

2018 International Conference on Smart City and Intelligent Building (ICSCIB 2018)

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**Special Session on:**

**“Construction Robot and Automation”**

***Session Organisers:***

**Professor Junqi Yu<sup>1</sup> and Dr. Shengjun Xu<sup>2</sup>**

**<sup>1</sup>junqiyu@126.com**

**<sup>2</sup>duplin@sina.com**

**School of Information and Control Engineering  
Xi'an University of Architecture and Technology**

**No.13 Yanta Road  
Xi'an 710055, P.R.China**

**Description:**

Building construction is one of the traditional engineering practice of human. Although the science and engineering innovated and developed rapidly, the form of building construction still remained almost the same in recent 100 years. Now, construction industry is still considered to be “rudeness, danger, pollution and waste”. Thus, an imminent change is needed for construction industry.

Over the past decades, with the application of robot technology, many industries, such as automobile manufacturing, logistics, electronics industry, etc, have undergone tremendous changes. Robot technology is able to liberate human beings from the dangerous, repetitive, dirty and heavy work. Construction Robots (CR) is the robotic equipment and technology facing the whole life cycle of the building, especially the construction process. By introducing CR to replace or assist human work, we can improve the working environment and efficiency, and make the building construction and maintenance more autonomously.

CR has attracted a lot of research concentration from institutions and high-tech companies recently, but it still at a primary stage. Now, the types of CR are rare, and most of them are prototype systems and can't be used on site. Additionally, how does the robot technology combines with construction industry? how does the construction and design adapt to the CR? These problems have not yet been clearly answered.

**Objectives:**

The aim of this special session is to seek the chance of exchanging recent achievements in CR's development and application, and build a platform for scientists and engineers from either academia or industry field to discuss construction-related robotic technology. Moreover, the automation and AI which oriented to the whole life cycle of buildings are also warmly welcomed.

Original papers are invited on recent advances in the design and development of CR, modelling, simulation and control of CR, applications of CR, and new intelligent construction equipment or system, etc.

🔍 **Subject Coverage** (but not limited to):

- Theory of construction robotics and digital fabrication
- Special robots for building construction, maintenance, dismantle, and others
- Robotic technologies with potential application in architecture
- Assembly and modular robotic building
- 3D printing technology for building construction
- Construction-related wearable robotic equipment
- Robotic protection technology for construction
- Robotic and automatic technology for construction industrialization
- Theory and Practice of smart construction
- All the other related theory, technology, and applications