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ETHICAL ISSUES IN THE APPLICATION OF ROBOTICS AND AUTOMATION IN ARCHITECTURE AND CONSTRUCTION

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Abstract

Recent trends in the architecture and construction industry, globally, evidently promote the adoption of robotics and automation technologies to increase efficiency, quality, safety, and reduction of costs in construction. The emerging technologies also provide highly integrated, connected and scalable new methods of construction. Most robotics and automation scientists believe that many new aspects currently emerging in robotics and automation, and aspects that are expected to emerge in future, call for the development of new cultural, ethical and legal regulations that can effectively face the most delicate issues that may arise in practice. This paper examines the ethical questions that arise in the implementation of robotics and automation technologies in project design and construction. It begins this scrutiny from the fundamental ethics questions in robotics and automation. It also examines the diverse aspects of design and construction where Robotics and Automation have been implemented, their advantages, disadvantages and ethical implications. It concludes what will make for successful ethical implementation.

Keywords: Automation, Ethics, Robotics