Homomorphic Encryption for Financial Cryptography

V. Seethalakshmi · Rajesh Kumar Dhanaraj ·
S. Suganyadevi · Mariya Ouaissa
Editors

Homomorphic Encryption for Financial Cryptography

Recent Inventions and Challenges

Springer

Editors
V. Seethalakshmi
Department of Electronics
and Communication Engineering
KPR Institute of Engineering
and Technology
Coimbatore, Tamil Nadu, India

S. Suganyadevi
Department of Electronics
and Communication Engineering
KPR Institute of Engineering
and Technology
Coimbatore, Tamil Nadu, India

Rajesh Kumar Dhanaraj
Symbiosis Institute of Computer Studies
and Research (SICSR)
Symbiosis International (Deemed
University)
Pune, India

Mariya Ouaissa
Institute Specializing in New Information
and Communication Technologies
Moulay Ismail University
Meknes, Morocco

ISBN 978-3-031-35534-9 ISBN 978-3-031-35535-6 (eBook)
https://doi.org/10.1007/978-3-031-35535-6

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

This book offers to get insights regarding the efficient utilization of Homomorphic Encryption for Financial Cryptography in confidentiality, phishing, anonymity, object and user identity protection. In an era where there is a greater emphasis on privacy, owing mostly to rules such as General Data Protection Regulations (GDPR), the notion of Homomorphic Encryption (HE) has a lot of potential for real-world applications across a wide range of sectors. Homomorphic Encryption is a new technique that can help organizations protect their customers' privacy without affecting their capacity to obtain insights from their data. Homomorphic Encryption allows to evaluate or modify encrypted data without disclosing it to anyone. The possibilities provided by Homomorphic Encryption are nearly limitless.

Homomorphic Encryption enables enterprises to safely use cloud computing and storage services. It eliminates the need for users to choose between data security and usability. Organizations can use HE to exchange sensitive business data with other parties without disclosing the data or the results of the calculation to them. This may hasten cooperation and creativity while limiting the possibility of sensitive information being exposed. HE can enable organizations in highly regulated areas, like health care and finance, to outsource research and analytical services without fear of non-compliance.

This edited book aims to bring together leading academic researchers, scientists and research scholars to exchange and share their experiences and research results on all aspects of Homomorphic Encryption for Financial Cryptography. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends and concerns as well as practical challenges encountered and solutions adopted in the field of Homomorphic

Encryption for Financial Cryptography as a solution to increase the security of the data.

Coimbatore, India — V. Seethalakshmi
Pune, India — Rajesh Kumar Dhanaraj
Coimbatore, India — S. Suganyadevi
Meknes, Morocco — Mariya Ouaissa

Contents