

Journal of Computer and Communications



https://www.scirp.org/journal/jcc

Journal Editorial Board

ISSN: 2327-5219 (Print) ISSN: 2327-5227 (Online)

https://www.scirp.org/journal/jcc

Editor-in-Chief

Prof. Zengchang Qin

Beijing University of Aeronautics and Astronautics, China

Norwegian University of Science and Technology, Norway

Editorial Board

Prof. Harald Øverby Dr. Sangeeta Ahuja Dr. Rafid Al-Khannak Dr. Orlando Ayala Dr. Doina Bein Dr. Janusz Bobulski **Dr. Ashraf Darwish** Dr. Calandra Davide Dr. Vahid Dehghanian Dr. Qiang Duan Dr. Cai Gao Dr. Jordi Garcia Alminana **Prof. Gregory Grigoropoulos Prof. William Edward Hammond** Dr. Fei Huang Dr. Dariusz Jacek Jakóbczak Dr. Krishna P. Kadiyala **Dr. Abbas Khosravi Prof. Hyunsung Kim** Dr. Sunny Jung Kim **Prof. Mikel Larrea** Prof. Lai Soon Lee Dr. Guowei Lei Prof. Gino Jinho Lim **Prof. Yang Liu Dr. Stamatios Papadakis** Dr. Lai Man Po **Dr. Zhiliang Qin** Dr. Abolfazl Razi **Prof. Christoph Reich** Prof. Sukumar Senthilkumar **Prof. Durga Prasad Sharma** Dr. R. Sharma Prof. John A. Springer Dr. Mohammad Taleghani Dr. Vijayakumar Varadarajan Dr. T. Velmurugan Dr. Wei Wei Prof. Wei Yu

IASRI (ICAR), India Buckinghamshire New University, UK Old Dominion University, USA California State University, Fullerton, USA Czestochowa University of Technology, Poland The University of Helwan, Egypt University of Turin, Italy University of Calgary, Canada Pennsylvania State University Abington College, USA Walmart Global Tech, USA UPC BarcelonaTech, Spain National Technical University of Athens, Greece Duke Health Technology Solutions, USA Microsoft, USA Technical University of Koszalin, Poland University of Texas at Dallas, USA Deakin University, Australia Kyungil University, South Korea Dartmouth College, USA University of the Basque Country UPV/EHU, Spain University Putra Malaysia, Malaysia Jimei University, China University of Houston, USA Qingdao University of Science and Technology, China University of Crete, Greece City University of Hong Kong, Hong Kong (China) Shandong University, Singapore Northern Arizona University, USA Furtwangen University, Germany Vellore Institute of Technology-University, India University of Maryland, India Indian Institute of Technology Madras, India Purdue University, USA Islamic Azad University (Rasht Branch), Iran The University of New South Wales, Australia Dwaraka Doss Goverdhan Doss Vaishnav College, India Xi'an University of Technology, China Towson University, USA



Table of Contents

Volume 11 Number 10 October 2023 Application Research of an Intelligent Detection Algorithm for Vehicle Trajectory **Route Deviation** Improvement of Counting Sorting Algorithm A360 Bot Framework: Empowering Smart Robotic Process Automation Solutions Identifying Biomarkers for Diabetic Kidney Disease Using GraphSAGE Neural Network A Smart Home Energy Monitoring System Based on Internet of Things and Inter Planetary File System for Secure Data Sharing Discrete Event Simulation-Based Evaluation of a Single-Lane Synchronized Dual-Traffic Light Intersections Ontology-Driven Analytic Models for Pension Management and Decision Support System E. Joe, M. Ogharandukun, U. Felix, C. N. Ogbonna.....101 Intelligent Sign Multi-Language Real-Time Prediction System with Effective Data Preprocessing D. E. Elmatary, D. M. Maher, A. T. Ibrahim......120 Implementation of a Hybrid Triple-Data Encryption Standard and Blowfish Algorithms for Enhancing Image Security in Cloud Environment

Journal of Computer and Communications (JCC) Journal Information

SUBSCRIPTIONS

The *Journal of Computer and Communications* (Online at Scientific Research Publishing, <u>https://www.scirp.org/</u>) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates: Print: \$39 per issue. To subscribe, please contact Journals Subscriptions Department, E-mail: <u>sub@scirp.org</u>

SERVICES

Advertisements Advertisement Sales Department, E-mail: <u>service@scirp.org</u>

Reprints (minimum quantity 100 copies) Reprints Co-ordinator, Scientific Research Publishing, Inc., USA. E-mail: <u>sub@scirp.org</u>

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:

Copyright © 2023 by Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY). <u>http://creativecommons.org/licenses/by/4.0/</u>

Copyright for individual papers of the journal:

Copyright © 2023 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

Disclaimer of liability

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact: E-mail: <u>jcc@scirp.org</u>

Call for Papers

Journal of Computer and Communications



ISSN: 2327-5219 (Print) ISSN: 2327-5227 (Online) https://www.scirp.org/journal/jcc

Journal of Computer and Communications is an international journal dedicated to the latest advancement of communications and computers. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of computer and communications. All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields.

Subject Coverage

The journal publishes original papers including, but not limited to, the following fields:

- Applications of Communication Systems
- Artificial Intelligence
- Big Data Search and Mining
- Cloud Computing
- Communication Protocols
- Complex Network Models
- Computational Robotics
- Computer and Network Security
- Computer Graphics and Visualization
- Computer Vision
- Cooperative Communications
- Distributed Computing
- Green Networking
- Grid Computing
- High Performance Computing
- Image Processing

- Information and Communication Theory and Algorithms
- Information and Communication: Security, Privacy, and Trust
- Information Retrieval
- Mobile and Portable Communications Systems
- Mobile and Ubiquitous Networks
- Mobile Computing Systems
- Multimedia/Signal Processing
- Network Modeling and Simulation
- Numerical Methods
- Online Social Network Computing
- Optical Communications
- Self-Stabilization, Autonomic Computing
- Simulation/Analytical Evaluation of Communication Systems

We are also interested in: 1) Short Reports – 2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book Reviews – Comments and critiques.

Website and E-Mail

https://www.scirp.org/journal/jcc

E-mail: jcc@scirp.org