Contents

Part I Security

Computer User Profiling Based on Keystroke Analysis ............ 3
Tomasz Emanuel Wesołowski and Piotr Porwik

Heart-Based Biometrics and Possible Use of Heart Rate
Variability in Biometric Recognition Systems ................... 15
Nazneen Akhter, Sumegh Tharewal, Vijay Kale,
Ashish Bhalerao and K.V. Kale

Dynamic Ciphering-15 Based on Multiplicative Polynomial
Inverses Over Galois Field GF(7^3) ......................... 31
J.K.M. Sadique Uz Zaman, Sankhanil Dey
and Ranjan Ghosh

On Preventing SQL Injection Attacks ......................... 49
Bharat Kumar Ahuja, Angshuman Jana, Ankit Swarnkar
and Raju Halder

Securing Service in Remote Healthcare .................. 65
Tapalina Bhattasali, Rituparna Chaki, Nabendu Chaki
and Khalid Saeed

Part II Systems Biology

Inference of Gene Regulatory Networks with Neural-Cuckoo
Hybrid ............................................................ 87
Sudip Mandal, Goutam Saha and Rajat K. Pal

Detection of Diabetic Retinopathy Using the Wavelet
Transform and Feedforward Neural Network .................. 101
Manas Saha, Mrinal Kanti Naskar and B.N. Chatterji
Liver Fibrosis Diagnosis Support System Using Machine Learning Methods .................................................. 111
Tomasz Orczyk and Piotr Porwik

Light-Weighted DNA-Based Cryptographic Mechanism Against Chosen Cipher Text Attacks .......................... 123
E. Suresh Babu, C. Nagaraju and M.H.M. Krishna Prasad

Genetic Algorithm Using Guide Tree in Mutation Operator for Solving Multiple Sequence Alignment ............... 145
Rohit Kumar Yadav and Haider Banka

A Comparative Analysis of Image Segmentation Techniques Toward Automatic Risk Prediction of Solitary Pulmonary Nodules .......................... 159
Jhilam Mukherjee, Soharab Hossain Shaikh, Madhuchanda Kar and Amlan Chakrabarti

Part III Networking and Cloud Computing

Safe Cloud: Secure and Usable Authentication Framework for Cloud Environment ........................................ 183
Binu Sumitra, Pethuru Raj and M. Misbahuddin

Kaushik Ghosh, Pradip K. Das and Sarmistha Neogy

The Design of Hierarchical Routing Protocol for Wireless Sensor Network .................................................. 223
Ayan Kumar Das, Rituparna Chaki and Kashi Nath Dey

Network Selection Using AHP for Fast Moving Vehicles in Heterogeneous Networks .............................. 235
Raman Kumar Goyal and Sakshi Kaushal

Part IV Data Analytics

Context-Aware Graph-Based Visualized Clustering Approach (CAVCA) ...................................................... 247
K. Rajendra Prasad and B. Eswara Reddy

Materialized View Construction Using Linearizable Nonlinear Regression .................................................. 261
Soumya Sen, Partha Ghosh and Agostino Cortesi

Author Index ............................................................................. 277
Advanced Computing and Systems for Security
Volume 1
Chaki, R.; Cortesi, A.; Saeed, K.; Chaki, N. (Eds.)
2016, X, 278 p. 85 illus. in color., Softcover