Contents

Network Security and Applications

Intelligent Network-Based Intrusion Detection System (iNIDS)	1
Mutual Authentication for Wireless Communication Using Elliptic Curve Digital Signature Based on Pre-known Password Tumpa Roy, Poonam Sisodia, Divye Upadhyay, Kamlesh Dutta	11
Securing Multi-agent Systems: A Survey	23
Personal Secret Information Based Authentication towards Preventing Phishing Attacks	31
Key Distribution Schemes in Wireless Sensor Networks: Novel Classification and Analysis Premraj Mahajan, Anjali Sardana	43
An Integrated Intrusion Detection System for Credit Card Fraud Detection	55
Analysis and Performance Evaluation of Application Specific Processors for Network-Based Intrusion Detection Systems	61
ECDLP Based Proxy Multi-signature Scheme	71

SVIP-Enhanced Security Mechanism for SIP Based VoIP Systems and Its Issues	81
D. Chandramohan, D. Veeraiah, M. Shanmugam, N. Balaji, G. Sambasivam, Shailesh Khapre	01
Host-Based Bot Detection Using Destination White-Lists for User's	
Profile	87
Effective Implementation and Evaluation of AES in Matlab	95
Low Overhead Handoff Based Secure Checkpointing for Mobile Hosts Priyanka Dey, Suparna Biswas	103
An Obfuscated Implementation of RC4	113
A Statistical Pattern Mining Approach for Identifying Wireless Network	
Intruders Nur Al Hasan Haldar, Muhammad Abulaish, Syed Asim Pasha	131
SLA for a Pervasive Healthcare Environment	141
Composing Signatures for Misuse Intrusion Detection System Using Genetic Algorithm in an Offline Environment	151
SRSnF: A Strategy for Secured Routing in Spray and Focus Routing Protocol for DTN	159
Multi Tree View of Complex Attack – Stuxnet	171
Secure Peer-Link Establishment in Wireless Mesh Networks	189
Secret Image Embedded Authentication of Song Signal through Wavelet Transform (IAWT)	199
Specification Based IDS for Power Enhancement Related Vulnerabilities in AODV	209
English to Hindi Machine Translator Using GMT and RBMT Approach Ambrish Srivastav, Nitin Hambir	219

Contents	XIX
Plugging DHCP Security Holes Using S-DHCP	227
Efficient Cryptography Technique on Perturbed Data in Distributed Environment	239
A Novel Triangle Centroid Authentication Protocol for Cloud Environment	245
Security and Availability of Data in the Cloud	255
A Novel Power Balanced Encryption Scheme for Secure Information Exchange in Wireless Sensor Networks	263
A Cryptographic Approach towards Black Hole Attack Detection	273
Connecting Entropy-Based Detection Methods and Entropy to Detect Covert Timing Channels	279
Route and Load Aware Channel Assignment Algorithm for Multichannel and Multi Radio Vehicular Ad-Hoc Networks	289
Performance Analysis of TCP & UDP in Co-located Variable Bandwidth Environment Sharing Same Transmission Links	299
Personalised High Quality Search with in a Web Site: No User Profiling L.K. Joshila Grace, V. Maheswari, Dhinaharan Nagamalai	307
Usability Evaluation Using Specialized Heuristics with Qualitative Indicators for Intrusion Detection System	317
Networks and Communications	
Analysis and Synchronization of the Hyperchaotic Yujun Systems via Sliding Mode Control	329

String Matching Technique Based on Hardware: A Comparative Analysis	339
Aakanksha Pandey, Nilay Khare	00)
Impact of Blackhole and Rushing Attack on the Location-Based Routing Protocol for Wireless Sensor Networks	349
Analysis of Fractional Frequency Reuse (FFR) over Classical Reuse Scheme in 4G (LTE) Cellular Network	361
Temporary Parallel Route Recovery for Frequent Link Failure in VANET	369
Analysis of MIMO Channel Characteristics in Indoor Environment Using Ray Tracing Simulator	375
Efficient Target Recovery in Wireless Sensor Network	385
Generic Middleware Architecture Supporting Heterogeneous Sensors Management for Any Smart System	395
Improving TCP Performance in Hybrid Networks	405
Synchronization in Distributed Systems	417
NAAS: Negotiation Automation Architecture with Buyer's Behavior Pattern Prediction Component	425
Quantum DOT Sensor for Image Capturing and Routing Based on Temporal Power and Critical Factor	435
Checkpointing and Recovery Using Node Mobility among Clusters in Mobile Ad Hoc Network	447
Design of Broadband Optical Sources for OCDMA/WDMA Applications Lakshmi Priya, M. Meenakshi, G. Geetha	457
Localization in Wireless Sensor Network: A Distributed Approach	467

Contents	XXI
Web Mining and Security in E-commerce	477
Performance Improvement in MIMO Systems Using Rotating Codebooks	489
Efficient Techniques for the Implementation of AES SubByte and MixColumn Transformations	497
Feature Selection for Detection of Ad Hoc Flooding Attacks	507
Performance Analysis of SCTP Compared to TCP and UDP	515
Wireless and Mobile Networks	
MSRCC – Mitigation of Security Risks in Cloud Computing	525
Topology Construction of 3D Wireless Sensor Network	533
Design and Analysis of Dual Capacitively Loaded C-PIFA	543
Jong Nang 3-Input NOR Channel	551
Multiuser Transmitter Preprocessing Aided Downlink Communications in Correlated Frequency-Selective Channels	563
Multi-dimensional Performance Characterization of Directional Antennas for Applications in Energy Efficient Ad-Hoc Network	575
Reliability Enhanced Routing Protocol for Wireless Mesh Networks	587
DARIH: Distributed Adaptive Routing via Information Highway in Sensor Network	597
A Comparative Study of Cache Replacement Policies in Wireless Mobile Networks Preetha Theresa Joy, K. Polouse Jacob	609

FTLBS: Fault Tolerant Load Balancing Scheme in Wireless Sensor	601
Network	621
Effective Resource Allocation Technique for Wireless Cellular System Banda Sreenivas, S. Ramesh Babu, S. Prabhakar, D. Karunakar Reddy	633
Performance Analysis of AODV and DSDV Protocols Using RPGM Model for Application in Co-operative Ad-Hoc Mobile Robots	641
Enhanced SAFER+ Algorithm for Bluetooth to Withstand Against Key Pairing Attack Payal Chaudhari, Hiteishi Diwanji	651
Super Peer Deployment in Unstructured Peer-to-Peer Networks	661
Efficient Path Selection to Propagate Data Message for Optimizing the Energy Dissipation in WSN Subrata Dutta, Nandini Mukherjee, Monideepa Roy, Sarmistha Neogy	671
Peak to Average Power Ratio Reduction in OFDM System over PAM, QAM and QPSK Modulation	685
MERCC: Multiple Events Routing with Congestion Control for WSN Ayan Kumar Das, Rituparna Chaki	691
Peer-to-Peer Networks and Trust Management	
Awareness Based Approach against E-Mail Attacks	699
On the Fly File Dereplication Mechanism	709
Security Service Level Agreements Based Authentication and Authorization Model for Accessing Cloud Services	719
Load Balancing in Cluster Using BLCR Checkpoint/Restart Hemant Hariyale, Manu Vardhan, Ankit Pandey, Ankit Mishra, Dharmender Singh Kushwaha	729

Adaptive Region Based Huffman Compression Technique with Selective Code Interchanging	739
Human Tracking in Video Surveillance	749
Performance Evaluation of V2V:Communication by Implementing Security Algorithm in VANET	757
An Efficient Approach to Secure Routing in MANET	765
Trust Oriented Secured AODV Routing Protocol against Rushing Attack Swarnali Hazra, S.K. Setua	777
SEPastry: Security Enhanced Pastry	789
Hybrid Scenario Based Analysis of the Effect of Variable Node Speed on the Performance of DSDV and DSR	797
Author Index	807