姓名：张灿荣

职称：教授、博士生导师

学科：管理科学与工程、工业工程

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【个人简介】

张灿荣，教授、博士生导师、广东省杰青。2005 年本科毕业于西安交通大学工业工程系，2010 年博士毕业于清华大学工业工程系，读博期间，到美国威斯康星大学麦迪逊分校交流学习一年，2010 年博士毕业后入职清华大学深圳国际研究生院。长期从事作业调度和数字化生产系统研究，主要的工作是设计优化理论与数据分析技术（Optimization and Data Analytics）相结合的优化算法，处理集装箱码头运作优化、生产计划与调度、物流网络设计和优化等领域的复杂优化决策问题，提高系统运作效率。承担包括 4 项国家自然科学基金和 1 项国家重点研发计划子课题在内的十余项国家、地方、企事业单位科研项目；研究成果发表在 Transportation Science，Transportation Research Part B: Methodological, INFORMS Journal on Computing，IISE Transactions，European Journal of Operational Research, Naval Research Logistics 等国际知名期刊上；部分科研成果

通过产学研合作和科技成果转化等方式，在华为技术有限公司、华为海思半导体有限公司、阿里巴巴、恒力集团、盐田港、天津港等多家企业得到应用，为企业带来实实在在的效益。担任工业工程学科知名 SCI 期刊 Computers & Industrial Engineering 领域主编；参与 INFORMS Conference on Service Science 等多个国际会议的组织工作。承担《高级运筹学》、《生产管理》等多门课程的教学任务，教学效果良好，《高级运筹学》被评为清华大学校级精品课程和清华大学课程思政示范课程，多次获评清华大学年度教学优秀奖，被学生评为深研院首届"良师益友"。

【学术经历】

● 工作经历：

2020.12 - 现在   清华大学深圳国际研究生院   教授、博导
2013.12-2020.11   清华大学深圳国际研究生院   副教授、博导
2010.07-2013.11   清华大学深圳国际研究生院   讲师

● 教育经历：

2008.09-2009.09   美国威斯康星大学麦迪逊分校   联合培养
2005.09-2010.07   清华大学工业工程系   博士
2000.09-2005.07   西安交通大学管理学院工业工程系   双学士

【研究兴趣】

● 方法层面：

大规模优化、线性和整数规划、动态规划、随机优化、数据挖掘等。

● 应用层面：

集装箱码头运作优化、生产计划与调度、物流网络设计和优化，以及相应的决策支持系统研发。

【科研项目】

● 纵向科研项目

[1] 国家自然科学基金面上项目，《基于数据驱动的集装箱甩挂运输问题研究》，主持，在研

[2] 国家自然科学基金面上项目,《基于动态决策和数据挖掘的集装箱翻倒问题研究》,主持,已结题

[3] 国家自然科学基金面上项目,《考虑不确定性的港口资源调度问题研究》,主持,已结题

[4] 国家自然科学基金青年项目,《考虑集装箱翻倒的场地位置分配研究》,主持,已结题

[5] 国家重点研发计划,《基于 HCPS 的智能工厂与无人生产线自组织重构体系与关键技术》,主持（子课题）,已结题

[6] 广东省自然科学基金杰出青年项目,《集装箱码头运作优化研究》,主持,在研

[7] 深圳市稳定支持项目（重点项目）,《可重构柔性装配中心关键技术研究》,共同主持,在研

[8] 深圳市基础研究项目（自由探索）,《半导体智能生产管理决策支持系统关键技术研究》,主持,已结题

[9] 深圳市基础研究项目（学科布局）,《物流末端配送机器人关键技术研究》,共同主持,已结题

- 企业合作项目
[1] 苏州恒力智能科技有限公司,《薄膜下料与生产排程优化项目》,主持,在研
[2] 阿里云计算有限公司,《基于缓冲区的汽车焊装-涂装-总装多车间联合调度排序问题研究》,主持,在研
[3] 华为技术有限公司,《芯片生产排程调度算法研发》,主持,已结题
[4] 华为海思半导体有限公司,《仓储机器人协调控制算法研发》,主持,已结题
[5] 华为海思半导体有限公司,《仓库操作看板优化调度系统研发》,主持,已结题
[6] 华为海思半导体有限公司,《高级生产计划排程系统（APS）研发》,主持,已结题
[7] 盐田港国际资讯有限公司,《盐田区临港物流能力指数构建》,主持,已结题
[8] 深圳市盐田区经济促进局,《盐田区港口物流业发展第十三个五年规划》,主持,已结题
[9] 天津五洲国际集装箱码头有限公司,《集装箱堆场场地计划决策支持系统研发》,主要完成人,已结题

【学术论文】

（注：＊代表通讯作者； ＃代表指导的学生）

[55] Wang Naiyu#, Meng Qiang, and **Zhang Canrong**＊. A branch-price-and-cut algorithm for the local container drayage problem with controllable vehicle interference. *Transportation Research Part B: Methodological*, 2023, forthcoming.

[54] Wang Chong#, Miao Lixin, **Zhang Canrong**＊, Wu Tao, and Liang Zhe. Robust Optimization for the Integrated Berth Allocation and Quay Crane Assignment Problem. *Naval Research Logistics*, 2023, forthcoming.

[53] Hao Xinye#, Liu Changchun, Liu Maoqi, **Zhang Canrong**, and Zheng Li＊. Solving a Real-world Large-scale Cutting Stock Problem: A Clustering-assignment-based Model. *IISE Transactions*, November 2023, 55(11): 1160-1173.

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September 2022, 301(2): 785-796.

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[43] Duan Guofang, **<u>Zhang Canrong</u>**, Gonzalez Priscila, and Qi Mingyao*. Performance evaluation for Robotic Mobile Fulfillment Systems with time-varying arrivals. *Computers & Industrial Engineering*, August 2021, 158: 1-22.

[42] **<u>Zhang Canrong</u>**, Zhang Dandan, and Wu Tao* Data-driven Branching and Selection for Lot-sizing and Scheduling Problems with Sequence-dependent Setups and Setup Carryover. *Computers & Operations Research*, August 2021, 132: 1-16.

[41] Yu Lina, **<u>Zhang Canrong</u>**, Jiang Jingyan, Yang Huasheng*, and Shang Huayan. Reinforcement learning approach for resource allocation in humanitarian logistics. *Expert Systems with Applications*, July 2021, 173: 1-14.

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[29] Wang Zujian[#], Qi Mingyao, Cheng Chun, and **Zhang Canrong**. A hybrid algorithm for large-scale service network design considering a heterogeneous fleet. *European Journal of Operational Research*, July 2019, 276(2): 521-541.

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[26] Wu Tao, Xiao Fan, **Zhang Canrong**, He Yan, and Liang Zhe. The green

capacitated multi-item lot sizing problem with parallel machines. ***Computers & Operations Research***, October 2018, 98: 149-164.

[25] Wu Tao, Liang Zhe, and **Zhang Canrong**. Analytics Branching and Selection for the Capacitated Multi-Item Lot Sizing Problem with Non-Identical Machines. ***INFORMS Journal on Computing***, Spring 2018, 30(2): 236-258.

[24] **Zhang Canrong**, Wu Tao, Qi Mingyao, and Miao Lixin. Simultaneous Allocation of Berths and Quay Cranes under Discrete Berth Situation. ***Asia-Pacific Journal of Operational Research***, June 2018, 35(3): 1-28.

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[16] Liang Zhe, He Yan, Wu Tao, and **Zhang Canrong***. An informative column generation and decomposition method for a product on planning and facility

location problem. *International Journal of Production Economics*, December 2015, 170, Part A: 88-96.

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[9] Lin Jiahong[#], Gao Benhe, and <u>**Zhang Canrong**</u>. Simulation-based investment planning for Humen Port. *Simulation Modelling Practice and Theory*, January 2014, 40: 161-175.

[8] Xiao Jing[#], <u>**Zhang Canrong**</u>, Zheng Li, and Gupta Jatinder N. D. MIP-based fix-and-optimize algorithms for the parallel machine capacitated lot-sizing and scheduling problem. *International Journal of Production Research*, August 2013, 51(16): 5011-5028.

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【讲授课程】

- 《高级运筹学》
- 《生产管理》
- 《库存管理》
- 《Analysis and Optimization on Logistics Systems》

【学术兼职】

- Computers & Industrial Engineering，领域主编（Area Editor）
- INFORMS Conference on Service Science，项目主席（Program Chair）

【主要荣誉】

● 学术荣誉

[1] 广东省杰青（2020 年）

[2] 深圳市地方级领军人才（2017 年）

[3] 深圳市海外孔雀计划人才（2014 年）

[4] 中日友好 NSK 机械工学优秀论文奖（2010 年）

[5] IEEE 自动化与物流国际会议最优论文（2007 年）

● 课程教学和学生指导

[1] 深圳市优秀教师（2023 年）

[2]《高级运筹学》清华大学课程思政示范课程（2023 年）

[3] 清华大学课程思政示范教师（2023 年）

[4]《高级运筹学》院课程思政试点示范工程（2022 年）

[5] 清华大学第十八届"良师益友"提名（2022 年）

[6]《高级运筹学》清华大学精品课（2019 年）

[7] 清华大学年度教学优秀奖（2018 年）

[8] 清华大学年度教学优秀奖（2017 年首届）

[9]《高级运筹学》清华大学深圳研究生院精品课（2017 年）

[10]清华大学深圳研究生院"良师益友"（2013 年首届）