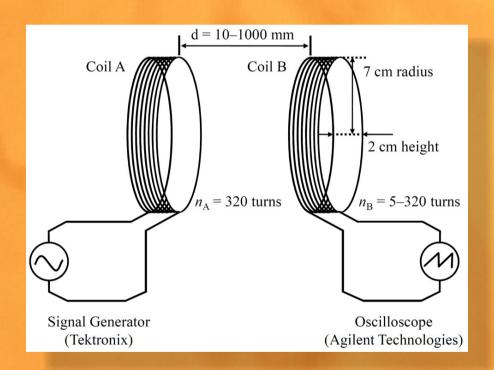


# Journal of Electromagnetic Analysis and Applications





# JOURNAL EDITORIAL BOARD

ISSN: 1942-0730 (Print) ISSN: 1942-0749 (Online)

http://www.scirp.org/journal/jemaa

.....

#### **Editors-in-Chief**

**Prof. Paul Hoole** Taylor's University, Malaysia

**Prof. Yuanzhang Sun** Wuhan University, China

# **Editorial Advisory Board**

**Prof. C. C. Chan** University of Hong Kong, China

Prof. Ryuichi Yokoyama Waseda University, Japan

Prof. Xiaoxin Zhou Chinese Society of Electrical Engineering (CSEE), China

#### **Editorial Board**

**Dr. Leonardo M. Angelone** Food and Drug Administration, USA

Prof. Vladimir N. Binhi Russian Academy of Sciences, Russia

Dr. Marco Breschi University of Bologna, Italy

**Prof. Iver Hakon Brevik** Norwegian University of Science and Technology, Norway

**Prof. Antonella D'Orazio** Polytechnic of Bari, Italy

**Dr. Hosam El-Ocla**Lakehead University, Canada

**Prof. Mohamed H. Gaber** Cairo University, Egypt

**Prof. Kerim Guney** Nuh Naci Yazgan University, Turkey

**Dr. Yuchun Guo**Jiangnan Electronic Communication Research Institute, China

Prof. Xijiang Han

Harbin Institute of Technology, China

Dr. Eisuke Hanada

Shimane University Hospital, Japan

Prof. Isabel Jesus Institute of Engineering of Porto, Portugal

Dr. Bu Sik Park Food and Drug Administration (FDA), USA

**Prof. Yonghua Song** Tsinghua University, China

Prof. Vishnu Srivastava Central Electronics Engineering Research Institute, India

**Prof. Francisco Torrens** Universitat of Valencia, Spain

Prof. Uygun V. Valiev Mirzo Ulugbek National University of Uzbekistan (NUUz), Uzbekistan

Dr. Chao-Fu Wang National University of Singapore, Singapore

**Prof. Tham-Choy Yoong** Wawasan Open University, Malaysia

**Prof. Zeev Zalevsky** Bar-Ilan University, Israel



# TABLE OF CONTENTS

Volume 5	Number 8	August 2013
Characteristic	es of and Control over Resonance in the Electromotive Force of Electromag	netic Induction
S. D. Bu, J. K.	Han, J. Y. Hyeon, G. G. Kim.	317
Investigation of	of Ground Frequency Characteristics	
M. Nayel		322
A Hybrid Rec	onfigurable Antenna Design for Cognitive Radio System	
Y. S. H. Khrais	sat, N. Al-Tawalbeh, I. A. Abdel-Hafez, E. Shibly	328
Weakly Guidi	ng Fibers and LP Modes in Circular and Elliptical Waveguides	
S. Pillay, D. Ku	umar, H. A. A. B. Rashid	333
Compression of	of Characteristics of Trajectories in Rotating Frames vs. Nonuniform Magn	etic Fields
H. Sarafian		336
-	d Band Characteristics UWB Antenna Using C-Shaped Slots and Slot-Type Loaded Loop (CLL)	:
A Zitouni N	Pould: Hagana	242

The figure on the front cover is from the article published in Journal of Electromagnetic Analysis and Applications, 2013, Vol. 5, No. 8, pp. 317-321 by Sang Don Bu, Jin Kyu Han, Jin Young Hyeon and Gi Gwan Kim.

Copyright © 2013 SciRes.

# **Journal of Electromagnetic Analysis and Applications (JEMAA)**

#### **Journal Information**

#### SUBSCRIPTIONS

The Journal of Electromagnetic Analysis and Applications (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@2013 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: jemaa@scirp.org



# Journal of Electromagnetic **Analysis and Applications**

ISSN: 1942-0730 (Print) ISSN: 1942-0749 (Online)

www.scirp.org/journal/jemaa

Journal of Electromagnetic Analysis and Applications (JEMAA) is a professional journal in the field of electromagnetic analysis, testing and application. The goal of this journal is to provide an international platform for engineers and academicians all over the world to promote, share, and discuss various new issues and developments in the field of electromagnetics. This journal is edited to encourage deeper understanding and greater effectiveness in theory analysis, testing, numerical calculation and engineering application that relevant electromagnetic fields.

## **Editors-in-Chief**

Prof. Paul Hoole Prof. Yuanzhang Sun Taylor's University, Malaysia Wuhan University, China

## **Subject Coverage**

JEMAA publishes four categories of original technical reports: papers, communications, reviews, and discussions. Papers are well-documented final reports of research projects. Communications are shorter and contain noteworthy items of technical interest or ideas required rapid publication. Reviews are synoptic papers on a subject of general interest, with ample literature references, and written for readers with widely varying background. Discussions on published reports, with author rebuttals, form the fourth category of JEMAA publications. Topics of interest include, but are not limited to:

- Antenna Arrays
- Antenna Theory and Applications
- Biological Effects
- Eddy Current Problems
- Electric Power and Grounding (Earth)
- Electric Power Line
- · Electrical Machine
- Electrocardiograph (ECG)
- Electroencephalograph (EEG)
- Electromagnetic Breaker • Electromagnetic Compatibility
- Electromagnetic Compatibility (EMC)
- Electromagnetic Compatibility and Electromagnetic Environment
- Electromagnetic Devices
- Electromagnetic Field Theory
- Electromagnetic Interferences (EMI) • Electromagnetic Inverse Problems
- Electromagnetic Launch
- Electromagnetic Material Modelling
- Electromagnetic Measurement Technology and Instruments
- Electromagnetic Nondestructive Testing
- Electromagnetic Numerical Analysis
- Electromagnetic Physics
- Electromagnetic Solid Mechanics
- Electromagnetic Structure Optimization Electromagnetism and Biological Tissues
- Electromagnetism and Medical Devices

- Electromagnetism in Medical Applications
- Electromyography
- Environmental Pollution by Electromagnetics
- Fiber Optics
- High Frequency Techniques
- Integrated Optics
- Magnetic Fluid
- Measuring Technique of Radiated Electromagnetic
- Medical Applications
- Moving Conductor Eddy Current Problems
- Multiphysics Coupled Problems
- Noise and Signals
- Noise Reduction
- Optical and Millimeter Wave Techniques
- Printed Circuits
- Quasi-Static Fields
- Radar Measurements and Applications
- Radiated Electromagnetic
- Scattering and Diffraction
- Serges (Thunderbolts or Static Electricity)
- Solid State Devices and Circuits
- Static Fields Static Magnetic
- Test Electromagnetic Analysis Method (Team) Workshop Benchmark Problems
- The Problems of the Propagation of Electromagnetic Waves
- Waveguides

# **Notes for Intending Authors**

Submitted papers should not be previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers will be peer reviewed. For more derails about the submissions, please access the website.

E-mail: jemaa@scirp.org

# Website and E-Mail

#### What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science, by delivering superior scientific publications and scientific information solution provider that enable advancement in scientific research.

# What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, world-wide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- •High visibility for maximum global exposure with open access publishing model
- •Rigorous peer review of research papers
- Prompt faster publication with less cost
- •Guaranteed targeted, multidisciplinary audience





Website: http://www.scirp.org Subscription: sub@scirp.org Advertisement: service@scirp.org