

2013 IEEE IAS Electrical Safety Workshop

(ESW 2013)

**Dallas, Texas, USA
11 – 15 March 2013**



**IEEE Catalog Number: CFP13ESW-PRT
ISBN: 978-1-4673-3040-4**

2013 IEEE IAS ELECTRICAL SAFETY WORKSHOP

Table of Contents

Page

IEEE Electrical Safety Workshop Information

Our Mission – Changing the Electrical Safety Culture

Past IEEE IAS Electrical Safety Workshops

Past Affiliated Regional Workshops

Useful Links to Non-Profit and Government Organizations

2013 IEEE IAS Electrical Safety Workshop Presentations

ESW2013-02 Keynote Presentation – Defining World Class EHS

Laura Fiffick, The Campbell Institute, National Safety Council a

18E

ESW2013-03 “Look Up and Live” – Developing an Effective Overhead Power Line Safety Program

Pam Tompkins, SET Solutions, LLC

19

ESW2013-04 Case History - Contract Employee Cuts into Energized 13.8 kV Cable

Robert Huddleston, Eastman Chemical Co.

25

ESW2013-05 Report on the Current State and Understanding of Human Response to Electrical Contacts

Michael S. Morse, University of San Diego

29

ESW2013-06 Clothing in Arc Flash: Four Types of Arc Exposure and the effect of moisture on garment appearance after an arc event

Elihu “Hugh” Hoagland IV, ArcWear.com, e-hazard.com

Mikhail Golovkov, ArcWear.com

Claude Maurice, Kinetrics

Phillip Clark, ArcWear.com

35

ESW2013-07 Predicting the Remaining Life of Vacuum Interrupters in the Field

John Cadick, Cadick Corp.

Finley Ledbetter, GroupCBS

Alan Seidel, Lower Colorado River Authority

18E

ESW2013-08 Electrical Safety Myths and Facts

James R. White, Shermco Industries

51

ESW2013-09 AFCIs – From a Standards Perspective

Kevin J. Lippert, Eaton Corp.

Thomas Domitrovich, Eaton Corp.

57

ESW2013-10 Case Study: Electrical Disaster Recovery Operations for a Hospital

Mike Moore, Shermco Industries

6G

ESW2013-11 Avoid Miscues During Electrical Switching Through Written Procedures and Safe Work Practices

Dennis J. Hill, URS

Kenneth A. L'Esperance, Hope Engineering

71

ESW2013-12 Auditing Is a Critical Element in Any Electrical Safety Program

D. Ray Crow, DRC Consulting LLC

John D. Aeiker, Aeiker Safety Associates LLC

85

ESW2013-13 Case History: I Thought I Got Shocked

Eric Castle, Gallatin Steel

Joe Rachford, Gallatin Steel

95

ESW2013-14 Application Guidelines for Transformer Connection and Grounding for Distributed Generation: An Update

Eric Weisgerber, NEI Electric Power Engineering, Inc

P.K. Sen, Colorado School of Mines

Keith Malmedal, NEI Electric Power Engineering, Inc

99

ESW2013-15 Applying Reliability Centered Maintenance (RCM) to Electrical Equipment Critical to Worker Safety	105
<i>Michael D. Fontaine, National Fire Protection Association</i>	
<i>Dennis M. Green, Tony Demaria Electric</i>	
<i>John C. Webb, ABB Inc.</i>	
<i>Peter A. Stoppello, ABB Inc</i>	
ESW2013-16 Cultural Drift and the Occlusion of Electrical Safety	113
<i>Anna H.L. Floyd, Floyd Consulting LLC</i>	
<i>H. Landis Floyd II, DuPont</i>	
ESW2013-17 Integrating the Non-Electrical Worker into the Electrical Safety Program	125
<i>T. David Mills, Westinghouse Electric Company, LLC</i>	
<i>John H. McAlheney, Savannah River Nuclear Solutions, LLC</i>	
ESW2013-18 Selling Electrical Safety in Your Organization	133
<i>Tim Rohrer, Exiscan IR Windows</i>	
ESW2013-19 Latent Potential Differences Between Exposed-Conductive Parts Under Ground-Fault Conditions in Low-Voltage Systems	137
<i>Massimo Mitolo, ETAP</i>	
<i>Fabio Freschi, Politecnico di Torino</i>	
<i>Haijun Liu, ETAP</i>	
<i>Michele Tartaglia, Politecnico di Torino</i>	
ESW2013-21 IEEE and NFPA Arc Flash Coalition Update	140E
<i>Ben Johnson, Thermon Manufacturing Corp.</i>	
ESW2013-22 A Case Study: Arc Flash Hazard Remediation at Electric Utility Generation Stations	147
<i>Thomas H. Blair, Tampa Electric Company</i>	
<i>Ralph D. Painter, Tampa Electric Company</i>	
<i>George M. Bolos, Tampa Electric Company</i>	
ESW2013-23 Best Practices for Working in Proximity to Overhead Powerlines	151
<i>Mike Doherty, PowerTel Utilities Contractors Limited</i>	
<i>Dean G. Gatien, PowerTel Utilities Contractors Limited</i>	
ESW2013-24 Improving Workplace Electrical Safety Through Self-Assessment	163
<i>Brett C. Brenner, Electrical Safety Foundation International</i>	
ESW2013-25 Proposed Changes to NFPA70E-2015	168E
<i>Paul Dobrowsky, Innovative Technology Services</i>	
ESW2013-27 Protecting Your Staff from Arcing Hazards	169
<i>David Sweeting, Sweeting Consulting Pty. Ltd.</i>	
ESW2013-28 Putting A Face On Safety: Changing Attitudes To Promote A Climate Of Safety	177
<i>Kyla Kruse, Energy Education Council - Safe Electricity®</i>	
ESW2013-29 Live Work on Lighting Circuit Results in Serious Injuries	181
<i>Shahid Jamil, BP Americas Inc</i>	
ESW2013-30 An Investigation of Low Voltage Arc Flash Exposure	183
<i>Albert M. Smoak, Southwestern Electric Power Co.</i>	
<i>Adam J. Keeth, Southwestern Electric Power Co.</i>	
ESW201-31 Arc Flash Study and Remediation Project in a Midwestern Pulp and Paper Mill	187
<i>Greg W. Drewiske, NewPage</i>	
ESW2013-34 NFPA 70E: Reducing and Eliminating Electrical Hazards through Electrical Equipment Design Considerations	199
<i>Dennis W. Doody, Vilter Manufacturing – Emerson Climate Technologies</i>	
ESW2013-35 Protective Devices for Preventing Electric Fatalities, and the Fatalities by Month in Japan	205
<i>Norimitsu Ichikawa, Kogakuin University</i>	

ESW2013-36 Ground Fault Protection – GFCI or GFPE – There is a difference <i>Dennis K. Neitzel, AVO Training Institute, Inc.</i> <i>Timothy L. Gauthier, AVO Training Institute, Inc.</i>	207
ESW2013-37 Design of Arc Flash Protection System Using Solid State Switch, Photo Detection, with Parallel Impedance <i>Sergio Panetta, I-Gard Corporation</i>	211

IAS Myron Zucker Awards “Electrical Safety Prevention through Design” Student Engineering Education Initiative - Posters

Incorporating Electrical Safety Topics into Electrical Engineering Curriculum****B#5 <i>Daniel Geiger II, Auburn University</i>
Electrical Safety in the University Engineering Program of BUTE ****B#5 <i>Gábor Göcsei, Budapest University of Technology and Economics</i>
Changing Electrical Safety Culture ****B#5 <i>Zhenyuan Zhang, The University of Texas at Arlington</i>