

Journal of Electromagnetic Analysis and Applications





www.scirp.org/journal/jemaa

JOURNAL EDITORIAL BOARD

ISSN: 1942-0730 (Print) 1942-0749 (Online) http://www.scirp.org/journal/jemaa

.

Editors-in-Chief

Prof. James L. Drewniak	Missouri-Rolla University, USA
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. Boguslaw Butrylo	Bialystok Technical University, Poland
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
Dr. Isabel Jesus	Institute of Engineering of Porto, Portugal
Dr. Yinbiao Shu	State Grid Corporation, China
Prof. Yonghua Song	Tsinghua University, China
Prof. Francisco Torrens	Universitat of Valencia, Spain
Prof. Uygun V. Valiev	Mirzo Ulugbek National University of Uzbekistan (NUUz), Uzbekistan
Dr. Wenhua Yu	Pennsylvania State University, USA
Prof. Zeev Zalevsky	Bar-Ilan University, Israel

Editorial Assistant

Tina Chen

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



TABLE OF CONTENTS

Volume 4	Number 1	January 2012
Numerical M Linear Steppi	odeling of the Coupled Electromagnetic and Mechanical Phenomena of ing Motors	
M. Zaouia, N	I. Benamrouche, M. Rachek	1
Wideband Sid for X-Band A	erpinski Carpet Fractal Shaped Cylindrical Dielectric Resonator Antenna pplication	
D. Soren, R.	Ghatak, R. K. Mishra, D. R. Poddar	9
-	armonic Current in Permanent Magnet Synchronous Motor and Motor Torque	
X. Y. Wang,	W. Zhou, R. Z. Dou	15
Comparing the Quality of Power Generated from DFIG with Different Types of Rotor Converters		
M. N. Nashed	, M. N. Eskander	21
Modeling of A	Antenna for Deep Target Hydrocarbon Exploration	
N. Yahya, N.	Nasir, M. N. Akhtar, M. Kashif, H. M. Zaid, A. Shafie	
0	evelopment of Impeller Synergic Systems of Electromagnetic Type to spension Flight of Symmetrical Bodies	
F. Bulnes, J.	C. Maya, I. Martínez	42

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: \$59 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©2012 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), 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. James L. Drewniak Prof. Yuanzhang Sun Missouri-Rolla University, USA 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
- Electrical MachineElectric Power and Grounding (Earth)
- Electric Power Line
- Electrocardiograph (ECG)
- Electroencephalograph (EEG)
- Electromagnetic Breaker
- Electromagnetic Compatibility
- Electromagnetic Compatibility and Electromagnetic Environment
- Electromagnetic Compatibility (EMC)
- Electromagnetic Devices
- Electromagnetic Field Theory
 Electromagnetic Interferences (El
- Electromagnetic Interferences (EMI)
 Electromagnetic Inverse Problems
- Electromagnetic Launch
- Electromagnetic Material Modelling
- Electromagnetic Measurement Technology and Instruments
- Electromagnetic Nondestructive Testing
- Electromagnetic Numerical Analysis
- Electromagnetic PhysicsElectromagnetic 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.

Website and E-Mail

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