# Zhen Chen, Ph.D.

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### **Working Experience**

2022.06–2023.06 ■ **Visiting scholar.** Business School, University of Edinburgh Host Professor: Roberto Rossi

2018.09–2018.12 ■ **Post doc.** School of Economics and Business Administration, Chongqing University, China.

### **Education**

Thesis title: *Lot sizing problems considering supply chain financing*. Supervisor: Professor Ren-qian Zhang, Professor Roberto Rossi

2016.09 – 2017.08 ■ Visiting PhD student, Management Science and Business Economics, University of Edinburgh, Edinburgh, UK.

Paper title: Single item lot sizing problem with business overdraft.

Supervisor: Professor Roberto Rossi

2010.09 – 2013.01 ■ Master. Management Science and Engineering, Beihang University, Beijing, China.

Cnina.

2006.09 – 2010.06 ■ Bachelor. Business Administration, Northeastern University, Qinhuang-dao, China.

### **Research Fields**

inventory management

supply chain financing

stochastic modelling and programming

### **Research Publications**

#### **Journal Article**

- Rossi, R., **Chen**, **Z.**, & Tarim, S. A. (2023). On the stochastic inventory problem under order capacity constraints. *European Journal of Operational Research*. (ABS 4, DOI: 10.1016/j.ejor.2023.06.045).
- **Chen**, **Z.** & Zhang, R.-q. (2022). A multi-period multi-product stochastic inventory problem with order-based loan. *International Journal of Production Research*. (ABS 3, DOI: 10.1080/00207543.2021.2006818).
- **Chen, Z.** & Rossi, R. (2021). A dynamic ordering policy for a stochastic inventory problem with cash constraints. *OMEGA: the International Journal of Management Science*, *102*. (ABS 3, DOI: 10.1016/j.omega.2020.102378).
- **Chen**, **Z.** & Zhang, R.-q. (2021). A cash-constrained dynamic lot-sizing problem with loss of goodwill and credit-based loan. *International Transactions in Operational Research*, 28(5), 2841–2866. (ABS 1).
- **Chen**, **Z.** & Rossi, R. (2019). A cash constrained single item stochastic lot-sizing problem. *IFAC-PapersOnLine*, *52*(13), 1479–1483.
- **Chen**, **Z.** & Zhang, R.-q. (2019). Single item lot sizing problem considering loan and capital constraint. *Journal of System engineering (in Chinese)*, 34(02), 266–276 + 288.

- Chen, Z. & Zhang, R. (2018). A capital flow-constrained lot-sizing problem with trade credit. Scientia Iranica, Transaction E. Industrial Engineering, 25(5), 2775–2787.
- Chen, Z., Wu, Y., & Zhao, O. (2015). Research on an independent ordering model and a joint ordering model of retailers under a new variable lead time. Industrial Engineering and Management (in Chinese), 20(04), 61-67.
- Chen, Z. & Xu, L. (2015). Comparative analysis on the operating costs of freight enterprises under implementation of carbon policies, *Industrial Engineering*, (03), 55–62. (in Chinese).

### **Working paper**

- Chen, Z. & Archibald, W. T. (2023). Maximising the survival probability of a cash-flow inventory problem with joint service level constraint. (R&R to International Journal of Production Economics, ABS 3).
- Chen, Z., Rossi, R., Belen, M.-B., & Tarim, A. (2023). Working force planning with stochastic turn over. (finished, plan to submit to a ABS 4/+ journal).

#### **Conference**

- Chen, Z. (2022). A cash-flow inventory problem maximising the survival probability with joint chance constraint. In 32nd European Conference on Operational Research (EURO 2022). 3-6 July. Espoo, Finland.
- Chen, Z. & Rossi, R. (2017). Stochastic lot sizing problem considering capital flow and business overdraft. In 8th International Workshop on Lot Sizing (pp. 59-62). 23-25 August. Glasgow, UK.
- Chen, Z. & Zhao, Q. (2012). An analysis for multi plant location problem under concurrent implementation of different carbon policies. In International Asia Conference on Industrial Engineering & Management Innovation (pp. 1359–1367). 10–12 August. Beijing, China.

### **Books and Chapters**

Zhang, R., Wang, J., & Chen, Z. (2016). Tongfang energy engineering technology co., ltd.—energy management contract service. In J. Wang, M. Kosaka, & K. Xing (Eds.), Manufacturing servitization in the asia-pacific (pp. 251–286). Singapore: Springer.

## **Projects**

- "Data-driven demand forecasting, inventory and financing management and their integration research" Youth Project of National Natural Science Foundation of China, 2022-2024, Project No. 72101213. £37,500 (PI)
- "Multi-period inventory control for online retailers under supply chain financing" Fundamental Research Funds for the Central Universities, 2019-2023, Project No. SWU1909738, £18,750 (PI) "Big data application research in the risk control of supply chain financing in Chongqing" Chongqing
- Social Science Planning Fund, 2021-2023, Project No. 2020BS49, £625 (PI)
- "Financial technology application research in supply chain financing" Research Funds of the Research Institute of Intelligent Finance and Platform Economics, Southwest University, 2020-2021, Project No. 20YJ0105, £2,500 (PI)

### Teach

- Principle of Statistics (undergraduate students)
- Multivariate Statistics (undergraduate students)
- Decision Theory and Methods (undergraduate students)
- Production and Operation Management (undergraduate students)
- Python Programming (undergraduate & master students)
- Advanced Applied Mathematical Statistics (PhD students, co-teach with two other teachers)

# **Reviewer activity**

I regularly review research articles for the academic journals listed below:

European Journal of Operational Research (ABS 4)

# **Reviewer activity (continued)**

- OMEGA: the International Journal of Management Science (ABS 3) International Journal of Production Research (ABS 3) Computers & Operations Research (ABS 3) Computers & Industrial Engineering (ABS 2)

## **Academic membership**

- Member of the Institute of Mathematics and its Applications (IMA, UK)
- Member of the Systems Engineering Society of China■ Member of the Operation Research Society of China

### References

### **Professor Roberto Rossi**

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### **Professor S. Armagan Tarim**

Business School, University College Cork, Cork, Ire-

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