

ISSN: 1949-2421 Volume 6, Number 2, May 2014



# Communications and Network



ISSN: 1949-2421



[www.scirp.org/journal/cn](http://www.scirp.org/journal/cn)

# Journal Editorial Board

ISSN Print: 1949-2421    ISSN Online: 1947-3826

<http://www.scirp.org/journal/cn>

---

## Editor-in-Chief

**Prof. Bharat Bhargava**

Purdue University, USA

## Editorial Board

**Prof. Ai Chen**

Chinese Academy of Sciences, China

**Prof. Xiaochun Cheng**

Middlesex University, UK

**Prof. Yoon-Ho Choi**

Samsung Electronics Co. Ltd., South Korea

**Prof. Nagy Ibrahim Elakalashy**

Minoufiya University, Egypt

**Prof. Abdullah Eroglu**

Indiana University-Purdue University Fort Wayne, USA

**Dr. Jordán Pascual Espada**

University of Oviedo, Spain

**Prof. Xiaopeng Fan**

Harbin Institute of Technology (HIT), China

**Prof. Cunqing Hua**

Shanghai Jiao Tong University, China

**Dr. Winai Jaikla**

King Mongkut's Institute of Technology Ladkrabang, Thailand

**Prof. Shanshan Jiang**

Broadcom Corporation, USA

**Prof. Xiaohong Jiang**

Tohoku University, Japan

**Prof. Rami Langar**

University of Pierre and Marie Curie, France

**Prof. Yu Liu**

Qualcomm Incorporated, USA

**Prof. Hussein Mouftah**

University of Ottawa, Canada

**Prof. Ruy de Oliveira**

Institute of Technology of MT, Brazil

**Prof. Lu Peng**

Louisiana State University, USA

**Prof. Eng. Sattar B. Sadkhan**

Babylon University, Iraq

**Dr. Karan Singh**

Gautam Buddha University, India

**Prof. Xiaojun Wang**

Dublin City University, Ireland

**Prof. Jonathan Wellons**

Vanderbilt University, USA

**Dr. Yong Xiang**

Deakin University, Australia

**Dr. Gang Yao**

University of Illinois at Urbana Champaign, USA

**Prof. Hsiang-Fu Yu**

National Taipei University of Education, Chinese Taipei

**Prof. Francesco Zirilli**

Sapienza Università di Roma, Italy

## Table of Contents

**Volume 6    Number 2**

**May 2014**

<b>Link Layer Correction Techniques and Impact on TCP's Performance in IEEE 802.11 Wireless Networks</b>	
P. Dalal, M. Sarkar, K. Dasgupta, N. Kothari.....	49
<b>Perspective of Adaptive CN System for Forecasting Congestion of Road Traffic Flow</b>	
T. Takagi.....	61
<b>Internet as a Growing and Dynamic Network: An Economic View</b>	
P. L. Scandizzo, A. Imperiali.....	69
<b>Markov Model Based Jamming and Anti-Jamming Performance Analysis for Cognitive Radio Networks</b>	
W. Cadeau, X. H. Li, C. Y. Xiong.....	76
<b>A Generic Platform for Sharing Functionalities among Devices</b>	
R. Nguyen Van, H. Shimada, K. Sato.....	86
<b>A PTS Optimization Scheme with Superimposed Training for PAPR Reduction in OFDM System</b>	
R. Z. Luo, R. Li, X. Q. Wu, S. N. Hu, N. Niu.....	97
<b>Improving Network Efficiency by Selecting and Modifying Congestion Control Constraints</b>	
S. Ullah, F. Shahzad, S. Khurram, W. Anwer.....	105
<b>Optimizing Packet Generation Rate for Multiple Hops WBAN with CSMA/CA Based on IEEE802.15.6</b>	
P. T. Hiep, R. Kohno.....	112
<b>Community Detection in Dynamic Social Networks</b>	
N. Aston, W. Hu.....	124
<b>Analysis of Different Call Admission Control Strategies and Its Impact on the Performance of LTE-Advanced Networks</b>	
M. A. Safwat, H. M. El-Badawy, A. Yehya, H. El-Motaafy.....	137



## **Communications and Network (CN)**

### **Journal Information**

#### **SUBSCRIPTIONS**

The *Communications and Network* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

##### **Subscription rates:**

Print: \$89 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

#### **SERVICES**

##### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

##### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

#### **COPYRIGHT**

##### **COPYRIGHT AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:**

Copyright © 2014 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

##### **COPYRIGHT FOR INDIVIDUAL PAPERS OF THE JOURNAL:**

Copyright © 2014 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.

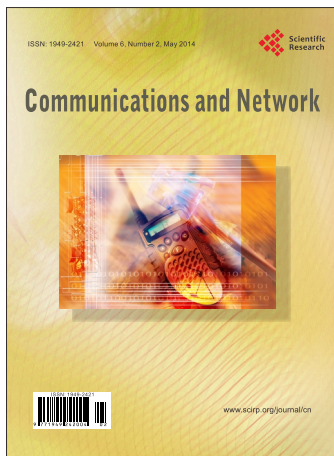
##### **DISCLAIMER OF LIABILITY**

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: [cn@scirp.org](mailto:cn@scirp.org)



**Call for Papers**

# Communications and Network

**ISSN 1949-2421 (print) ISSN 1947-3826 (online)**

**<http://www.scirp.org/journal/cn>**

CN, an international journal, dedicates to the latest advancement of communications and network technologies. The goal of this journal is to keep a record of the state-of-the-art research and promote the research work in these fast moving areas.

All manuscripts submitted to CN must be previously unpublished and may not be considered for publication elsewhere at any time during CN's review period. Additionally, accepted ones will immediately appear online followed by printed in hard copy. The topics to be covered by Communications and Network include, but are not limited to:

- ◆ Algorithms and Programs
- ◆ Applications and Value-Added Services
- ◆ Cognitive Radio
- ◆ Communication Protocols
- ◆ Complexity
- ◆ Computer and Network Security
- ◆ Cooperative Communications
- ◆ Data and Information Security
- ◆ Error Correcting Codes
- ◆ Fading/Equalization
- ◆ Green Technology
- ◆ Hardware and Software System Architecture
- ◆ High Performance Computing, Grid Computing, Cloud Computing
- ◆ Internet/Intranet Protocols
- ◆ Internet/Intranet Services
- ◆ Location Based Services
- ◆ Mobile and Portable Communications Systems
- ◆ Mobile Computing Systems
- ◆ Mobility Networks and Protocols
- ◆ Modulation/Signal Design
- ◆ Multi Antenna/User Systems
- ◆ Multimedia Services in Wireless Networks
- ◆ Network Protocol, QoS and Congestion Control
- ◆ Operations and Management
- ◆ Optical Communications
- ◆ Overlay and Peer-to-Peer Networks
- ◆ Self-Stabilization, Autonomic Computing
- ◆ Shared and Transactional Memory, Synchronization Protocols, Concurrent Programming
- ◆ Simulation/Analytical Evaluation of Communication Systems
- ◆ Source Coding/Data Compression
- ◆ Switching and Routing
- ◆ Synchronization
- ◆ Traffic Diagnosis
- ◆ Transmission and Access Systems
- ◆ Wired and Wireless Integration
- ◆ Wireless Network Design and Performance Evaluation

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the CN.

## Website and E-Mail

**<http://www.scirp.org/journal/cn>**

**E-Mail: [cn@scirp.org](mailto:cn@scirp.org)**