
**Guest Editorial Column:
Special Issue of
Journal of Mobile Multimedia
“Mobile Communication and Computing
for Internet of Things and
Industrial Automation”**

Dear Readers,

We are very glad to introduce you to this Special Issue of the Journal of Mobile Multimedia “Mobile Communication and Computing for Internet of Things and Industrial Automation”. This Special Issue is published in collaboration with authors from research institutions and universities who have great experience in the development of international research projects on Internet of Things, industrial automation, robotics, soft computing, gesture communications and mobile multimedia.

The aim of this Special Issue is to present the systematized research, description and analysis of new theoretical results and applications of mobile technologies for industrial and special robots, control systems, communications, data transmission and education.

The Special Issue consists of four articles:

The article “*Inspection Mobile Robot’s Control System with Remote IoT-based Data Transmission*”, by Y. Kondratenko et al., is devoted to the remote-control system for the mobile inspection robot operating on inclined ferromagnetic surfaces. The focus is on the control system’s architecture and remote data transmission based on IoT technologies. The proposed system makes it possible to control the robot’s movement along surfaces in different

spatial positions from any Internet access point in the world after the authorization procedure, e.g. for providing remote access to the monitoring and control by outside advisors and experts at the event of insufficient experience of the post operator. Experimental results of the proposed system show a good compatibility of chosen hardware, user-friendly human-machine interface and high mobility for research of modern control algorithms at IoT approach implementation for extreme robotics.

In “*Highly Information and Energy-efficient Monitoring Data Transmission in IoT Networks*”, B. Shevchuk et al. discuss information technology for increasing the operating functional efficiency of the perspective monitoring wireless and IoT networks. For crypto-protection of monitoring data arrays, the authors propose to use disposable ciphers, which are the rules and parameters of the pseudo-random data arrays generating of a certain length or volume. Energy-efficient data transmission is based on improving the information’s efficiency of the IoT object and on-board systems.

The article “*Information technology augmentative and alternative communication using smart mobile devices*”, by I. Krak et al., deals with information technology for alternative communication implemented by non-contact text entry using a limited number of simple dynamic gestures. The authors consider the process of calculating the features of the different components of the movement that occur when showing dynamic hand gestures and propose to use a radial virtual keyboard in combination with the well-known ambiguous letter selection approach. It is shown that there are a rather limited number of movements that can be used in information technology for entering text messages. Research results can be successfully implemented for communication with people with disabilities and for operating industrial robots using hand gestures.

T. Misiuk et al. in the article “*Computer Vision Mobile System for Education Using Augmented Reality Technology*” describe the process of creating a mobile application that uses augmented reality to display additional information about the objects under study. The computer vision mobile system uses augmented reality technology that allows users to obtain a virtual environment object in a real world and to be able to interact with it. The focus is on the development of the functional model of the system, the process of application development using the Vuforia library, and the peculiarities of Android application. This computer vision mobile system can be used in various fields of human activity, especially in education, for use in schools and universities for more effective interaction between students and educational material.

All of these articles have been double-blind reviewed in two review rounds according to the publication standards.

We hope you, the readers, will enjoy reading this special issue and will get valuable information about advanced applications of mobile technologies.

We would like to express our deep appreciation to all authors for their contributions, to reviewers for their timely and interesting comments and suggestions as well as to River Publishers' staff for kind technical assistance.

We certainly look forward to working with all contributors again in the nearby future.

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