

Studies in Systems, Decision and Control

Volume 36

Series editor

Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland
e-mail: kacprzyk@ibspan.waw.pl

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Anis Koubaa · Elhadi Shakshuki
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Robots and Sensor Clouds

 Springer

Editors

Anis Koubaa
Prince Sultan University
Riyadh
Saudi Arabia
and

Elhadi Shakshuki
Jodrey School of Computer Science
Acadia University
Wolfville, NS
Canada

ISEP/CISTER Research Unit
Porto
Portugal

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Preface

In the evolving world of wireless technology and computing, there are many levels of technologies being introduced to the web. With the recent development of cloud computing, it is possible for users and machines to utilize and to share several services. The current power of robots, communication, storage, fast progress of wireless techniques, enhanced and different types of sensors, robots and sensor networks are able to take advantage of these services and provide influential solutions.

The book comprises four chapters that address some of the latest research in clouds robotics and sensor clouds.

The first part of the book includes two chapters on cloud robotics. The first chapter introduces a novel resource allocation framework for cloud robotics and proposes a Stackelberg game model and the corresponding task-oriented pricing mechanism for resource allocation. In the second chapter, the authors apply cloud computing for building a cloud-based 3D Point Cloud extractor for stereo images. Their objective is to have a dynamically scalable and applicable to near-real-time scenarios.

The second part of the book includes two chapters on integration of the cloud with the Internet of Things (IoT). The third chapter discusses the importance of the integration of cloud computing with the Internet of Things and presents an architecture for the Cloud of Things. In the fourth chapter, the authors reviewed the main proposed architectures for the Internet of Things, highlighting their adequacy with respect to IoT requirements.

Anis Koubaa
Elhadi Shakshuki

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