Table of Contents

Social Authentication: Harder Than It Looks	1
The MVP Web-Based Authentication Framework (Short Paper) Sonia Chiasson, Chris Deschamps, Elizabeth Stobert, Max Hlywa, Bruna Freitas Machado, Alain Forget, Nicholas Wright, Gerry Chan, and Robert Biddle	16
A Birthday Present Every Eleven Wallets? The Security of Customer-Chosen Banking PINs	25
The Postmodern Ponzi Scheme: Empirical Analysis of High-Yield Investment Programs	41
Deploying Secure Multi-Party Computation for Financial Data Analysis (Short Paper)	57
Cryptographic Rule-Based Trading (Short Paper)	65
Efficient Private Proximity Testing with GSM Location Sketches Zi Lin, Denis Foo Kune, and Nicholas Hopper	73
Metrics for Measuring ISP Badness: The Case of Spam (Short Paper)	89
Congestion-Aware Path Selection for Tor	98
Attacking the Washington, D.C. Internet Voting System	114
Security Audits Revisited	129
Efficient, Compromise Resilient and Append-Only Cryptographic Schemes for Secure Audit Logging	148



On Secure Two-Party Integer Division	164
A Non-interactive Range Proof with Constant Communication	179
Privacy-Preserving Stream Aggregation with Fault Tolerance	200
Dynamic Accumulator Based Discretionary Access Control for Outsourced Storage with Unlinkable Access (Short Paper)	215
Privacy Enhanced Access Control for Outsourced Data Sharing	223
Designing Privacy-Preserving Smart Meters with Low-Cost Microcontrollers	239
Memory-Efficient Garbled Circuit Generation for Mobile Devices Benjamin Mood, Lara Letaw, and Kevin Butler	254
Oblivious Decision Programs from Oblivious Transfer: Efficient Reductions	269
UC-Secure Searchable Symmetric Encryption	285
CTL: A Platform-Independent Crypto Tools Library Based on Dataflow Programming Paradigm	299
A Cache Timing Attack on AES in Virtualization Environments Michael Weiß, Benedikt Heinz, and Frederic Stumpf	314
Softer Smartcards: Usable Cryptographic Tokens with Secure Execution	329
The PACE AA Protocol for Machine Readable Travel Documents, and Its Security Jens Bender, Özgür Dagdelen, Marc Fischlin, and Dennis Kügler	344
Oblivious Printing of Secret Messages in a Multi-party Setting	359

Reverse Fuzzy Extractors: Enabling Lightweight Mutual Authentication for PUF-Enabled RFIDs	374
CommitCoin: Carbon Dating Commitments with Bitcoin (Short Paper)	390
Bitter to Better — How to Make Bitcoin a Better Currency	399
Author Index	415

Table of Contents

ΧI