

**ショートレクチャー :**

## **BIM Technology Analysis and Its Application in High-speed Railway Station Design**

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### **Abstract :**

The research analyzed the characteristics of architecture design for high-speed railway (HSR) stations by comparing Shinkansen railway stations in Japan and HSR stations in China.

The BIM technology and its applications in the designing process of HSR stations construction in China were introduced by taking examples of several representative stations.

Based on the summary and analysis of the design experiences of HSR stations, the prospect of application trends with BIM technology in the future was proposed.

**日時 : 1月17日(木) 10:00~11:30**

**場所 : 東北大学青葉山キャンパス 総合研究棟 1階 110室**

## Chuanheng LI, Dr.Eng.

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### RESEARCH FUNDATION

- 2019-2022 ***Pedestrian Behavior and Organizational Induction in Public Space Based on Simultaneous Monitoring of Eye Movement EEG: Taking Wuhan's Important Public Transportation Hub as an Example***, National Natural Science Foundation of China
- 2016-2019 ***Study on the Influence Mechanism of Railway Passenger Station Regional Planning on Urban Thermal Climate***, National Natural Science Foundation of China
- 2014-2015 ***Research on Policy Design and Benefit of Hubei Transportation Carbon Fund***, Fund from Science and Technology Department of Hubei Province
- 2010-2012 ***Research on Architectural Design Education Integrating with Technology***, Fund from Hubei Provincial Education Department
- 2010-2011 ***Research on Energy Efficiency of Large Railway Passenger Station Buildings***, Fund from Ministry of Railways of the People's Republic of China
- 2009-2010 ***Simulation optimization of energy consumption of large space buildings***, Fund of Wuhan University of Technology

### HONORS and AWARDS

- 2007 ***Excellent Urban Planning Award***, Guangdong Province, CHINA
- 2004 ***Science and Technology Progress Award***, Ministry of Railways of P. R. China
- 99,04,07 ***Excellent Architectural Design Award (3 times)***, Ministry of Railways of P. R. China

### PROJECT

#### Architecture Design

- 2007 ***Wuchang Railway Station***
- 2004 ***Nanjing Railway Station***
- 1999 ***Longyan Railway station***
- 1997-2007 ***Nantong Railway Station, Concert Hall of Huangshi City, Transportation Hub of Yancheng***

#### City Planning

- 1999-Now ***City Planning of station areas along several High-Speed Railway lines in China***
- 1998 ***City Planning of Xuanwu Lake Section around Nanjing Station***

## **Junyi Zhang(张俊毅), Senior Engineer**

**Architect / BIM manager,**

Department of Architecture, China Railway Siyuan Survey and Design Group CO.,LTD  
#745 Heping Road, Yangyuan, Wuchang, Wuhan, CHINA

### **EDUCATION**

- M.S.            **Wuhan University** Wuhan, Hubei ,CHINA  
(2007-2009)        Architecture Design Program, School of Urban Design
- B.S.            **Wuhan University of Technology**, Wuhan, Hubei , CHINA  
(2002-2006)        Civil Engineering Program, School of Civil engineering and Architecture

### **Introduction of China Railway Siyuan Survey and Design Group CO.LTD.**

中铁第四勘察设计院集团有限公司（铁四院）China Railway Siyuan Survey and Design Group CO.LTD. founded in 1953 has 4600 staff. The number of large-scale and large-sized modern railway station buildings designed and built by Siyuan Company is the first in China. In recent years, the large-scale High-Speed Railway (HSR) Station like Wuhan Station, Guangzhou South Station, Nanjing South Station, Shenzhen Futian Station, Kunming South Station were all designed and built by Siyuan Company that shows it has the highest level in construction and design ability of HSR stations in China.

### **PROJECTS**

- 2018    ***BIM design Xiangyang Dongjing Transportation Hub***
- 2016    ***Optical Valley Control Center of Wuhan Metro Line 11***, the first person in charge
- 2015    ***BIM design of Fuoshan West Transportation Hub***
- 2015    ***Nanchang Dispatching Office***(200,000m<sup>2</sup>,700 million RMB investment), the first person in charge

### **RESEARCH**

- 2018    ***Research on IFC Data Expansion and Verification Technology for Small and Medium-sized Station Building Information Models: Taking the BIM Model of Anjiang Station as an Example***
- 2016    ***Development of Revit-based engineering quantity statistics software***
- 2014    ***Application Research of BIM Technology in the Design Building of Tie Siyuan Headquarters***
- 2011    ***Research on Promotion and Application of BIM System in Railway Station Building Design (Architecture and Structure major)***