M. Parlal
5. Exemplary Teaching Award, Faculty of Engineering, 2004

## V. SERVICES

Feb. 2013 – June 2020: Head, Dept of Management Sciences; 1 Nov. 2024 – Aug. 2025: Interim Head; 1 July 2020 – 1 August 2021: Dean,  
Member of Organizing Committee for the INFORMS Healthcare Conference 2021, July 21-23, 2021; etc.

## VI. CONSULTING (Past 2 years)

- \* Economic Impact Study on Development of the 3rd Gen Semiconductor Innovation Infrastructure and Blueprint in HK (2022-23), Contract Research for Science Park.
- \* Inventory Tracking and Tracing for Huawei ICT Supply Chain, ongoing.