

Felix T. S. CHAN



Academic Qualification

- 1982-1986 Ph.D.: Imperial College of Science and Technology,
University of London, UK; Flexible Manufacturing Systems;
- 1981-1982 Master: Imperial College of Science and Technology,
University of London, UK; Advanced Applied Mechanics;
- 1979-1981 BS: Brighton University, UK; Mechanical Engineering.

Working Experience

- 2022-present Vice Dean and Professor / Macau University of Science and
Technology
- 2009-2022 Associate Professor/Professor/Associate Dean (Research)/
Associate Head / The Hong Kong Polytechnic University
- 1996-2009 Lecturer/Associate Professor / University of Hong Kong
- 1988-1996 Lecturer/Senior Lecturer / University of South Australia
- 1986-1988 Research Fellow / University of Strathclyde

Teaching Activities

- Project Management
Operations Research
Production and Operations Management
Supply Chain Management

Research Areas

- Optimisation

Scheduling
Decision Sciences
Logistics and Supply Chain Management

Journal Paper Publications in the Past 3 years (1/9/2020 – 31/8/2023)

- (1) Wang, T., Wang, X.P., Ma, R., Li, X., Hu, X., Chan, F.T.S. and Ruan, J.H. (2020), Random Forest-Bayesian Optimization for Product Quality Prediction with Large Scale Dimensions in Process Industrial Cyber-Physical Systems, *IEEE Internet of Things*, Sept., Vol. 7, No. 9, pp. 8641-8653.
- (2) Chan, F.T.S., *Wang, Z.X., Goswami, A., Singhania, A. and Tiwari, M.K. (2020), Multi-objective Particle Swarm Optimisation based Integrated Production Inventory Routing Planning for Efficient Perishable Food Logistics Operations, *International Journal of Production Research*, September, Vol. 58, No. 17, pp. 5155-5174.
- (3) Yuan, X.Y, Shi, J.H., Wang, Y., Hu, T.T, Wang, X.P., Chan, F.T.S. and Ruan, J.H. (2020), An extended Bass Model on consumer quantity of B2C commerce platforms, *Electronic Commerce Research*, September, Vol. 20, No. 3, pp. 609-6289 0 59f1 0 0 1 306.05 504T/F215.32 841.92 reW* nBT/

- (7) Qian, Xiaohu, Chan, F.T.S., *Yin, Mingqiang, Zhang, Q., Huang, M. and Fu, X. (2020), A two-stage stochastic winner determination model integrating a hybrid mitigation strategy for transportation service procurement auctions, *Computers and Industrial Engineering*, Nov., Vol. 149. 106703.
- (8) Shang, K., Chan, F.T.S., Karungaru, S., Terada, K., Feng, Z. and Ke, L.-J. (2020), Two-stage robust optimization for the orienteering problem with stochastic weights, *Complexity*, Vol. 2020, Article ID 5649821, pp. 1-15.
- (9) Zhang, C., *Wang, Z.X., Ding, K., Chan, F.T.S. and Ji, W. (2020), An energy-aware Cyber Physical System for energy Big Data analysis and recessive production anomalies detection in discrete manufacturing workshops, *International Journal of Production Research*, December, Vol. 58, No. 23, pp. 7059-7077.
- (10) Huo, J.G., *Zhang, J.H. and Chan, F.T.S. (2020), A fuzzy control system for assembly line balancing with a three-state degradation process in the era of industry 4.0, *International Journal of Production Research*, Dec., Vol. 58, No. 23, pp. 7112-7129.
- (11) Eltoukhy, A.E.E., *Wang, Z.X., Chan, F.T.S., Chung, S.H., Ma, H.M. and Wang, X.P. (2020), Robust aircraft maintenance routing problem using a turn-around time reduction approach, *IEEE SCM-Systems*, Dec., Vol. 50, No. 12, pp. 4919-4932.
- (12) Zhan, S.L., Liu, S., Ignatius, J., Chen, D. and *Chan, F.T.S. (2021), Disaster relief logistics under demand-supply incongruence environment: A sequential approach, *Applied Mathematical Modelling*, January, Vol. 89, part 1, pp.592-609.
- (13) Liu, S., Yu, W., Chan, F.T.S. and Niu, B*. (2021), A variable weight based hybrid approach for multi-attribute group decision making under interval-valued intuitionistic fuzzy sets, *International Journal of Intelligent Systems*, Vol. 36, pp. 1015 1052.
- (14) Ruan, J.H., *Wang, Z.X., Chan, F.T.S., Patnaik, S. and Tiwari, M.K. (2021), A reinforcement learning based algorithm for the aircraft maintenance routing

problem, *Expert Systems With Application*, May, Vol. 169, 114399.

- (15) Li, S.M., Chan, F.T.S., *Tsang, Y.P. and Lam, H.Y. (2021), New Product Idea Selection in the Fuzzy Front End of Innovation: A Fuzzy Best-Worst Method and Group Decision-Making Process, *Mathematics*, Feb., Vol. 9, 337, pp. 1-18.
- (16) Ding, K., Zhang, Y., Chan, F.T.S., Zhang, C., Lv, J., Liu, Q., Leng L. and Fu, H. (2021), A cyber-physical production monitoring service system for energy-aware collaborative production monitoring in a smart shop floor, *Journal of Cleaner Production*, Vol. 297, May, pp. 1-14.
- (17) Zheng, S., Wang, K., Li, Z., Fu, X. and Chan, F.T.S. (2021), Subsidy or Minimum Requirement? Regulation on Port Adaptation Investment under Disaster Ambiguity, *Transportation Research Part B: Methodological*, Vol. 150, August, pp. 457-481.
- (18) Shaban, I.A., Chan, F.T.S., Chung, S.H. and Qu, T. (2021), A mixed wholesale-option-contract to fix the demand imbalance between substitutable air cargo routes: a cooperative game approach, *Expert Systems With Applications*, Vol. 182, November, 2021, 115300.
- (19) Shaban, I.A., Chan, F.T.S. and Chung, S.H. (2021), A novel model to manage air cargo disruptions caused by global catastrophes such as Covid-19, *Journal of Air Transport Management*, Vol. 95, August, 102086.
- (20) Qin, Y., Ng, K.K.H., Hu, H., Chan, F.T.S. and Xiao, S.H. (2021), Post disaster

using the DEMATEL approach: A case study, *Measuring Business Excellence*, May, DOI 10.1108/MBE-07-2020-0104.

- (23) Qian, Xiaohu , Yin, Mingqiang , Chan, F.T.S., Zhang, J. and Huang, M. (2021), Sustainable-responsive winner determination for transportation service procurement auctions under accidental disruptions, *Journal of Cleaner Production*. October, Vol. 320, No. 20, 128833.
- (24) *Orisaremi, K. K., Chan, F. T. S., & Chung, N. S. H. (2021). Potential reductions in global gas flaring for determining the optimal sizing of gas-to-wire (GTW) process: An inverse DEA approach. *Journal of Natural Gas Science and Engineering*, September, Vol. 93, [103995].
- (25) Hui, J.H., Yan, Z., Lv, J., Liu, Y., Ding, K. and Chan, F.T.S. (2022), An Investigation on Energy Consumption and part Quality of Stereolithography Apparatus Manufactured Parts, *Rapid Prototyping Journal*, January, Vol. 28, No. 1, pp. 52 67.
- (26) Wu, S.M., *Chan, F.T.S. and Chung, S.H. (2022), A Study on Green Supply Chain Under Capital Constraint Considering Time-Varying Salvage Value, *International Journal of Production Research*, Feb., Vol. 60, No. 1, pp. 8-24.
- (27) Huang, C., *Chan, F.T.S. and Chung, S.H. (2022), Recent contributions on supply chain finance: Towards a theoretic and practical research agenda, *International Journal of Production Research*, Vol. 60, No. 2, pp. 493-516. Published online: 30 Aug 2021. DOI: 10.1080/00207543.2021.1964706.
- (28) *Zhou, F., He, Y., Chan, F.T.S. (2022), Joint Distribution Promotion by Interactive Factor Analysis using an Interpretive Structural Modeling Approach, *SAGE Open*, January-March 2022, pp. 1 16.
- (29) Zhu, B., Zhang, Y., *Ding, K., *Chan, F.T.S., Hui, J. and Zhang, F. (2022), Lot-sizing Decisions for Material Requirements Planning with Hybrid Uncertainties in a Smart Factory, *Advanced Engineering Informatics*, January, Vol. 51, 101527.
- (30) Yang, D., Yin, W., *Liu, S. and *Chan, F.T.S. (2022), Understanding the Effect of Multi-Agent Collaboration on the performance of Logistics Park Projects: Evidence from China, *Sustainability*, March, Vol. 14, Issue 7, 4179.

- (31) Zhou, J., Rao, S., Gao, L., Lu, C., *Zheng, J. and *Chan, F.T.S. (2022), Self-regulated bi-partitioning evolution for many-objective optimization, *Information Sciences*, April, Vol. 589, pp. 827-848.
- (32) Prajapati, D., *Chan, F.T.S., Chelladurai, H., Lakshay, L. and Pratap, S. (2022), An IoT embedded Sustainable Supply Chain management of B2B E-commerce. *Sustainability*. April, Vol. 14, No.9, 5066.
- (33) Zhang, X., *Chan, F.T.S. and *Mahadevan, S. (2022), Explainable Machine Learning in Image Classification Models: An Uncertainty Quantification Perspective, *Knowledge-Based Systems-SI*, May, Vol. 243, 108418.
- (34) Wu, S.M., *Chan, F.T.S. and Chung, S.H. (2022), The impact of buyback support on financing strategies for a capital-constrained supplier, *International Journal of Production Economics*, June, Vol. 248, 108457.
- (35) Irfan, I.A., Sumbal, M.S.U.K., Khurshid, F. and *Chan, F.T.S. (2022), Towards a Resilient Supply Chain Model: Critical Role of Knowledge Management and Dynamic Capabilities, *Industrial Management and Data Systems*, May, Vol. 122, No. 5, pp. 1153-1182.
- (36) *Zhang, X., Chan, F.T.S., Yan, C. and Bose, I. (2022), Towards risk-aware artificial intelligence and machine learning systems: An overview, *Decision Support Systems*, Vol. 159, August, 113800.
- (37) Zheng, S., *Wang, K., Chan, F.T.S., Fu, X. and Li, Z.C. (2022), Subsidy on transport adaptation investment-Modeling decisions under incomplete information and Ambiguity, *Transportation Research Part B: Methodological*, Vol. 162, August, pp. 103-129
- (38) Xu, X., Ji, P. and *Chan, F.T.S. (2022), Loss-procurement decision in a multi-sourcing under e-commerce surroundings, *Industrial Management and Data Systems*, Aug. Vol. 122, No. 8, pp. 1787-1815.
- (39) Liu, S., He, X.J., *Chan, F.T.S. and *Wang, Z. (2022), An Extended Multi-Criteria Group Decision-Making Method with Psychological Factors and Bidirectional Influence Relation for Emergency Medical Supplier Selection, *Expert Systems With Applications*, September, Vol. 202, 117414.

- (40) Wu, S.M., *Chan, F.T.S. and Chung, S.H. (2022), The Influence of Positive and Negative Salvage Values on Supply Chain Financing Strategies, *Annals of Operations Research*, Vol. 315, pp. 535-563.
- (41) Prajapati, D., *Chan, F.T.S., Daultani, Y. and Pratap, S. (2022), Sustainable Vehicle Routing of Agro-Food grains in the E-commerce industry, *International Journal of Production research*, Vol. 60, Issue 24, Dec., pp. 7319-7344.
- (42) Huang, C., *Chan, F.T.S. and Chung, S.H. (2022), The Impact of Payment Term Extensions on the Working Capital Management of an Automotive Supply Chain, *International Journal of Production research*, Vol. 60, Issue 24, Dec., pp. 7360-7383.
- (43) Kushwaha, S., *Chan, F.T.S., Chakraborty, K. and Pratap, S. (2022), Collection and Remanufacturing Channels Selection under a Product Take-Back Regulation with Remanufacturing Target, *International Journal of Production research*, Vol. 60, Issue 24, Dec., pp. 7384-7410.
- (44) Goswami, M., Daultani, Y., *Chan, F.T.S. and Pratap, S. (2022), Assessing the Impact of Supplier Benchmarking in Manufacturing Value Chains: An Intelligent Decision Support System for Original Equipment Manufacturers, *International Journal of Production research*, Vol. 60, Issue 24, Dec., pp. 7411-7435.
- (45) Eltoukhy, A.E.E., *Wang, Z.X., Shaban, I.A. and *Chan, F.T.S. (2022), Coordinating aircraft maintenance routing and integrated maintenance staffing

- (47) Orisaremi, K.K., *Chan, F.T.S., Chung, S.H. and Fu, X. (2022), A sustainable lean production framework based on inverse DEA for mitigating gas flaring,

- (56) Zhang, J.H., *Chan, F.T.S. and *Xu, X. (2023), Data-driven analysis on optimal purchasing decisions in combined procurement, *International Journal of Production research*, July, Vol. 61, No. 13, pp. 4265-4278.
- (57) Ng, K.K.H., *Chan, F.T.S., Qin, Y. and Xu, G. (2023), The Impacts of longitudinal separation, efficiency loss and cruise speed adjustment in robust terminal traffic flow problem under uncertainty, *International Journal of Transportation Research*, Vol. 15, No. 6, pp. 584-607.
- (58) Zhou, T., Zhang, L., Han, T., Droguett, E.L., Mosleh, A. and *Chan, F.T.S. (2023), An Uncertainty-Informed Framework for Trustworthy Fault Diagnosis in Safety-Critical Applications, *Reliability Engineering and System Safety*, January, Vol. 229, 108865.
- (59) Irfan, I., Au, A.K.M., Khurshid, F. and *Chan, F.T.S. (2023), Learning by -to-B to B-to-C, *Supply Chain Management: An International Journal*, April, Vol. 28, NO. 4, pp. 641-665.
- (60) Kehinde, T.O., *Chan, F.T.S. and Chung, S.H. (2023), Scientometric review and analysis of recent approaches to stock market forecasting: Two decades survey, *Expert Systems With Applications*, March, Vol. 213, Part C, 119299.
- (61) Goswami, M., *Chan, F.T.S., Ramkumar, M., Daultani, Y., Pratap, S. and Chhabra, A. (2023), A joint modeling and exploratory framework for intra-firm collaboration within construction and mining equipment industry, *Industrial Management and Data Systems*, February, Vol. 123, No. 2, pp. 451-491.
- (62) Orisaremi, K.K., *Chan, F.T.S., Chung, S.H. and Fu, X. (2023), Maximizing flare gas power generation for the design of an optimal energy mix, *Journal of Cleaner Production*, March, Vol. 391, 136164.
- (63) Xu, X., Ji, P. and *Chan, F.T.S. a dual-sourcing procurement, *Industrial Management and Data Systems*, March, Vol. 123, No. 3, pp. 1052-1072.
- (64) Zhang, Y., Zhang, D., *Zhang, X., Qiu, L., Chan, F.T.S., Wang, Z. and Zhang, S. (2023), Guided Probabilistic Reinforcement Learning for Sampling-Efficient

Maintenance Scheduling of Multi-Component System, *Applied Mathematical Modelling*, July, Vol. 119, pp. 677-697

- (65) Eltoukhy, A.E.E., *Hussein, M., Xu, M. and *Chan, F.T.S. (2023), Data-driven Game-theoretic Model Based on Blockchain for Managing Resource Allocation and Vehicle Routing in Modular Integrated Construction, *International Journal of Production research*, July, Vol. 61, No. 13, pp. 4472-4502.
- (66) *Chan, F.T.S. and Ding, K. (2023), Industrial Intelligence-driven Production and Operations Management, *International Journal of Production research*, July, Vol. 61, No. 13, pp. 4215 4219.
- (67) Zhang, Q., *Chan, F.T.S., Chung, S.H. and Fu, X. (2023), Improved ant colony optimization for the operational aircraft maintenance routing problem with cruise speed control, *Journal of Advanced Transportation*, Vol. 2023, 18 pages.
- (68) Luo, G., *Liu, X. and *Chan, F.T.S. (2023), Optimal ordering decisions in portfolio procurement considering the spot price fluctuation, *Sustainability*, 15, 11169.
- (69) Zheng, K., *Ding, K., Hui, J., Zhang, F., Lv, J. and *Chan, F.T.S., Blockchain-based Credible Manufacturing Data Sharing for a Collaborative Manufacturing Supply Chain, *International Journal of Production research*. (In Press)
- (70) Kumar, R.R., *Chan, F.T.S., Chakraborty, A. and Goswami, M., Driving
*IEEE Transactions on Engineering
management*. (In Press)
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_____ Knowledge Bases, Cooperation Networks and Influential Contributions of Channel Modeling for Terahertz Communications, *IEEE Communications Magazine*. (In Press)
- (72) Guo, L., Duan, Z., Guo, W., *Ding, K., Lee, C.H. and *Chan, F.T.S., Machine vision-based recognition of elastic abrasive tool wear and the its influence on machining performance, *Journal of Intelligent Manufacturing*. (In press)

Other Professional Activities

Chief Editor/Senior Associate Editor/Associate Editor for international journals:

- (1) Editor-in-Chief, Transportation Management.
- (2) Senior Associate Editor, OPSEARCH.
- (3) Associate Editor, International Journal of Modelling in Operations Management.
- (4) Associate Editor, Modern Supply Chain Research and Applications.
- (5) Associate Editor, Operations and Supply Chain Management: An International Journal.

Guest Editor for international journals including:

International Journal of Production Research; Mathematics; Journal of Manufacturing Technology Management; International Journal of Business Performance Management; International Journal of Intelligent Systems Technologies and Applications; International Journal of Computer Applications in Technology; International Journal of Value Chain Management; Mathematical Problems in Engineering; Proceedings of Institute of Mechanical Engineering- Part O: Journal of Risk and Reliability.

Member of Editorial Board of international journals including:

International Journal of Production Research; Supply Chain Management: An International Journal; Journal of Intelligent Manufacturing; Journal of Manufacturing Technology Management; International Journal of Computer Integrated Manufacturing; Robotics and Computer Integrated Manufacturing; International Journal of Advanced Manufacturing Technology; International Journal of Business Performance Management; International Journal of Computer Applications in Technology; International Journal of Agile Systems and Management; International Journal of Services, Economics and Management; International Journal of Supply Chain and Operations Resilience; Advances in Industrial Engineering and Management.

Keynote Speech/ Chairman/Member of International Conferences:

- Prof. Chan has been frequently invited to give keynote speech in various international conferences, about 20 times.
- He is also very active in organizing international conferences and taking key roles including Conference Chairman; Program Chairman, about 16 times.
- He has been involved in organizing conferences as a member, more than 60 times.

Invited Reviewer for Research Funding Bodies:

- (1) Member of the Engineering Panel (Joint Research Schemes) of the Research Grants Council (RGC), Hong Kong (1 March 2018 – present).
- (2) Member of Assessment Panel of NSFC/RGC Joint Research Scheme (1 March 2018 – present).
- (3) Member (Engineering) on the Assessment Panel for Competitive Research Funding Schemes for the Local Self-financing Degree Sector of the Research Grants Council (RGC), Hong Kong (14/3/2017 – present).
- (4) Member of Assessment Panel of ITF Entrepreneurs Fund.

Honors/Awards

Top 2% Scientists

Based on the recent compilations from a research group of Stanford about the impact of scientists, Prof. Felix Chan is categorized as **Top 2% Scientists** for THREE consecutive years (2020-2022).

OPERATIONS RESEARCH

Based on the recent compilation (2020) from a research group of Stanford about the impact of scientists (top 2% listed). The work is published in <https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000918>.

Prof. Felix Chan is categorized in the field of Operations Research, ranked 10 out of 23455 researchers worldwide, i.e. Top 0.04% worldwide.

Furthermore, b

Prof. Felix Chan ranked among the Top 25 based on total publication score:

- Top 25 SCM authors of Asia by publication score over the 15-year period of 2001-2015. (Prof. Felix Chan Ranks **No. 16**)
- Top 25 SCM authors of Asia by total degree centrality over the 15-year period of 2001-2015. (Prof. Felix Chan Ranks **No. 5**)
- Top 25 SCM authors of Asia by Bonacich power centrality over the 15-year period of 2001-2015. (Prof. Felix Chan Ranks **No. 6**)

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