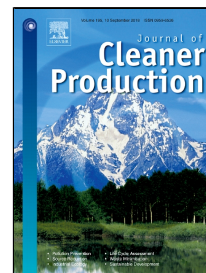


# Accepted Manuscript

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Jingfeng Yuan, Kaiwen Chen, Wei Li, Chuang Ji, Zhiru Wang, Mirosław J. Skibniewski



PII: S0959-6526(18)32088-2  
DOI: 10.1016/j.jclepro.2018.07.109  
Reference: JCLP 13563  
To appear in: *Journal of Cleaner Production*  
Received Date: 27 July 2017  
Accepted Date: 10 July 2018

Please cite this article as: Jingfeng Yuan, Kaiwen Chen, Wei Li, Chuang Ji, Zhiru Wang, Mirosław J. Skibniewski, Social Network Analysis for Social Risks of Construction Projects in High-Density Urban Areas in China, *Journal of Cleaner Production* (2018), doi: 10.1016/j.jclepro.2018.07.109

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# **Social Network Analysis for Social Risks of Construction Projects in High-Density Urban Areas in China**

Jingfeng Yuan<sup>1</sup>, Ph.D.; Kaiwen Chen<sup>2</sup>; Wei Li<sup>3</sup>; Chuang Ji<sup>4</sup>, Ph.D.; Zhiru Wang<sup>5</sup>, Ph.D.

Mirosław J. Skibniewski<sup>6,7,8</sup>, Ph.D.

1 Associated Professor, Ph. D., Department of Construction and Real Estate, Southeast University, Nanjing 210096, P. R. China. (Corresponding author); E-mail: jingfeng-yuan@seu.edu.cn

2 Ph. D. Student, Dept. of Building Construction, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061, USA. Email: kwchen16@vt.edu

3 Ph.D. Student, Department of Construction and Real Estate, School of Civil Engineering, Southeast University, Nanjing 210096, P. R. China. E-mail: leewei0842@163.com

4 Director, Investment Development Department of Longyuan Future city Investment & Management Co, Ltd. Shanghai 200072, P. R. China. Email: ji.chuang@hotmail.com

5 Lecturer, Ph. D., College of Economics and Management, University of Science & Technology Beijing, Beijing 100083, P. R. China. Email: wangzhiru@ustb.edu.cn

6 Professor, Ph. D., Dept. of Civil and Environmental Engineering, University of Maryland, College Park, MD 20742, USA. E-mail: mirek@umd.edu

7 Member of Research Board, Institute for Theoretical and Applied Informatics, Polish Academy of Sciences, Gliwice, Poland

8 T.-S. Yang Honorary Distinguished Professor, Chaoyang University of Technology, Taichung, Taiwan

## **Abstracts**

Social impacts have become increasingly important for urban development in China. In addition, unlike general construction projects, construction projects in high-density urban areas have high levels of complexity and uncertainty. Thus, from a network perspective, an improved social risk analysis theory and a method for these projects were generated in this paper. A case study involving 66 cases of social conflicts in construction projects in China was performed, and 16 social risk factors were summarized. Eight stakeholders related to these social risk factors were then identified based on a literature review and the case database. A theoretical model for social risk network analysis considering the interrelationships between stakeholders and risks was developed by using NetMiner, a social network analysis (SNA) tool. A 2-mode network and two 1-mode networks were used to analyze the relationships among the identified 16 social risk factors and 8 stakeholders. In terms of three-level challenges such as complex environments, the unreasonable behavior of individuals or organizations, and diversified interaction between behaviors and environments, the most important social risks of construction projects in high-density urban areas were explored to help the government implement effective social risk management measures. In addition, multiple, complicated relationships among residents, contractors, governmental authorities, and owners represented a major factor leading to social risk; therefore, more attention should be focused on this topic. The proposed social risk analysis method can increase the attention paid by project managers, governmental authorities, and project owners to social risk factors in high-density areas

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