

Advances in Intelligent Systems and Computing

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Series editor

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and Measurement Techniques

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Foreword

For many years, industrial automation, robotics, and measuring techniques have been the key factors determining industrial development, creation of wealth, and improvement of quality of life both of individuals and whole nations. Creation of knowledge and deeper understanding of these fields is even more important nowadays, when we are participating in the fourth industrial revolution, associated with the ideas standing behind INDUSTRY 4.0. As a result of this revolution, sooner than we can expect, we will see the vanishing of the border between artificial intelligence, embedded in cyber-physical systems, and human beings. Hence, the current industry, managed by people, will be transformed into industry managed jointly by people and IT systems, pushing the efficiency of production to the levels never observed before.

This book presents the results of research presented during the International Conference Automation 2017. Top experts involved in research in the fields of industrial automation, robotics, and measuring techniques describe new developments in those fields. Each chapter presents theoretical analysis of specific technical problems, numerical analysis, and simulation results, as well as the implementation of the outcomes of this research applied to real-world problem.

We strongly believe that the presented theoretical analyses and models, practical solutions and guidelines will be useful for both the researchers working in the area of engineering sciences and the practitioners solving industrial problems in our world subjected to current technological transformation.

December 2016

Roman Szewczyk
Cezary Zieliński
Małgorzata Kaliczyńska

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Editors

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