

# Yueran Wang

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## Education

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### Degrees

**[Tongji University](#) (985 project university), P.R.China**

M.S. in Construction Project Management (A+ in [CDE](#)) 2019 – Now

**[Shandong University](#) (985 project university), P.R.China:**

B.E. in Construction Project Management 2015 - 2019

Bachelor of Law 2015 - 2019

### Standard Test

IELTS 7.0

## Research Experience

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**Research on the knowledge system of construction cost based on knowledge graph** 2020 - 2022

Graduate Student, with Prof. Xianyi Gao

Tongji University – Shanghai Municipal Electricity Power Company of [State Grid Corporation of China](#),  
P.R.China, ¥ 500,000

### *Literature review*

- Summarized the importance of applying knowledge graph technology in the AEC industry to make fragmented knowledge networked and make interdisciplinary collaboration easier
- Studied the future of knowledge graph technology in the AEC industry, such as safety management, risk control and e-learning

### *Prototype design*

- Designed the structure of an e-learning platform based on the knowledge graph about construction cost and other knowledge in the AEC industry, in the form of a search engine with a case library and a graphical knowledge network
- Designed a process to build a knowledge graph in the AEC industry for e-learning, including entity extraction, ontology construction, relationship extraction, attribute extraction
- Designed the page layout and internal logic of the platform using Axure and finished a 30-page requirement document
- Made a demo of the knowledge graph based on Neo4j
- Participated in writing the first-phase research report, in charge of 115 pages

### *Ontology construction*

- Wrote a program based on regular expression and syntactic dependency parsing using python to extract entities from books
- Constructed over 300 OWL ontologies on protégé working with experts

**Research on the philosophy, method and practice of project governance and management in [Beijing Daxing International Airport\(BDIA\)](#) project** 2021 – 2022

Research Assistant, with Prof. Guangbin Wang, Prof. Guangshe Jia and Prof. Xianyi Gao

Air Traffic Hub Engineering Research Centre, Tongji University – Beijing Daxing International Airport Headquarters, P.R.China, ¥ 1,450,000

## **Planning**

- Participated in the planning of a series of books summarizing governance and management of the airport and finished a 118-page project planning document
- Coordinated the work between the research centre and the headquarters as liaison
- Participated in interviewing 28 leaders of the airport project and writing minutes of the interviews

## **Writing**

- Wrote eight chapters of the project management and governance volume of the series, analyzed the difficulties, key points and highlights of the project

## **Research**

- Summarized the philosophy, method and practice of complex megaprojects governance and management
- Built an affiliation network of participants of the project based on meeting minutes, analyzed the governance mode and the governance structure of the project
- Built a governance model of megaprojects as a complex system
- Compared the differences between Chinese and foreign governance modes of megaprojects

## **Data processing of a mediator of an econometric model**

2021 - 2021

Technical support, with Dr Hanmin Li

- Screened out 14551 documents needed from 39433 documents using the regular expression based on python
- Wrote a program to identify text in PDF and save the text in TXT format and converted every document from PDF to TXT automatically using the program
- Wrote a program to split text, identify and count keywords of every document automatically, and form a matrix of the variable data

## **Policies of carbon emission control in AEC industry in China**

Graduate student, with Prof.Xianyi Gao

Tongji University, P.R.China

2019 – 2020

- Discussed the contradiction between the territorial control of carbon emission in AEC industry and the non-territoriality of the air resource
- Designed four policies and built evolutionary game models under four policies to analyze the stable strategies of carbon emission control of multiple cities in a trans-provincial area
- Analyzed the results, figuring out the ideal policy which is breaking the inter-provincial barriers of territoriality and forming an inter-provincial multi-city cooperative governance alliance of carbon emission, and generalized it to the air pollution control

## **Teaching Experience**

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### **Teaching assistant, Tongji University**

2020- 2020

*Contract Management* course for 35 undergraduate students;

- Graded quizzes and exams

### **Teaching assistant, Tongji University**

2021- 2021

*Construction Cost Evaluation* course for 35 undergraduate students

- Graded quizzes and exams
- Collected and organized homework of students

## **Projects**

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### **i Worker**

2017-2019

a project to help migrant workers in the AEC industry on Internet platforms

- Collaborated with four students to conduct a field study of migrant workers' information asymmetry of the employment market in the information age focused on weakening the asymmetry
- Wrote a research report based on the questionnaire survey(over 100), and the interview(over 15 migrant workers and two civil servants in the relevant government department)
- Created this project as a team leader with three undergraduate students and two graduate students and with the help of [Enactus](#) China
- Created and managed an official account on WeChat and QQ chat groups to provide information about job opportunities and rights protection, and designed an APP prototype
- Collaborated with Ruiwen law firm to provide legal advice

## Awards

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Second prize of Enactus China Social Innovation Competition	2018
Awarded for one of the best innovation projects(i Worker)	
Second prize of Shandong Province University Student Innovation and Entrepreneurship Competition	2018
First prize of Shandong University Innovation and Entrepreneurship Competition	2018
Second prize of Career Planning Competition of Management Department, Shandong University	2018
Outstanding field research in the Management Department, Shandong University(5%)	2016&2017

## Reports

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Analysis of Site Selection, Delivery and Scheduling of Shared Bikes	2019
Intention Analysis of Using "UnionPay" based on TAM	2019
Social Network Analysis of Users in Yahoo Finance Forum	2019
Investment Risk Analysis of Community Pension Project under PPP Mode	2020
Risk Identification and Evaluation of Aerial Work	2020
Research on Knowledge System of Construction Cost based on Knowledge Graph(Phase I)	2021

## Skills

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### Research software

*Python* - Distributed web crawling, Text analysis, Data processing, Application of machine learning algorithms  
*Matlab* - Multi-party evolutionary game modelling, Convex optimization modelling  
*Amos* - Structural equation modelling, Technology acceptance modelling  
*Ucinet&Gephi* – Social network analysis and visualization  
*SPSS* - Linear regression, Non-linear regression, Principal components analysis, Time series analysis  
*Protégé* – Ontology construction

### Professional software

*Revit, Microsoft Project, AutoCAD, Access, Neo4j*

### Other skills

*Questionnaire design, Investment analysis, HTML design*

## Training and Certification

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BIM Technology and Application, Online Course	2020
Mechanical Design with AutoCAD, ITAT	2018
Access Database Program Design, National Education Examinations Authority of China	2016

## Dissertations

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### Bachelor Dissertation, Bachelor of Engineering

Enablers of project environmental practices in the Chinese construction industry: a structural equation modelling analysis, Prof.Ying Li, Shandong University

### **Master Dissertation(working), Master of Science**

Dynamic governance of complex megaprojects: a case study of Beijing Daxing International Airport project, Prof.Xianyi Gao, Tongji University

The dissertation focuses on the dynamic governance of megaprojects as complex systems. I will:

- 1) systematically summarize the research about stakeholders, project governance, megaprojects and complex systems;
- 2) establish a framework to study the dynamics of megaproject governance and coordination based on network analysis by detecting key stakeholders, critical problems and complex relationships;
- 3) create a governance model from the perspective of stakeholders and life cycle for megaprojects as complex systems;
- 4) study the 10-year case of Beijing Daxing International Airport project based on official meeting minutes documents.

### **Publications**

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#### **Accepted**

Yueran, W., & Xianyi, G. (2021). Formation of cooperative air pollution control alliance in inter-provincial and multi-city regions: Based on evolutionary game analysis. *Operations Research and Management Science*

#### **Submitted**

Yueran, W., & Xianyi, G. (2021). Policies for promoting star-rated green housing – static subsidy vs. dynamic subsidy. *Computers & Industrial Engineering*

#### **Working**

Rule-based automated entity extraction in the AEC industry

Ontology-based e-learning platform of construction cost

The governance mode of the Beijing Daxing International Airport project: evidence from meeting minutes