

Liqun Chen · Jinguang Han (Eds.)

Provable Security

10th International Conference, ProvSec 2016
Nanjing, China, November 10–11, 2016
Proceedings



Springer

Contents

Attribute/Role-Based Cryptography

Accountable Ciphertext-Policy Attribute-Based Encryption Scheme Supporting Public Verifiability and Nonrepudiation	3
<i>Gang Yu, Zhenfu Cao, Guang Zeng, and Wenbao Han</i>	
An Efficient and Expressive Ciphertext-Policy Attribute-Based Encryption Scheme with Partially Hidden Access Structures	19
<i>Hui Cui, Robert H. Deng, Guowei Wu, and Junzuo Lai</i>	
Ciphertext-Policy Attribute Based Encryption Supporting Access Policy Update.	39
<i>Yinhao Jiang, Willy Susilo, Yi Mu, and Fuchun Guo</i>	
Universally Composable Cryptographic Role-Based Access Control	61
<i>Bin Liu and Bogdan Warinschi</i>	

Data in Cloud

ID-based Data Integrity Auditing Scheme from RSA with Resisting Key Exposure	83
<i>Jianhong Zhang, Pengyan Li, Zhibin Sun, and Jian Mao</i>	
Efficient Dynamic Provable Data Possession from Dynamic Binary Tree	101
<i>Changfeng Li and Huaqun Wang</i>	
Identity-Based Batch Provable Data Possession.	112
<i>Fucaï Zhou, Su Peng, Jian Xu, and Zifeng Xu</i>	
Secure Naïve Bayesian Classification over Encrypted Data in Cloud	130
<i>Xingxin Li, Youwen Zhu, and Jian Wang</i>	

Searchable Encryption

Integrity Preserving Multi-keyword Searchable Encryption for Cloud Computing	153
<i>Fucaï Zhou, Yuxi Li, Alex X. Liu, Muqing Lin, and Zifeng Xu</i>	
Oblivious Keyword Search with Authorization	173
<i>Peng Jiang, Xiaofen Wang, Jianchang Lai, Fuchun Guo, and Rongmao Chen</i>	

Efficient Asymmetric Index Encapsulation Scheme for Named Data 191
Rong Ma and Zhenfu Cao

Key Management

Multi-cast Key Distribution: Scalable, Dynamic and Provably Secure Construction 207
Kazuki Yoneyama, Reo Yoshida, Yuto Kawahara, Tetsutaro Kobayashi, Hitoshi Fuji, and Tomohide Yamamoto

One-Round Attribute-Based Key Exchange in the Multi-party Setting 227
Yangguang Tian, Guomin Yang, Yi Mu, Kaitai Liang, and Yong Yu

Strongly Secure Two-Party Certificateless Key Agreement Protocol with Short Message 244
Yong Xie, Libing Wu, Yubo Zhang, and Zhiyan Xu

Encryption

Integrity Analysis of Authenticated Encryption Based on Stream Ciphers 257
Kazuya Imamura, Kazuhiko Minematsu, and Tetsu Iwata

Secure and Efficient Construction of Broadcast Encryption with Dealership 277
Kamalesh Acharya and Ratna Dutta

Towards Certificate-Based Group Encryption 296
Yili Ren, Xiling Luo, Qianhong Wu, Joseph K. Liu, and Peng Zhang

Leakage Analysis

Updatable Lossy Trapdoor Functions and Its Application in Continuous Leakage 309
Sujuan Li, Yi Mu, Mingwu Zhang, and Futai Zhang

A Black-Box Construction of Strongly Unforgeable Signature Schemes in the Bounded Leakage Model 320
Jianye Huang, Qiong Huang, and Chunhua Pan

Towards Proofs of Ownership Beyond Bounded Leakage 340
Yongjun Zhao and Sherman S.M. Chow

Homomorphic Encryption

A Homomorphic Proxy Re-encryption from Lattices 353
Chunguang Ma, Juyan Li, and Weiping Ouyang

Preventing Adaptive Key Recovery Attacks on the GSW Levelled Homomorphic Encryption Scheme	373
<i>Zengpeng Li, Steven D. Galbraith, and Chunguang Ma</i>	
A Secure Reverse Multi-Attribute First-Price E-Auction Mechanism Using Multiple Auctioneer Servers (Work in Progress)	384
<i>Jun Gao, Jiaqi Wang, Ning Lu, Fang Zhu, and Wenbo Shi</i>	
Author Index	393