

Hong Chen

Professor of Management Science
Cheung Kong Graduate School of Business
PhD, Stanford University

RESEARCH INTERESTS

- Clean energy market and finance, and carbon reduction in supply chain
- Modeling, optimization and empirical analysis of supply chain management, and service and healthcare management, economic and financial systems
- Corporate finance and real estate

EDUCATION

Ph.D., Engineering-Economic Systems, Stanford University
M.A., Engineering-Economic Systems, Stanford University
B.S., Mathematics, Xi'an Jiaotong University

PROFESSIONAL EXPERIENCE

2023-present	Professor of Management Science, Cheung Kong Graduate School of Business
2011-2022	Professor of Management Science, Shanghai Advanced Institute of Finance 2012-2015, Deputy Dean for Programs 2012-2014, Founding Director of DBA Program
2016-2017	Visiting Professor, Cheung Kong Graduate School of Business
2005-2011	Alumni Professor in Supply Chain Management, Chair of the Division of Operations and Logistics (2006-2009), Sauder School of Business, University of British Columbia
2010-2011	Dean (oversea), School of Management, Xi'an Jiaotong University
2009-2010	Professor, Operations Management, CEIBS, Shanghai
2003-2005	Founding Professor and Academic Associate Dean, Cheung Kong Graduate School of Business
1989-2002	Professor (1998-2002), Associate Professor (with tenure, 1993-1998), Assistant Professor (1989-1993), Faculty of Commerce and Business Administration (now renamed to Sauder School of Business), University of British Columbia
1988-1989	Assistant Professor, Industrial and Management Engineering, New Jersey Institute of Technology
1987-1988	Post-doctoral fellow, Division of Applied Sciences, Harvard University

VISITING POSITION HELD

Jan-Dec 2002	Visiting Professor, Systems Engineering and Engineering Management, Chinese University of Hong Kong
1997-1999	Visiting Senior Lecturer, Industrial Engineering and Engineering Management, Hong Kong University of Science & Technology
Mar-June 1994	Visiting Associate Professor, School of Industrial and Systems Engineering, Georgia Institute of Technology
Feb 1994	Visiting Scholar, Operations Research, Stanford University
Aug-Oct 1993	Visiting Senior Lecturer, School of Business and Management, Hong Kong University of Science & Technology

HONORARY APPOINTMENTS

2007-2010	Special Term Professor, Shanghai University of Finance and Economics
2001-2004	Honorary Head, Department of Management Science, School of Management, Xi'an Jiaotong University
2002-2003	Special Term Professor, School of Economics and Management, Tsinghua University

AWARDS AND DISTINCTIONS

- Outstanding Oversea Young Research Award (“国家杰青” B类), NSFC, China, 2000
- Research Excellence Award, Faculty of Commerce, UBC, 1993
- Izaak Walton Killam Memorial Faculty Research Fellowship, UBC, 1993
- Engineering Initiation Awards, NSF-USA, 1989
- George Nicholson Prize (honorable mention), The Institute for Operations Research and Management Science (INFORMS), 1988
- The Li Foundation Fellowship, the Li Foundation, New York, 1982-1984

EDITORSHIP AND OFFICES HELD ON SCHOLARLY SOCIETIES

- Editor, *Journal of the Operations Research Society of China*, 2012-2015
- Associate Editor, *Management Science*, 2006-2009
- Associate Editor, *Queueing Systems - Theory and Applications*, 1996-2008.
- Editor, *Journal of Systems Science and Complexity (China)*, 2000-2007
- Associate Editor, *Operations Research*, 1995-2005
- Served on the Career Award Panel, National Science Foundation (USA), 2000
- Chair/Past Chair, INFORMS Society on Applied Probability, 1995-1998
- Vice Chair/Chair Elect, INFORMS Society on Applied Probability, 1994-1995
- Council Member, TIMS Applied Probability College, 1992-1994

MEMBERSHIPS ON SCHOLARLY SOCIETIES

- The Institute for Operations Research and Management Science (INFORMS, a merger of former Operations Society of America (ORSA) and The Institute of Management Science (TIMS)), 1987-present
- INFORMS Society on Applied Probability
- INFORMS Society on Manufacturing and Service Operations Management (MSOM)
- Production and Operations Management Society (POMS)
- American Economic Association

Taught courses for DBA, Executive MBA and Executive Development Program at

Shanghai Advanced Institute of Finance
China Europe International Business School
Cheung Kong Graduate School of Business
Guanghua School of Management, Beijing University
School of Economics and Management, Tsinghua University
School of Engineering, Chinese University of Hong Kong

Publications Record

BOOK

H. Chen and D.D. Yao, *Fundamentals of Queuing Networks: Performance, Asymptotics and Optimization*, Springer-Verlag, New York, 2001.

ARTICLES IN PROFESSIONAL JOURNALS

- H. Chen, C. Tong and L. Bai, "The Lenovo Duo Model" (in Chinese), *Harvard Business Review* (China Edition), 82-92, January 2009.
- Chen, H., Qin, L., Shi, X.H, "Towards an Agility Supply Chain" (in Chinese), *Harvard Business Review* (China Edition), June 2009.

REFEREED PUBLICATIONS

(a) *Journals*

- H. Chen, J.M. Harrison, A. Mandelbaum, A.V. Ackere and L.M. Wein, "Empirical evaluation of a queueing network model for semiconductor wafer fabrication", *Operations Research*, **36**, 2, 202-215 (1988).
- H. Chen, "Optimal intensity control of a multi-class queue", *Queueing Systems - Theory and Applications*, **5**, 281-294 (1989).
- J.M. Harrison, R.J. Williams and H. Chen, "Brownian models of closed queueing networks with

- homogeneous customer populations", *Stochastics and Stochastics Reports*, **29**, 37-74 (1990).
- H. Chen and D.D. Yao, "Optimal intensity control of a queueing system with state-dependent capacity limit", *IEEE Transactions on Automatic Control*, **35**, 4, 459-464 (1990).
 - H. Chen and D.D. Yao, "Derivatives of the expected delay in the GI/G/1 queue", *Journal of Applied Probability*, **28**, 899-907 (1990).
 - H. Chen and A. Mandelbaum, "Discrete flow Networks: bottleneck analysis and fluid approximations", *Mathematics of Operations Research*, **16**, 2, 408-446 (1991).
 - H. Chen and A. Mandelbaum, "Stochastic discrete flow networks: diffusion approximations and bottlenecks", *Annals of Probability*, **19**, 4, 1463-1519 (1991).
 - H. Chen and D.D. Yao, "A fluid model for systems with random disruptions", *Operations Research*, **40**, S2, S239-247 (1992).
 - H. Chen, P. Yang, D.D. Yao and X. Chao, "Optimal control of a simple assembly system", *Operations Research Letters*, **14**, 199-205 (1993).
 - S.H. Xu and H. Chen, "On the asymptote of the optimal routing policy for two service stations", *IEEE Transactions on Automatic Control*, **38**, 187-189 (1993).
 - H. Chen and D.D. Yao, "Dynamic scheduling of a multi-class fluid network", *Operations Research*, **41**, 1104-1115 (1993).
 - H. Chen and W. Whitt, "Diffusion approximations for open queueing networks with service interruptions", *Queueing Systems, Theory and Applications*, **13**, 335-359 (1993).
 - H. Chen and J.G. Shanthikumar, "Fluid limits and diffusion approximations for networks of multi-server queues in heavy traffic", *Journal of Discrete Event Dynamic Systems*, **4**, 269-291 (1994).
 - H. Chen, P. Yang and D.D. Yao, "Control and scheduling in a two-station queueing network: optimal policies and heuristics", *Queueing Systems, Theory and Applications*, **18**, 301-332 (1994).
 - H. Chen, "Fluid approximations and stability of multiclass queueing networks: work-conserving disciplines", *Annals of Applied Probability*, **5**, 636-665 (1995).
 - D. Atkins and H. Chen, "Performance evaluation of scheduling control of queueing networks: fluid model heuristics", *Queueing Systems, Theory and Applications*, **21**, 391-413 (1995).
 - H. Chen, "Rate of convergence of the fluid approximation for generalized Jackson networks", *Journal of Applied Probability*, **33**, 3, 804-814 (1996).
 - H. Chen, "A sufficient condition for the positive recurrence of a semimartingale reflecting Brownian motion in an orthant", *Annals of Applied Probability*, **6**, 3, 758-765 (1996).
 - H. Chen and H. Zhang, "Diffusion approximations for multiclass re-entrant lines under a first-buffer-first-served discipline", *Queueing Systems, Theory and Applications*, **23**, 177-195 (1996).
 - T. Chi, J.J. Liu and H. Chen, "Optimal stopping rule for a project with uncertain completion time and salvageability", *IEEE Transactions on Engineering Management*, **44**, 1, 54-66 (1997).
 - H. Chen and H. Zhang, "Stability of multiclass queueing networks under FIFO discipline", *Mathematics of Operations Research*, **22**, 3, 691-725 (1997).
 - H. Chen, O. Kella and G. Weiss, "Fluid approximations for a processor-sharing queue", *Queueing Systems, Theory and Applications*, **27**, 99-125 (1997).
 - X. Chao, H. Chen and W. Li, "Optimal control of tandem networks with finite buffer and blocking", *Acta Mathematicae Applicatae Sinica (应用数学学报)*, **13**, 425-437 (1997).
 - H. Chen and H. Zhang, "Diffusion approximations for Kumar-Seidman network under a priority service discipline", *Operations Research Letters*, **23**, 171-181 (1998).
 - H. Chen, "Basic Adjoint Relation for Transient and Stationary Analysis of Some Markov Processes", *Annals of Operations Research*, **87**, 273-303 (1999).
 - J.J. Liu and H. Chen, "Optimal pacing in an assembly-based multistage production system",

- Annals of Operations Research*, **87**, 87-101 (1999).
- H. Chen and H. Zhang, "Stability of multiclass queueing networks under priority service disciplines", *Operations Research*, **48**, 1, 26-37 (2000).
 - H. Chen and H. Zhang, "A necessary condition and a sufficient condition for the diffusion approximations of multiclass queueing networks under priority service disciplines", *Queueing Systems, Theory and Applications*, **34**, 237-268 (2000).
 - H. Chen and X. Shen, "Strong approximation for multiclass feedforward queueing networks", *Annals of Applied Probability*, **10**, 3, 822-876 (2000).
 - H. Chen and H. Zhang, "Diffusion approximations for some multiclass queueing networks under FIFO service disciplines", *Mathematics of Operations Research*, **25**, 679-707 (2000).
 - H. Chen and M. Frank, "State dependent pricing with a queue", *IIE Transactions*, **33**, 10, 847-860 (2001).
 - H. Ye and H. Chen, "Lyapunov function as a necessary and sufficient condition for the stability of fluid networks", *Operations Research Letters*, **28**, 3, 125-136 (2001).
 - H. Chen and H. Ye, "Existence condition for the diffusion approximations of multiclass priority queueing networks", *Queueing Systems, Theory and Applications*, **38**, 435-470 (2002).
 - H. Chen, X. Shen and D.D. Yao, "Brownian approximations of multiclass open queueing networks", *Operations Research*, **50**, 6 (2002).
 - H. Chen and H. Ye, "Piecewise linear Lyapunov function for the stability of multiclass queueing networks", *IEEE Transactions on Automatic Control*, **47**, 4 (2002).
 - X. Shen, H. Chen, J.G. Dai and W. Dai, "The finite element method for computing the stationary distribution of an SRBM in a hypercube with applications to finite buffer queueing networks", *Queueing Systems, Theory and Applications*, **42**, 1, 33-62 (2002).
 - H. Chen and Y.-W. Wan, "Price competition of make-to-order firms", *IIE Transactions*, **35**, 9 (2003).
 - H. Chen and X. Shen, "The finite element method for computing the stationary distribution of an SRBM in an orthant with applications to open queueing networks", *Queueing Systems, Theory and Applications*, **45**, 1, 27-45 (2003).
 - H. Chen and M. Frank, "Monopoly pricing when customer queues", *IIE Transactions*, **36**, 569-581 (2004).
 - H. Chen and Y.-W. Wan, "Capacity competition of make-to-order Firms", *Operations Research Letters*, **22**, 3, 187-194 (2005).
 - H. Chen, M. Frank and O. Wu, "What actually happened to the Inventories of American Companies between 1981-2000?", *Management Science*, **51**, 7, 1015-1031 (2005).
 - H. Chen, O. Wu and M. Frank, "U.S. retail and wholesale inventory performance from 1981 to 2003", *Manufacturing and Service Operations Management*, **9**, 4, 430-456 (2007).
 - X. Chao, H. Chen, and S. Zheng, "Joint replenishment and pricing decisions in inventory systems with stochastically dependent supply capacity", *European Journal of Operations Research*, **191**, 140-153 (2008).
 - X. Chao, H. Chen and S. Zheng, "Dynamic capacity expansion for a service firm with capacity deterioration and supply uncertainty", *Operations Research*, **57**, 82-93 (2009).
 - H. Chen, O. Wu and D.D. Yao, "On the benefit of inventory-based dynamic pricing strategies", *Production and Operations Management*, **19**, 3, 249-260 (2010).
 - O. Wu and H. Chen, "Optimal control and equilibrium behavior of production-inventory systems", *Management Science*, **56**, 9, 1362-1379 (2010).
 - H. Chen and H. Ye, "Asymptotic optimality of balance routing", *Operations Research*, **60**, 163-179 (2012).
 - H. Chen and Z. Zhang, "Technical note – Joint inventory and pricing control with general

additive demand”, *Operations Research*, **62**, 6, 1335-1343 (2014).

- H. Chen, Q. Qian and A. Zhang, “Would allowing privately funded health care reduce the public waiting time? Theory and empirical evidence from Canadian joint replacement surgery data”, *Production and Operations Management*, **24**, 4, 605-618 (2015).
- H. Chen and M. Frank, “Are Direct Investments by the Federal Reserve a Good Idea? A Corporate Finance Perspective”, *Quarterly Journal of Finance*, **6**, 3 (48 pages) (2016).
- O. Wu and H. Chen, “Chain-to-chain competition under demand uncertainty”, *Journal of the Operations Research Society of China*, **4**, 1, 49-75 (2016).
- H. Chen and H. Ye, “An examination of some factory physics principles”, *Journal of the Operations Research Society of China*, **4**, 2, 131-145 (2016).
- Z.Y. Zhou, H. Chen, L. Han and A.M. Zhang, “The effect of a subway on house prices: evidence from Shanghai”, *Real Estate Economics*, **49**, 1, 199-234 (2021).
- H. Chen, T. Wang and D.D. Yao, “Financial network and systemic risk – a dynamic model”, *Production and Operations Management*, **30**, 8, 2441-2466 (2021)
- H. Chen and M.Z. Frank, “The Effect of Taxation on Corporate Financing and Investment”, (Featured Article) *Review of Corporate Finance Studies*, **11**, 1, 47-87 (2022).
- V.F. Araman, H. Chen, P.W. Glynn and L. Xia, “On a single server queue fed by scheduled traffic with Pareto perturbations”, *Queueing Systems, Theory and Applications*, **100**, 1, 61-91 (2022)

(b) Conference Proceedings

- H. Chen and D.D. Yao, “Optimal scheduling of multi-class queueing networks: the approach via fluid network”, *Proceedings of the 28th IEEE Conference on Decision and Control*, 1105-1106 (1989).
- P. Yang, H. Chen and D.D. Yao, “Optimal control and scheduling in a multi-class queueing network: results and conjectures”, *Proceedings of the 29th IEEE Conference on Decision and Control*, 582-586 (1990).
- H. Chen and D.D. Yao, “Studies on systems with random disruptions via fluid models”, *Proceedings of 1991 American Control Conference*, Boston, MA.
- X. Chao and H. Chen, “Optimal control for a tandem queue with blocking”, *Proceedings of the 12th World Congress International Foundation of Automatic Control*, **10**, 357-360, Sydney, Australia (1993).
- D. Atkins and H. Chen, “Dynamic scheduling control for a central server network of queues”, *World Congress International Foundation of Automatic Proceedings of the 12th Control*, **10**, 351-356, Sydney, Australia (1993).
- H. Chen and Y. Zhao, “A new queueing model for aircraft landing process”, *Proceedings of AIAA Guidance, Navigation, and Control Conference*, AIAA Paper 1997-3737, New Orleans, LA (1997)
- H. Chen and H. Ye, “Piecewise linear Lyapunov function for the stability of multiclass queueing networks with priority service disciplines”, *Proceedings of the 38th IEEE Conference on Decision and Control*, Phoenix (1999).
- H. Chen, Y.-W. Wan and J. Zhong, “Price and time competition of two identical make-to-order firms”, MSOM Society Conference, Ann Arbor, Michigan (2000).

(c) Chapters

- H. Chen and A. Mandelbaum, “Leontief systems, RBV's and RBM's”, *Applied Stochastic*

Analysis, edited by M.H.A. Davis and R.J. Elliotte, *Stochastic Monographs*, Volume 5, 1-43, Gordon and Breach Science Publishers (1991).

- H. Chen and W.T. Ziemba, "Dynamic Programming", *The New Palgrave Dictionary of Money and Finance*, edited by P. Newman, M. Milgate and J. Eatwell, 713-715, Macmillan (1992).
- H. Chen and A. Mandelbaum, "Hierarchical modelling of stochastic networks, Part I: fluid models", *Stochastic Modeling and Analysis of Manufacturing Systems*, edited by D.D. Yao, 47-105, Springer-Verlag (1994).
- H. Chen and A. Mandelbaum, "Hierarchical modelling of stochastic networks, Part II: strong approximations", *Stochastic Modeling and Analysis of Manufacturing Systems*, edited by D.D. Yao, 107-131, Springer-Verlag (1994).
- H. Chen and D.D. Yao, "Stable priority disciplines for multiclass networks", in *Stochastic Networks: Stability and Rare Events* (Lecture Notes Series), edited by P. Glasserman, K. Sigman and D.D. Yao, 27-39, Springer-Verlag (1996).
- H. Chen, "A Brownian model of stochastic processing network", *Stochastic Modeling and Optimization, with applications in Queues, Finance and Supply Chains*, edited by D.D. Yao, H. Zhang and X.Y. Zhou, Springer-Verlag (2002).
- H. Chen and H. Ye, "Methods in diffusion approximation for multi-server systems: sandwich, uniform attraction and state-space collapse" in *Queueing Networks: A Fundamental Approach*, edited by R.J. Boucherie and N.M. van Dijk, 489-530, Springer (2011).