



# Advanced information networking and applications. proceedings of the 36th International Conference on Advanced Information Networking and Applications (AINA-2022) /

Enokido, Tomoya,

editor

Barolli, Leonard,

editor

Takizawa, Makoto,

editor

Monografía

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMzIxMDgzMzI>

---

**Título:** Advanced information networking and applications. Volume 2 proceedings of the 36th International Conference on Advanced Information Networking and Applications (AINA-2022) edited by Leonard Barolli, Farookh Hussain, Tomoya Enokido

**Editorial:** Cham, Switzerland Springer [2022] 2022

**Descripción física:** 1 online resource (728 pages)

**Mención de serie:** Lecture Notes in Networks and Systems Ser. v.450

**Bibliografía:** Includes bibliographical references and index

**Contenido:** Intro -- Welcome Message from AINA-2022 Organizers -- Organization -- AINA-2022 Organizing Committee -- Honorary Chair -- General Co-chairs -- Program Committee Co-chairs -- Workshops Co-chairs -- International Journals Special Issues Co-chairs -- Award Co-chairs -- Publicity Co-chairs -- International Liaison Co-chairs -- Local Arrangement Co-chairs -- Finance Chair -- Web Co-chairs -- Steering Committee Chair -- Tracks and Program Committee Members -- 1. Network Protocols and Applications -- Track Co-chairs -- TPC Members -- 2. Next-Generation Wireless Networks -- Track Co-chairs -- TPC Members -- 3. Multimedia Systems

and Applications -- Track Co-chairs -- TPC Members -- 4. Pervasive and Ubiquitous Computing -- Track Co-chairs -- TPC Members -- 5. Web-Based and E-Learning Systems -- Track Co-chairs -- TPC Members -- 6. Distributed and Parallel Computing -- Track Co-chairs -- TPC Members -- 7. Data Mining, Big Data Analytics and Social Networks -- Track Co-chairs -- TPC Members -- 8. Internet of Things and Cyber-Physical Systems -- Track Co-chairs -- TPC Members -- 9. Intelligent Computing and Machine Learning -- Track Co-chairs -- TPC Members -- 10. Cloud and Services Computing -- Track Co-chairs -- TPC Members -- 11. Security, Privacy and Trust Computing -- Track Co-chairs -- TPC Members -- 12. Software-Defined Networking and Network Virtualization -- Track Co-chairs -- TPC Members -- AINA-2022 Reviewers -- AINA-2022 Keynote Talks -- Data Intensive Scalable Computing in Edge/Fog/Cloud Environments -- Resource Management in 5G Cloudified Infrastructure: Design Issues and Challenges -- Contents -- A Fuzzy-Based System for Determining Driver Stress in VANETs Considering Driving Experience and History -- 1 Introduction -- 2 Overview of VANETs -- 3 Proposed Fuzzy-Based System -- 4 Simulation Results -- 5 Conclusions -- References Performance Evaluation of WMNs by WMN-PSOHC Hybrid Simulation System Considering Different Instances: A Comparison Study for RDVM and LDIWM Replacement Methods -- 1 Introduction -- 2 Proposed and Implemented Simulation System -- 2.1 Particle Swarm Optimization -- 2.2 Hill Climbing -- 2.3 WMN-PSOHC System Description -- 3 WMN-PSOHC Web GUI Tool -- 4 Simulation Results -- 5 Conclusions -- References -- Millimeter-Wave Dual-Band Slotted Antenna for 5G Applications -- 1 Introduction -- 2 Antenna Design -- 2.1 Design Equations -- 2.2 Antenna Specification -- 2.3 Substrate Material Selection -- 3 Result Analysis -- 3.1 Bandwidth -- 3.2 2-D Radiation Pattern -- 3.3 Directivity, Gain and Efficiency -- 3.4 VSWR, Reflection Co-efficient or S-Parameter -- 4 Comparative Analysis -- 5 Future Work -- 6 Conclusion -- References -- NARUN-PC: Caching Strategy for Noise Adaptive Routing in Utility Networks -- 1 Introduction -- 1.1 Research Problem -- 1.2 Paper Contribution -- 2 NARUN and NARUN-PC Protocols -- 3 Simulation -- 3.1 Experimental Results -- 4 Conclusions and Future Work -- References -- HYPE: CNN Based HYbrid PrEcoding Framework for 5G and Beyond -- 1 Introduction -- 2 System Model and Problem Formulation -- 3 HYPE: CNN Based HYbrid PrEcoding Framework for 5G and Beyond -- 3.1 Acquiring Partial CSI -- 3.2 Structure of HP-CNN -- 3.3 Training Strategy of HP-CNN -- 4 Simulation Results and Discussions -- 5 Conclusion and Future work -- References -- The Multi-access Edge Computing (MEC)-Based Bit Rate Adaptive Multicast SVC Streaming Using the Adaptive FEC Mechanism -- 1 Introduction -- 2 Relative Work -- 3 Bandwidth Estimation and Adaptive FEC -- 4 The Proposed MM-CSVC Method -- 5 Performance Evaluation -- 6 Conclusion -- References -- PROA: Pipelined Receiver Oriented Anycast MAC for IoT -- 1 Introduction -- 2 Related Work -- 3 PROA Protocol 3.1 Anycast Communication -- 3.2 Two Phase Transmission Process -- 3.3 Segmented Transmission -- 3.4 Imminent Collision -- 3.5 FCS Selection -- 4 Experimental Results -- 4.1 Setup -- 4.2 Results -- 5 Conclusion -- References -- A Watchdog Proposal to a Personal e-Health Approach -- 1 Introduction -- 2 Related Work -- 3 Stress and Anxiety Prediction Architecture -- 4 Experimental Results -- 4.1 Body Sensors Data -- 4.2 Monitoring Environment Solution -- 5 Conclusions and Future Works -- References -- Computation Offloading by Two-Sided Matching in Fog Computing -- 1 Introduction -- 2 Related Research -- 2.1 Fog Computing -- 2.2 Computation Offloading -- 2.3 Matching Theory -- 3 Student Project Allocation -- 4 Experiment and Results -- 5 Summary and Future Work -- References -- Distributed Log Search Based on Time Series Access and Service Relations -- 1 Introduction -- 2 Related Works -- 3 Proposed Method -- 3.1 Rule Generator -- 3.2 Log Searcher -- 4 Implementation -- 5 Experimental Results -- 6 Discussion and Conclusions -- References -- Detector: Hierarchical Distributed Fault Detection Algorithm for Lattice Based Modular Robots -- 1 Introduction -- 2 Background -- 3 Detector: Disconnection Detection -- 3.1 Definitions -- 3.2 The Proposed Algorithm -- 4 Simulation Results -- 5 Conclusion -- References -- ManufactSim: Manufacturing Line Simulation Using Heterogeneous Distributed Robots -- 1 Introduction -- 2 Industrial Context -- 3 Related Work -- 4 Our Proposal -- 5 Experiments -- 6 Conclusion -- References -- Sports Data Management, Mining, and Visualization -- 1 Introduction -- 2 Background -- 2.1 Bell Curve -- 2.2 Linear Regression -- 2.3 Pythagorean Expectation -- 3 Our Sports Data Mining Solution -- 3.1 Data Collection -- 3.2 Outcome Prediction -- 4 Evaluation -- 4.1 Bell Curve Expectation -- 4.2 Linear Regression 4.3 Pythagorean Expectation -- 5 Conclusions -- References -- Mining for Fake News -- 1 Introduction -- 2 Related Works -- 3 Our Fake News Mining Solution -- 3.1 Data Cleaning -- 3.2 Vectorization -- 3.3 News Classification -- 4 Evaluation -- 5 Conclusions -- References -- Software Functional and Non-function Requirement Classification Using Word-Embedding -- 1 Introduction -- 2 Related Work -- 3 Study Design -- 3.1 Experimental Dataset -- 3.2 Data Normalization -- 3.3 Feature Extraction using Word Embedding -- 3.4 Feature Selection and Dimensionality Reduction -- 3.5 Classification -- 3.6 Minority Oversampling -- 4 Research Methodology -- 5 Empirical Results and Analysis -- 5.1 Comparative Analysis -- 5.2 Word-Embedding -- 5.3 Classification

Techniques -- 5.4 Feature Selection Techniques -- 5.5 SMOTE -- 6 Conclusion -- References -- Topic Guided Image Captioning with Scene and Spatial Features -- 1 Introduction -- 2 Related Work -- 3 Proposed Model -- 3.1 Visual Feature Extraction -- 3.2 Textual Feature Extraction -- 4 Experiments -- 5 Conclusion -- References -- A Socially-Aware, Privacy-Preserving, and Scalable Federated Learning Protocol for Distributed Online Social Networks -- 1 Introduction -- 2 Related Work -- 3 Solution -- 3.1 Construction of Socially-Aware Random Overlay -- 3.2 Push-Based Merging Gossip Federated Learning -- 4 Evaluation -- 5 Experiment Results -- 5.1 Successful Construction of a Random Overlay on the Fly by the Sampling Service -- 5.2 Removal of the Sampling Bias in Random Overlay -- 5.3 Convergence of all the Network Nodes to a Similar Model -- 5.4 Comparison of Prediction Error with Centralized Training -- 6 Conclusions and Future Work -- References -- A Multi-layer Modeling for the Generation of New Architectures for Big Data Warehousing -- 1 Introduction -- 2 Related Works 3 Contribution: A New Multi-layered Conceptual Model for Big Data Warehousing -- 4 Validation of the Proposed Model: An Implementation for Multi-source Data Warehousing and Analysis -- 4.1 Proposed Business Model Process -- 4.2 An Architecture for COVID-19 Data Warehousing and Analysis -- 5 Results Analysis and Interpretation -- 6 Discussion and Findings -- 7 Conclusion -- References -- Efficient Retransmission Algorithm for Ensuring Packet Delivery to Sleeping Destination Node -- 1 Introduction -- 2 Related Work -- 2.1 Pure Flooding -- 2.2 Probabilistic Flooding -- 3 Background -- 3.1 Sleeping Mechanism -- 3.2 Full Retransmission Algorithm -- 4 Probabilistic Retransmission Algorithm -- 5 Evaluation -- 6 Conclusion -- References -- The Development of an Elderly Monitoring System with Multiple Sensors -- 1 Introduction -- 2 Background -- 2.1 Pifaa -- 3 Proposed system -- 3.1 Overview -- 3.2 Selecting and Discarding Sensors -- 3.3 Using Camera Images -- 4 Application to Display the Results -- 4.1 Overview -- 4.2 Native and Web Versions of the Application -- 4.3 Data Interpretation -- 5 Related Research -- 6 Summary -- References -- Predicting Cyber-Attacks on IoT Networks Using Deep-Learning and Different Variants of SMOTE -- 1 Introduction -- 2 Related Work -- 3 Study Design -- 3.1 Experimental Dataset -- 3.2 Feature Selection Techniques -- 3.3 Deep Learning Architecture -- 3.4 SMOTE -- 4 Results and Analysis -- 5 Comparative Analysis -- 5.1 Sampling Techniques -- 5.2 Feature Selection Techniques -- 5.3 Deep Learning Technique -- 5.4 Cost Benefit Analysis -- 6 Conclusion -- References -- A Decentralized Federated Learning Architecture for Intrusion Detection in IoT Systems -- 1 Introduction -- 2 Background -- 3 Related Work -- 4 Decentralized Federated Learning-Based IDS for IoT -- 5 Discussion -- 6 Conclusions and Future Work -- References Regression Analysis Using Machine Learning Approaches for Predicting Container Shipping Rates

**ISBN:** 9783030995874 electronic bk.) 9783030995867

**Materia:** Computer networks- Congresses

**Autores:** Enokido, Tomoya, editor Barolli, Leonard, editor Takizawa, Makoto, editor

**Enlace a formato físico adicional:** Print version Barolli, Leonard. Advanced Information Networking and Applications Cham : Springer International Publishing AG,c2022 9783030995867

**Punto acceso adicional serie-Título:** Lecture Notes in Networks and Systems Ser

---

## Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- [informa@baratz.es](mailto:informa@baratz.es)