



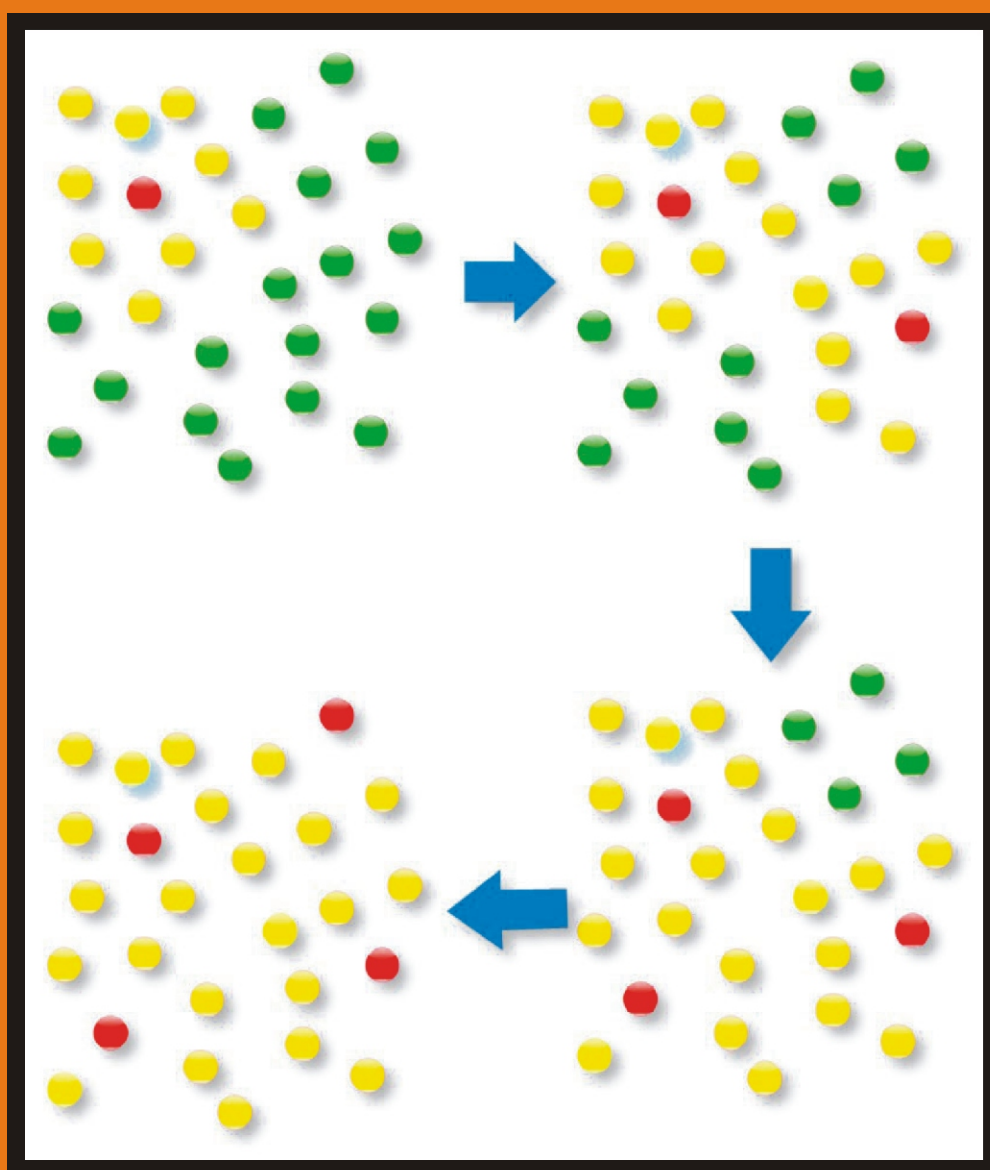
Scientific
Research

International Journal of

Communications, Network and System Sciences

ISSN: 1913-3715

Volume 4, Number 5, May 2011



ISSN: 1913-3715



www.scirp.org/journal/ijcns/

JOURNAL EDITORIAL BOARD

ISSN 1913-3715 (Print) ISSN 1913-3723 (Online)

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

Editor-in-Chief

Prof. Boris S. Verkhovsky

New Jersey Institute of Technology, USA

Editorial Board

Prof. Dharma P. Agrawal

University of Cincinnati, USA

Prof. Eduardo A. Castro

La Plata National University, Argentina

Prof. Hengda Cheng

Utah State University, USA

Prof. Ko Chi Chung

National University of Singapore, Singapore

Prof. Daniel B. da Costa

Federal University of Ceara, Brazil

Dr. Franca Delmastro

Italian National Research Council, Italy

Prof. Mohamed B. El_Mashade

Al_Azhar University, Egypt

Prof. Morteza Esmaeili

Isfahan University of Technology, Iran

Dr. Li Huang

Interuniversity Microelectronics Centre, Netherlands

Prof. Hiroaki Ishii

Kwansei Gakuin University, Japan

Prof. N. Ch. S. N. Iyengar

VIT University, India

Prof. Felipe Lara-Rosano

National Autonomous University of Mexico, Mexico

Dr. Nicola Mastronardi

Institute of Computational Mathematics "M. Picone", Italy

Dr. Lim Nguyen

University of Nebraska-Lincoln, USA

Prof. Yi Pan

Georgia State University, USA

Dr. Petar Popovski

Aalborg University, Denmark

Prof. Suresh Rai

Louisiana State University, USA

Dr. Kosai Raoof

Joseph Fourier University, France

Prof. Bimal Roy

Indian Statistical Institute, India

Prof. Shaharuddin Salleh

University Technology Malaysia, Malaysia

Prof. Innokentiy V. Semushin

Ulyanovsk State University, Russia

Dr. Hrishikesh Venkataraman

Dublin City University, Ireland

Prof. Shi Ying

Wuhan University, China

Editorial Assistant

Alice Cai

Scientific Research Publishing, USA. Email: ijcns@scirp.org

TABLE OF CONTENTS

Volume 4 Number 5

May 2011

Protection of Sensitive Messages Based on Quadratic Roots of Gaussians: Groups with Complex Modulus

B. Verkhovsky.....287

Fuzzy Digital Filtering: Signal Interpretation

J. C. G.a Infante, J. de J. M. Juárez, J. C. S. García.....297

A New On-Line/Off-Line Adaptive Antenna Array Beamformer for Tracking the Mobile Targets

S. Shirvani-Moghaddam, M. Shirvani-Moghaddam.....304

A Dynamic Interval Based Circular Safe Region Algorithm for Continuous Queries on Moving Objects

S. S. Wang, C. Zhang.....313

Hybrid Key Duplication Hashing Techniques for IP Address Lookup

R. Tiengtavat, W.-M. Lin.....323

Energy and Throughput Optimized, Cluster Based Hierarchical Routing Algorithm for Heterogeneous Wireless Sensor Networks

M. K Gowda, K. K Shukla.....335

Permutation and Complementary Algorithm to Generate Random Sequences for Binary Logic

J. Wan, J. Z. J. Zheng.....345

New Approach of QoS Metric Modeling on Network on Chip

S. Nasri.....351

The figure on the front cover is from the article published in International Journal of Communications, Network and System Sciences, 2011, Vol. 4, No. 5, pp. 335-344, by Mahanth K Gowda and Kaushal K Shukla.

International Journal of Communications, Network and System Sciences (IJCNS)

Journal Information

SUBSCRIPTIONS

The *International Journal of Communications, Network and System Sciences* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

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

E-mail: sub@scirp.org

COPYRIGHT

Copyright©2011 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

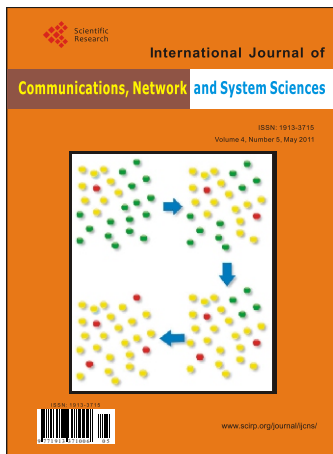
Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

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 assumes 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: ijcns@scirp.org



International Journal of Communications, Network and System Sciences (IJCNS)

ISSN 1913-3715 (Print) ISSN 1913-3723 (Online)

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

IJCNS is an international refereed journal dedicated 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.

Editor-in-Chief

Prof. Boris S. Verkhovsky

New Jersey Institute of Technology, USA

Subject Coverage

This journal invites original research and review papers that address the following issues in wireless communications and networks. Topics of interest include, but are not limited to:

Ad Hoc and Mesh Networks	Network Survivability
Coding, Detection and Modulation	Next Generation Network Architectures
Cognitive Radio	Reconfigurable Networks
Communication Networks Architecture Design	Resource Management
Cooperative Communications	Satellite Communication
Embedded Distributed Systems	Sensor Networks
Global Networks	Simulation and Optimization Tools
Heterogeneous Networking	UWB Technologies
MIMO and OFDM Technologies	Wave Propagation and Antenna Design
Network Protocol, QoS and Congestion Control	Wireless Personal Communications
Network Reliability, Security and Privacy	

We are also interested in:

- Short reports—Discussion corner of the journal :
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.
- Book reviews—Comments and critiques.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

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

ijcns@scirp.org