LEJUN ZHOU

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EDUCATION

Zhejiang University Hangzhou, China
Bachelor of Engineering in Civil Engineering 09/2019 – 06/2022

- GPA: 3.94/4.00
- Admitted on basis of performance on the college entrance examination 0.37% (Rank: 1700/450000)
- Selected awards: 2020–2021 Zhejiang University Scholarship
  2020–2021 Dean's List
- Exchange student at the University of Illinois at Urbana Champaign in the Spring 2022 Semester

University of Illinois at Urbana Champaign Urbana, Illinois, USA
Exchange Student in Civil Engineering 01/2022 – 08/2022

- Key Courses: CEE 201 System Engineering & Economics
  CEE 310 Transportation Engineering
  CS 357 Numerical Methods
  CEE 416 Traffic Capacity Analysis
  CEE 418 Public Transportation Engineering

PUBLICATIONS

1. **Lejun Zhou**, Anke Ye, Simon Hu. *A Four-Stage Heuristic Algorithm for Solving On-demand Meal Delivery Routing Problem*. Manuscript submitted for publication. *8th International Conference on Models and Technologies for Intelligent.*
2. Jie Wen, Youbohong Kong, Anxu Huang, **Lejun Zhou**, Yan Xiao. *Acoustic properties of glued laminated bamboo (glubam) and spruce-pine-fir (SPF).* Manuscript submitted for publication. *Building and Environment*.

RESEARCH EXPERIENCE

Zhejiang University (Department of International Campus) Hangzhou, China
Research Assistant to Professor Xiao Yan July 2020 – November 2021
New Composite Bamboo Material Research Group

- Test the acoustic properties and modulus of compression for composite glued laminated material; in the group, I took on the responsibility of dealing with the acoustic property data and using digital image correlation (DIC) to measure the compressive deformation of the material
- Since the data collected in the field experiments are noisy and sometimes inaccurate measurements, getting real data became a challenge in our research process; to overcome this difficulty, I performed Kalman filtering with MATLAB to make optimal estimation of system state, which can output reliable information
- The resulting paper has been submitted to the top journal *Building and Environment*. The innovative testing method and the result of the modulus of compression is included in Professor Xiao's textbook

UIUC (Department of Industrial & Enterprise Systems Engineering) Urbana, Illinois, USA
Research Assistant to Professor Lavanya Marla May 2022 – Present
COVID LMO Logistics

- The purpose of this project is setting up a distribution system for liquid medical oxygen (LMO) in India to reduce the penalty of LMO deficiency in the system; my task is cooperating with Professor Lavanya to set up an optimization model to deal with this dynamic distribution problem with Python CPLEX
- The big scale of data brought computational challenges in solving the problem; thus, I proposed a new formulation by combining multi-dimension variables, which can successfully simplify the linear programing model and shorten the solving time from three minutes to 30 seconds
- Now we have successfully set up several versions of the optimization models for different situations in the real world; compared to the manually design allocation strategy, the proposed model successfully reduces the unsatisfied demand of LMO

Zhejiang University (Department of International Campus) Hangzhou, China
Research Assistant to Professor Simon Hu September 2022 – Present
Meal Delivery Routing Problem

- The objective of the study is to set up an optimization model that can solve the Meal Delivery Routing Problem (MDRP); the optimization model can efficiently group the orders into bundles and then optimize the delivery routes accordingly, so that it can help improve the system's efficiency and reduce the freshness loss of the meals

- The MDRP is non-deterministic polynomial (NP-hard); to solve this problem, I adopted the rolling-horizon technique and put forward a four-stage heuristic algorithm; the optimization model was set up based on it to deal with the dynamic problem
- Through comparing with an existing algorithm, the system efficiency was assessed; the computational results of our algorithm based on public instances are presented in the paper as a reference for evaluating other algorithms' performance

WORK EXPERIENCE

Chemistry 102 Head Teaching Assistant Hangzhou, China

September 2021 – Present

- Assisting Professor Fangwei Shao in teaching undergraduate chemistry courses and providing mentoring to students in my office hour; holding discussion classes for students and lead them to learn chemistry efficiently
- Supervising the work of the other teaching assistants; when they have problems in work, guiding them to improve their teaching quality; weekly work meeting to coordinate the teaching progress of all teaching assistants is also hosted by me, which ensures that students are consistent in their learning and are proficient in what they have already learned
- Tutoring for overseas online students making sure they are on the same schedule as the students on campus and keep them updated on the professor's notices

ADDITIONAL INFORMATION

Computer Skills

- Python, MATLAB. (Especially familiar with using Python CPLEX and MATLAB Yalmip to set up optimization models)
- Vissim, Revit

Language

- Chinese (Native Speaker)
- English (TOEFL Grade: 103)
- Teochew (Native Speaker)

EXTRACURRICULAR ACTIVITIES

Interests

- Photography (The First Rank of Zhejiang University Popular Artwork Contest in 2019)