

LONG CHEN

No.96 Jinzhai Road, Baohe District, Hefei, Anhui, 230026, P.R.China
lchen1307@mail.ustc.edu.cn

EDUCATION

University of Science and Technology of China

MSc. in Management Science and Engineering

Hefei, China

09/2023 - Present

- GPA: 3.82/4.3, Rank: 2/49
- Advisor: Prof. Lindong Liu

Jiangnan University

B.S. in Industrial Engineering

Wuxi, China

09/2019 - 06/2023

- GPA: 3.64/4.0, Rank: 2/66

RESEARCH INTERESTS

Application: Machine Scheduling, Semiconductor Process Optimization, Intelligent Manufacturing

Methodology: Large Scale Integer Programming, Robust Optimization, Approximation Algorithm

RESEARCH PROJECTS

Extended ATIF and Exact Approach for Flow Shop Scheduling

3/2024 - Present

- This research models the semiconductor manufacturing process as a flow shop scheduling problem with generalized time windows and sequence-dependent setup times. Mixed integer programming and network flow models are used for formulation.
- Current progress includes Minkowski reformulation, branch-and-price, and Dantzig-Wolfe decomposition, along with approximation algorithms for large-scale problem-solving.

Online Batching with Nonlinear Objective via Deep Graph Learning

9/2024 - Present

- This research models the batching problem in semiconductor production as an online matching problem, with a nonlinear neural network as the optimization objective. Research framework of integrating offline training, online evaluation, and multimodal graph learning is adopted.

Sequential Recovery of Flooded Areas (Undergraduate dissertation)

10/2022 - 6/2023

- The post-flood drainage and area restoration problem is formulated as a mixed-integer programming model, which is then reformulated using Lagrangian relaxation.
- To solve it, a Lagrangian relaxation heuristic and a greedy heuristic algorithm are developed.

INTERNSHIP EXPERIENCE

Industry 4.0 Smart Manufacturing Engineer

Bosch Powertrain Systems Co., Ltd.

11/2022 – 06/2023

Department of MOE 4.3

Supervisor: Mr. Sun Jian

Hours per week: 40

- Led production line's Industry 4.0 digital transformation and algorithm development
- Completed projects: Stotz scraping, ECM&AF output tracking, parts warehousing system

Operations Research and Optimization Algorithm Engineer

Changxin Memory Technologies, Inc.

01/2024 – Present

Department of AI-AOPT

Supervisor: Dr. Xuan Hongwei

Hours per week: 32

- Analyzed semiconductor production business requirements and built mathematical formulations
- Responsible for heuristic fitness evaluation and constraint self-test algorithm development

PUBLICATION

Long Chen, Fenglin Zhang, Jiwen Yu. 2022. *A Two-Stage ARIMA Model via Machine Learning and its Application in Stock Price Prediction*. BCP Business & Management, 26: 400-408

SELECTED HONORS

USTC Academic Scholarship First Prize (university level)	2024
USTC Academic Scholarship First Prize (university level)	2023
China National Grants (national level)	2022
COMAP's Mathematical Contest in Modeling Honorable Mention (international level)	2022
National College Student Physics Experiment Competition Third Prize (national level)	2021
Jiangsu Provincial College Student Calculus Competition Third Prize (province level)	2020

SKILLS

Languages: Chinese (Native) · English (fluent, CET-6: 535)
Coding: C (4 years) · Matlab (4 years) · Python (3 years) · SQL (2 years)
Software and Tools: Pycharm · Jupyter · Spyder · Matlab · Visual Studio · Git · Gurobi · SCIP