

INTERNET OF THINGS: DEVELOPMENT, RESEARCH AND TRENDS

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Abstract

This talk will address Internet of Things (IoT), showing how the worldwide distributed sensors are revolutionizing our daily lives. At first, we will present the concepts and how IoT is being developed. Usage trends, challenges and research opportunities will also be addressed afterwards. Wireless communication, ubiquitous computing, the Internet and microelectromechanical systems are responsible for building the IoT systems. Concerning their development, we will cover four possibilities including the COAP protocol, WebSockets and HTML5, MQTT and the GS1 EPCglobal standard. The talk will address six challenges in the adoption of IoT systems, including computing, communication and storage perspectives, providing the basis to present research activities. In this part, the talk will show the discussions and the research topics covered in Applied Computing Graduate Program, at Unisinos University, which have focused on areas such as trade and retail, smart homes and health. Finally, we conclude with trends, directions and bets made by prof. Rodrigo Righi on the field of Internet of Things.