



*future internet*



*Special Issue Reprint*

## Security and Privacy in Blockchains and the IoT

[www.mdpi.com/books/reprint/6686](http://www.mdpi.com/books/reprint/6686)

Edited by  
Christoph Stach

ISBN 978-3-0365-6251-3 (Hardback)

ISBN 978-3-0365-6252-0 (PDF)



Data have become an immensely valuable resource. They are the key driver that puts the smart into smart services. This is fundamentally fueled by two technological achievements, namely the Internet of Things (IoT), which enables the continuous and comprehensive collection of all kinds of data, and blockchain technologies, which provide secure data management and exchange. In addition to those information security measures, data privacy solutions are also required to protect the sensitive data involved. In this book, eight research papers address security and privacy challenges when dealing with blockchain technologies and the IoT. Solutions are presented to the issue of how IoT group communication can be secured and how trust within IoT applications can be increased. In the context of blockchain technologies, approaches to enhance query-processing capabilities and efficiently apply a proof-of-work consensus protocol in IoT environments are introduced. Furthermore, how blockchain technologies can be used in IoT environments to control access to confidential IoT data as well as enable privacy-aware data sharing is discussed. Finally, two reviews offer an overview of the state-of-the-art in in-app activity recognition based on convolutional neural networks and the prospects for blockchain technology applications in ambient assisted living.



Order Your Print Copy  
You can order print copies at  
[www.mdpi.com/books/reprint/6686](http://www.mdpi.com/books/reprint/6686)

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



## Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



## Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



## High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



## High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



## Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.