2015 IEEE Global **Electromagnetic Compatibility Conference (GEMCCON 2015)**

Adelaide, Australia 10 – 12 November 2015



IEEE Catalog Number: CFP15B79-POD **ISBN**:

978-1-4673-9704-9

Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.

 IEEE Catalog Number:
 CFP15B79-POD

 ISBN (Print-On-Demand):
 978-1-4673-9704-9

 ISBN (Online):
 978-1-4673-8548-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400

Fax: (845) 758-2633

E-mail: curran@proceedings.com
Web: www.proceedings.com





Papers







NOVEMBER 10-12, Adelaide South Australia

- A Method of Increasing the Isolation between Antennas Using the Theory of Characteristic Modes Jiqian Wang & Donglin Su 1
- Estimating the Mutual Coupling of Out-of-Band Microwave Antennas Installed on a Nanosatellite Using Numerical Modelling Giuseppina Dall'Armi-Stoks and 6 Stephen McClanachan

Poster Session

Shielding for Reduction of Magnetic Field Strength from Docent Robot Being Charged by Wireless Power Transfer Technology - Kim Byung Chan 12

EMC and Digital Communications

Impact on Radar Probability of Detection due to Interference from 4G Communication Signals - Sandun Kodituwakku et al. 15

Development and Capability Demonstration of an Autonomous Wideband Adaptive Digital Interference Canceller - Jonathan Russell, Manik Attygalle, Manik and
 Kim Brown

EMC and Radio Astronomy Applications

The statistics of low frequency radio interference at the Murchison Radio-astronomy Observatory - Marcin Sokolowski, Randall B. Wayth and Morgan Lewis 25

Electromagnetic Environmental Effects (E3)

Electromagnetic Environmental Equivalence: An Optimisation Approach - Nectarios Kontoleon 31

Determining the Electromagnetic Environment of a Complex Conductive Cavity - Nicholas Hunt 36

Assessment of a Coaxial Return Direct Drive Setup for HIRF Testing - Andrew Walters and Tan Doan 41

EMC Measurement and Standardisation

An Evaluation and Comparison of Conducted Emission Test Methods for Integrated Circuits - Simon Kennedy, Mehmet Rasit Yuce and Jean-Michel Redouté 46
Design of a Generic Test Item - Maurizio Genearelli, Daniel Gillespie 51

Effects of a Near-Field Radio Frequency Interference on a Marine Navigational X-band Radar - Giuseppina Dall'Armi-Stoks and Krishna Venkataraman 57