

# Convergence of Blockchain Technology and E-Business

## Concepts, Applications, and Case Studies

Edited by

D. Sumathi, T. Poongodi, Balamurugan Balusamy,  
Bansal Himani, and Firoz Khan K P



CRC Press

Taylor & Francis Group

Boca Raton London New York

---

CRC Press is an imprint of the  
Taylor & Francis Group, an **informa** business

---

# Contents

Preface.....	vii
List of Editors .....	.ix
List of Contributors.....	xi
<b>Chapter 1</b> Blockchain and Bitcoin Scripts .....	1
<i>S. Prithi, Prabha Selvaraj, S. Suganthi and D. Sumathi</i>	
<b>Chapter 2</b> An Intuitive Approach behind Distributed Ledger Technology: An Elaborative Glance of Blockchain, Consensus Mechanisms, and Their Applications .....	27
<i>J. Prabhudas and Pradeep Reddy CH</i>	
<b>Chapter 3</b> Structure, Security Attacks, and Countermeasures in the Blockchain Network .....	61
<i>Karthikeyan Saminathan, Hari Kishan Kondaveeti, and Sathya Karunanithi</i>	
<b>Chapter 4</b> Electronic Voting—Cloud Storage—Smart and Collaborative Transportation—Blockchain and International Trading—Blockchain Business Models .....	85
<i>Yogesh Sharma. Balusamy Balamurugan and Nidhi Sengar</i>	
<b>Chapter 5</b> Blockchain-Based Smart Supply Chain Management .....	111
<i>Annapurani Kumarappan, Annie Uthra and S. H. Shah Newaz</i>	
<b>Chapter 6</b> Blockchain-Based Health Care Applications .....	141
<i>M.R. Manu, Namya Musthafa, Divya Menon, Sindhu S. and Soumya Varma</i>	
<b>Chapter 7</b> Developing Sustainable Solutions for Waste Management in Smart Cities Using Blockchain .....	155
<i>Jeyamala Chandrasekaran and A.M. Abirami</i>	

<b>Chapter 8</b>	Blockchain-Based Smart Supply Chain Management System.....	173
<i>M. Vivek Anand and S. Vijayalakshmi</i>		
<b>Chapter 9</b>	Enhancement of Interoperability in Health Care Information Systems with the Pursuit of Blockchain Implementations.....	201
<i>N.S. Gowri Ganesh, Roopa Chandrika R and A. Mummoorthy</i>		
<b>Chapter 10</b>	Securing the Blockchain Network from Cyberattacks.....	227
<i>S. Vijayalakshmi, Kiran Singh, Vaishali Gupta and Savita Dahiya</i>		
<b>Chapter 11</b>	The Implementation of Blockchain Technology to Enhance Online Education: A Modern Strategy .....	253
<i>Apeksha Singh and Abhilasha Sisodia</i>		
<b>Index.....</b>		277