HAITAO XU

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EDUCATION

Cleveland State University, Cleveland, OH   Fall 2021 - May 2025
Ph.D. candidate in Computer Science   GPA: 3.84/4.00
Dissertation: Algorithms for Facility Location Problems with Uncertainty on Graphs

Kunming University of Science and Technology, Kunming, China   Sep 2011 - June 2014
M.S. in Software Engineering   GPA: 85.7/100
Thesis: Research and Application of Software Component Technology in College Examination System

Shandong Institute of Commerce and Technology, Jinan, China   Sep 2005 - June 2008
A.S. in Computer Science and Applications   GPA: 82.3/100

PROFESSIONAL EXPERIENCE

Cleveland State University, Cleveland, Ohio   Fall 2021 - Present

Research Assistant

We study several facility location problems on various graphs related to uncertain demand data. Specifically, we focus on solving the two-center problem on a line, a tree graph, and a cactus graph, as well as the k-center problem on a general graph. These center problems are classical combinatorial optimization problems and have been explored a lot in theoretical computer science. Our emphasis, however, lies in uncertain demand data, leading us to develop more general algorithmic approaches to address these problems.

Teaching Assistant

CIS 550 Introduction to Algorithms; CIS 606 Analysis of Algorithms; CIS 620 Advanced Operating Systems

KEDACOM, Shanghai, China   Apr 2016 - Feb 2020
C/C++ Software Engineer, Trainer

Participate in the development of the general components of video conferencing software. These components are used on multiple platforms, including Windows PCs, Android devices, and iOS devices. The functions of the components include data transmission, command distribution, real-time message communication (based on the XMPP protocol), etc. Besides, serves as a trainer for new department employees, guiding them to become familiar with development processes, business knowledge, and technical frameworks.

Shanghai Huateng Software Systems Co Ltd, Shanghai, China   Aug 2014 - Apr 2016
C/C++ Software Engineer

Participate in the development of bank transaction systems. Including: batch trade settlement, report lost or stolen debit card, replacement card, card security authentication, etc. Additionally, involved in deploying new modules to bank backend production servers.

Jinan Yuancheng Innovation Technology Co., LTD, Jinan, China   July 2008 - June 2010
Software Engineer

Participate in the development of an automated office system based on C#, Extjs, JavaScript, CSS and Windows Workflow Foundation technology, mainly used to handle process review business.

RESEARCH INTERESTS

Algorithms and Data Structures, Combinatorial Optimization, Data-Centric Problem, Operations Research

PUBLICATIONS

Peer Reviewed Journal Articles

1. **Haitao Xu** and Jingru Zhang. The k-Center Problem of Uncertain Points on Graphs. *Submitted to the Information Processing Letters.*

2. **Haitao Xu** and Jingru Zhang. The two-center problem of uncertain points on cactus graphs. *Journal of Combinatorial Optimization*, 49.4 (2025): 54.

3. **Haitao Xu** and Jingru Zhang. The two-center problem of uncertain points on a real line. *Journal of Combinatorial Optimization*, 45.2 (2023): 68.

4. Qi Sun, Liwen Jiang, **Haitao Xu**. A Double-Layer Combination Algorithm for Real-Time Information-Sharing Network Design Problem. *Complexity*, 2021(1), 4856593.

5. Qi Sun, Liwen Jiang,**Haitao Xu**. Expectation-Maximization Algorithm of Gaussian Mixture Model for Vehicle-Commodity Matching in Logistics Supply Chain. *Complexity*, 2021(1), 9305890.

6. Song, Yang, Yan-Qiu Liu, Qi Sun, Ming-Fei Chen, and **Hai-Tao Xu**. A Joint Optimization Model considering the Product User's Risk Preference for Supply System Disruption. *Mathematical Problems in Engineering*, no. 1 (2021): 5081753.

Peer Reviewed Conference Papers

1. **Haitao Xu** and Jingru Zhang. The two-center problem of uncertain points on trees. *In Proc. of the 16th Annual International Conference on Combinatorial Optimization and Applications (COCOA)*, pages 485-697, 2023.

2. Lijie Wu, Qi Sun, **Haitao Xu**, Xiaochen Song, Yang Zhang. Design of hybrid simulated annealing algorithm for UAV scheduling based on coordinated task scheduling. *In Proc. of the 40th Chinese Control Conference (CCC)*, pages 1669-1674, 2021.

TECHNICAL SKILLS

1. 5+ years of C/C++ developer with experience in analysis, application development, maintenance, and system programming. Exposure to different domains like Banking and Video Conference.

2. Experience in designing, using Python, C/C++, STL, multi-threading, data structures, network programming, and design patterns.

3. Experience in Oracle 10g/i database programming using SQL, Stored Procedures, and other elements.

4. Experience in creating UML diagrams, creating, maintaining and reviewing design documents.

5. Experience in Java, JavaScript, HTML and CSS website development.

SERVICES

Journal Reviewer
Hindawi Complexity

Conference Reviewer
The 40th Chinese Control Conference (CCC'2021)

Professional Activities
Being a Judge for Choose Ohio First Symposium at Cleveland State University, in Spring 2022.