

2019 IEEE 5th Global Electromagnetic Compatibility Conference (GEMCCON 2019)

**Bangalore, India
6 – 8 November 2019**



**IEEE Catalog Number: CFP19B79-POD
ISBN: 978-1-7281-4153-4**

**Copyright © 2019 by the Institute of Electrical and Electronics 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 is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP19B79-POD
ISBN (Print-On-Demand):	978-1-7281-4153-4
ISBN (Online):	978-1-7281-4152-7

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

CURRAN ASSOCIATES INC.
proceedings
.com

IEEE Global Electromagnetic Compatibility Conference (GEMCCon 2019)

Contents

Paper Id	Topic	Authors	
Session 1: Conducted Emissions and Immunity			
P-09	Low Cost Conducted EMI Measurement on Site for Product EMC Pre-compliance	Wei Wu and Yuejia Wu	1
P-24	Modelling and Simulation of Conducted Emission For Electronic Control Module	Vishal V. Bodake, Sarang Gupta, Subramanya Bhat and Vasanth R. D.	4
Session 2: EMI/EMC Measurements			
P-15	Performance Validation of ALSE Using In-house Fabricated Long Wire Antenna	Mahesh Chaluvadi, G. Mahesh and K. George Thomas	8
P-18	Field Homogeneity and Quiet Zone of India's Largest EMP Facility	Venkata Ramana Botsa, Suresh Kumar Munaka, M. Dushyanth and Subbarao Bandaru	12
P-26	Characterization of Derivative Sensor Without Using Transient Source	Rakesh Kichouliya, Sandeep M. Satav and D. C. Pande	16
Session 3: Filters, Absorbers and Shielding			
P-11	Wide-Angle and Polarization Insensitive Dual-Band Metamaterial Absorber	Mahesh Chaluvadi and P. H. Rao	20
P-29	Hybrid Complementary FSS Element based on Fibonacci Spiral for Triple-band EMI Shielding Application	V. Krushna Kanth and S. Raghavan	23
P-10	Conductor Backed Coplanar Waveguide Bandpass Filter using Vertically Loaded Coupled Open-ended Stubs	Pratik Mondal, S. K. Parui, V. P. Padhy, T. Mandal and A. Sarkar	27
P-14	ESD (Electrostatic Discharge) Soft Failure Risk Assessment For a Thin Display Metal Back Cover	Tejasweeni D. Lingayat, Sudarshan Solanki and Bala Subramanya	31
Session 4: High Altitude Electromagnetic Pulse			
P-17	HEMP Hardening of Shielded Enclosure for Critical Equipment Protection	Shaik Saymeer, Botsa Venkata Ramana, Subbarao Bandaru and Mosa Satya Anuradha	37
P-20	Effect of Penetrating Conductors on Enclosure HEMP Hardening	Pranab Mistry, B. Venkata Ramana, Shaik Saymeer and B. Subbarao	41
Session 5: Radiated Emissions			
P-23	Estimating Far-Field EMI from CM current of Buck Converter	Shantala and M. L. Sudheer	47
Session 6: Electromagnetic Pulse			
P-21	Coupling Analysis of EMP and UWB Fast Transients on PCB Traces	Suresh Kumar Munaka, Bala Narendra Ambati, Siva Kumar Pukkalla, Venkata Ramana Botsa and Subbarao Bandaru	51
P-19	Modeling and Simulation Analysis of Ground Field Sensor for EMP Measurement	Amruta Varshini Gunta, Botsa Venkata Ramana, Subbarao Bandaru and C. B. Rao Kota	54
Session 7: Computational Electromagnetics			
P-28	Electrical Impedance Tomography – Differential Solutions	M. Viswanath, R. Seetharaman and D. Nedumaran	59