Index

A
activity on edge network (AOE) 257
attacks 286
authentication analysis 111
authentication system based on keystroke dynamics 149–160
automatic consent decision-making 117
automatic consent decision-making architecture 123
automatic privacy evaluation 129

B
bootstrapping 155
break point analysis 9

C
CERT 304, 322, 325
certified information system security professionals (CISSPs) 305
classification techniques 26
completeness of signature (CoS) 183
computer emergency response team (CERT) 304
computer security problem 329
conditional relational “value exchange” model 203
confidentiality, definition 263
confidentiality, privacy and trust (CPT) 265
confidentiality inference engine (CIE) 266
confidentiality management 272
consent decision dependences 117
consent evaluator 125
copying 28
content-based watermarking, motivation 175
CoS 177, 178, 179, 183, 184, 186
CPT, advanced 266
CPT, inference engines 266
CPT framework 265
CPT process 265
cracking 40
customer relationship management (CRM), privacy and security 189–210

data mining, defined 65
dCT 174, 177
deterrence theory 319
digital watermark 174
dimensionality reduction 83
dimensionality reduction-based transformation (DRBT) 79–102
directed acyclic graph (DAG) 257
discrete cosine transform (DCT) 174
discrete wavelet transform (DWT) 173, 174
DRBT, accuracy 89
DRBT, complexity 90
DRBT, how secure? 89
dWT 173, 174, 177, 178, 179, 186

e-mail worm detection using data mining 20–34
eCRM 190, 195, 199, 203, 205, 206
**Index**

EDI 189  
electronic customer relationship management  (eCRM) 190  
electronic customer relationship management, privacy and security 189–210  
electronic data interchange (EDI) 189  
email worm detection, features 23  
embedded consent decision-making 128  
equal error rate (EER) 152  
extended entity-relation (EER) diagrams 280

**F**

fraud detection system, proposed 7  
        fraud model 5

**G**

game-theoretic component 10  
game-theoretic model 5

**H**

hacking 40

**I**

image digest computation 177  
increased knowledge effects on privacy concerns 225–244  
informational privacy 196  
informational privacy concept 195  
information privacy, quantum computation 138–148  
information privacy in the quantum era 142  
information security, ontology 278–302  
information security effectiveness 303–326  
information systems security 35–46  
Internet, privacy concerns 227  
ISM 328, 330  
IS security, simulation model 327–339  
IS success model (ISM) 328  
IThink model 332

**K**

key algorithm 108  
keystroke dynamics using predefined input text 149–160  
knowledge and perceptions, measuring 51  
knowledge and perceptions assessment, U.S. and Korea 47–59  
knowledge discovery in databases (KDD) 65

**M**

mobile agent execution 110  
mobile agents preparing 109  
mobile agents with mutual authentication 103–114  
mutual authentication 109  
mutual authentication with mobile agents 103–114

**N**

network security, investment focus 39  
network security as a business issue 37

**O**

on-line credit card fraud detection 1–19  
online security as a business issue 37  
ontology of information security 278–302  
outlier detection 9

**P**

P3P 264  
Patriot Act 73  
perceived privacy risk (PPR) 212  
personal information confidentiality 118  
personalization, related risks 229  
phishing attacks, defeating 161–172  
Platform for Privacy Preferences (P3P) 264  
platform for privacy preferences (P3P) 264  
PPC over centralized data 85  
PPC over vertically partitioned data 85  
PCC solutions, taxonomy 90  
PPDM defined 65  
PPDM techniques, evaluating 67  
PPR 212  
principal component analysis (PCA) 83  
privacy, consumer attitudes 230  
privacy, definition 263  
privacy, four states of 196  
privacy, governmental and regulatory activities 70  
privacy-preserving clustering (PPC) 79–102  
privacy-preserving data mining (PPDM) 60–78  
privacy-preserving data mining, survey 65  
privacy-preserving transactions protocol 103–114  
privacy attributes 120  
privacy concerns 213  
privacy cost 64  
privacy defined 195  
privacy definitions and issues 63  
privacy enhancing technologies (PETs) 139  
privacy inference engine (PIE) 266  
privacy risk harm (RH) 211  
privacy risk likelihood (RL) 211
private information retrieval (PIR) 139, 143

Q
quantum computation on information privacy 138–148
quantum concepts, information privacy 141
quantum era, information privacy 142
quantum networks 142
quadratic multiple correlations (SMC) 313

R
RDFQL 272
RDF security 270
RH 211, 212, 216, 218, 224
risk factors 214
risk harm (RH) 211
risk likelihood (RL) 211
RL 211, 212, 216, 218, 224
Rootkits 50

S
secure information interoperability 271
secure multiparty computation (SMC) 66
security 198
security, enterprise and consumer views 200
security breaches through network administrators, cases 40
security components 199
security defined 199
security threats and vulnerabilities 201
SEM 217, 220, 304, 310, 318
Semantic Web, administering 262–277
Semantic Web, confidentiality 268
Semantic Web, privacy 272
Semantic Web, trust 274
setup algorithm 107
sharing evaluator model (SHEM) 119
SMC 313, 314, 315
SPARQL 292, 293, 296, 298
SPARQL, querying 292
structural equation modeling (SEM) 304
structural equation modeling (SEM) analysis 217

taxonomy of PPC solutions 90
team for research in ubiquitous secure technology (TRUST) 248

technology acceptance model (TAM) 211, 212
type of reasoned action (TRA) 212
threats 286
TIAP analysis 168
TRA 212
transactions protocol, analysis 111
transactions protocol with mutual authentication 107
transaction verifying 110
TRUST 247, 248, 261
trust, definition 263
trust, for Semantic Web 274
trust inference engine (TIE) 266
trustworthiness evaluation 249
trustworthy Web service evaluation Petri net (TWSEPN) 253
trustworthy Web services 245–261
two-factor interlock authentication 166
two-factor interlock authentication protocol (TIAP) 161
two-phase feature selection (TPS) 24
two-phase selection (TPS) 21
two-phase selection, results 30
TWSEPN 253, 254, 255, 256, 259

U
undetachable signatures, definition 106
user privacy enhancement 115–137

V
vulnerabilities 286

W
watermarked image quality 179
watermark embedding 178
watermark extraction and authentication 178
watermarking, content-based 175
watermarking using inter-coefficient relations 177
Web-based transactions, phishing attacks 161
Web site personalization 228
weighted average analysis 9

X
XML security 269, 270, 277