Monday, March 2  Working Group Meetings are open to everyone.
8:00-9:00am Proposed Project Authorization Request (PAR) Exploratory Meetings for “Electrical Safety Risk Management” AND “Electrical Safety Working around Capacitors and Capacitor Banks”. Tuscany 9/10
9:00-10:00am P-1814 Working Group, “Recommended Practice for Electrical System Design Techniques to Improve Electrical Safety” Tuscany 8
10:00-12:00n P1584.1 Working Group, “IEEE Guide for the Specification of Scope and Deliverable Requirements for an Arc-Flash Hazard Calculation Study in Accordance with IEEE Std 1584™” Tuscany 9/10
1:00-3:00pm Annual Meeting of the IEEE IAS Electrical Safety Committee – Open to all Tuscany 9/10
3:00-6:00pm Subcommittee Meetings for the Electrical Safety Committee – Open to all See website meetings at a glance or 2020 ESW EventMobi App

Tuesday, March 3
8:00–12:00n Tutorial 1: “NFPA 70E-2021 Standard for Electrical Safety in the Work Place: What Has Changed and Why?”; Ray Crow, Daleep Mohla, Jim White. Tuscany 9/10
8:00-12:00n Tutorial 2: “Get Plugged In: Electrical Safety Principles for Everyone”; Rene’ Graves, Mark Scott. Tuscany 8
8:00-12:00n Tutorial 3: “Arc Flash PPE: Matching to the Hazard. Why does it Work?”; Hugh Hoagland, Marcia Eblen. Tuscany 12
8:00-12:00n Tutorial 4: “Impedance-Grounded Systems - Methods and Applications”; Jimmy J. Guerrero, Amber Wright. Tuscany 11
11:00–1:30 Companions’ Luncheon; White Orchid. (by registration)
11:30-12:30 Authors’ & Student Presenter Luncheon; Tuscany 5 (by invitation)
12:00 noon Tutorial Lunch; For Tutorials 1, 2, 3 & 4 registrants only. Tuscany E

ESW 2020 Opening Session
1:00pm “Welcome to ESW 2020”; Scott Seaver, Chair ESW 2020
1:30pm “ESW 2020 Keynote”; James G. Cialdea
2:15pm “Leveraging Prevention Through Design Principles (PtD) in Electrical Installations”; Lanny Floyd, Marcelo Valdes
3:00pm Refreshment Break
3:30pm “Hinged or Unhinged: How to Operate Equipment Based on Lab Studies and Incident Investigations”; Hugh Hoagland, Paul Sullivan
3:45pm “How NFPA 70B Addresses the Reliability Requirements of NFPA 70E; Jim White
4:30pm Student Focus Session Introduction, Payman Dehghanian
5:30-6:00pm First Time Attendees’ Get Together Tuscany 12
6:00–8:00pm Welcome Reception and Student Posters Tuscany F

“Prevention through Design Student Engineering Initiative Presentations” (5:00–7:00pm)
• David Gross, University of Alaska: “Enhancing Electrical Safety through Innovative Fault Detection and Advanced Control of Photovoltaic Arrays”
• Shiyuan Wang, George Washington University: “On the Use of Artificial Intelligence for Electrical Safety”
• Moazzam Nazir, Clemson University: “Electrical Safety Considerations of Neural Blocker Placements for Mitigating Geomagnetically Induced Currents”
• Yuhao Zhou, University of Texas at Arlington: “Introducing Arc Flash Hazards and Electrical Safety in Power System Protection Courses”
• Kaynat Zia, University of Texas at Arlington: “DC Arc Flash Estimation”
• Meng Zhao, University of Pittsburgh: “A Real-Time Fault Localization in Power Distribution Grid for Detection of Electrical Fires through Deep Neural Networks Learning”

Check 2020 ESW EventMobi App for latest information
2020 IEEE IAS Electrical Safety Workshop
Meeting Room and Presentation Schedule

Wednesday, March 4
7:00am Workshop Breakfast: Tuscany F
Authors’ Breakfast, Tuscany 11 (by invitation)
7:45am Early Bird Prize Draw
8:00am “Full Scale Substation Arc Flash Incident Drill”; Brian P Prokuda, William Harris
8:45am “Check Lists Save Lives”; Ray Crow
9:00am “Evaluation of Methods for Applying IEEE1584-2018 Equations for Low Voltage Current Limiting Fuses”; Mike Lang, Albert Marroquin, Vince J. Saporita
9:45am Refreshment Break
10:15am “Lighting Jobs: Easy Work or Easy Death”; Michael Kovacic, Karl Cunningham
11:00am “Best Practices for Engaging Safety Professionals on Electrical Topics”; Rachel Bugaris, Lanny Floyd
11:45am “2021 Electrical Safety Workshop”; Kevin Lippert
12:00 noon Lunch: Tuscany F
1:00pm “Arc Flash Risk Assessment Energy Analysis-Renewal Recommendations”; Paul Sullivan, Dan Doan, Ken Jones
1:45pm “Low Voltage 100-500 Vdc Arc Flash Testing”; Kirk Gray, Simon Robert, Tim Gauthier
2:00pm “Human Performance, Error Precursors and the Tool Kit”; Robert Spang, Nichole Spang
2:45pm “Expo Introduction”; Kevin Warren
3:00-6:00pm **Product and Services Expo and Social** Tuscany B
The Latest in Technology and Services

Thursday, March 5
7:00am Workshop Breakfast: Tuscany F
Authors’ Breakfast, Tuscany 11 (by invitation)
7:45am Early Bird Prize Draw
8:00am “Application of Artificial Intelligence in Electrical Safety”; Mike Doherty, Behzad Esmaeili
8:45am “Leading Edge Safety-By-Design of a Wastewater Solids Pretreatment Facility”; Eric P. Campbell
9:00am “Expanding Workplace Electrical Safety to Non-Electrical Occupations”; Brett Brenner
9:45am Refreshment Break
10:15am “Ground-fault Circuit Interrupters (GFCIs) - From a Standard Perspective”; Nehad El-Sherif, Thomas Domitrovich, Frederick P. Reyes
11:00am “Awards and Recognitions”; Kevin Lippert, Daniel Roberts
12:00 noon Lunch: Tuscany F
1:00pm “The Bottom Line - Live parts to which an employee may be exposed shall be deenergized”; Timothy L. Gauthier
1:45pm “Best Practices: Training, Presentations & Support Material”; Tim Rohrer
2:30pm “But It Was Just a Little Shock”; Wes Mozley
2:45pm Refreshment Break
3:15pm “NFPA 70E-2021 Edition Proposed Changes”; Paul Dobrowsky
4:00pm “IEEE Collaboration Testing Update; Wei-Jen Lee
4:15pm “Focus Session Preview”; Eva Clark
4:30 – 6:30pm **Focus Session Presentations**
• Lithium Ion Battery Safety – Design and Safe Work Solutions; Lloyd B. Gordon
• A State by State Comparison of Occupational Electrical Fatalities; Tammy Gammon, Derek Vigstol
• Identifying critical success factors for improving electrical safety in a power distribution utility; K.K.N. Prabath Karunarathna
• Explaining Ventricular Fibrillation in Simple Electrical Terminology; Joe Rachford
• Nikola Tesla's Approach and Methods to Electrical Safety; Chris Varaljai
• An Innovative Method to Enable Electrical Incident Analysis; Nicole Burtcher, Ulrich Klapper
• DC Arc Flash Testing and Analysis at 600 V; Kenneth Cheng, Caesar Samson, Stephen Cress
• Understanding the Effect of Electrode Configuration on Incident Energy and Arc Flash Boundary; Adam Reeves, Mark Freyenberger, Michael Hodder

Check 2020 ESW EventMobi App for latest information
5:30-7:30pm  

**Networking Social** Tuscany F

**Friday, March 6**

7:00am  
Workshop Breakfast: Tuscany F  
Authors’ Breakfast Tuscany 11 (by invitation)

8:00am  
Early Bird Prize Draw

8:15am  
“Considerations for Adapting IEEE 1584-2002 Arc Flash Study Results to a Post IEEE 1584-2018 Risk Assessment”; Marcelo E. Valdes, Lanny Floyd

9:00am  
Matching Arc Rated PPE to the Hazard: Why Does it Work?”; Hugh Hoagland, Marcia Eblen, Jim Philips, Claude Maurice

9:45am  
Refreshment Break

10:00am  
“How to Sell an Investment in Electrical Safety & Maintenance”; Greg Drewiske

10:15am  
“Electrical Safety Programs and the Value in partnering with the Safety Professionals”; Jeremy Presnal, Greg Maberry, Herb Houston

11:00am  
“Complacency is your Enemy: Anatomy of an Arc Flash Incident and Lessons Learned”; Tommy R. Martinez, Julian Trusillo

11:45am  
“Workshop Wrap Up”; Scott Seaver

Noon  
2020 ESW adjourns

**Post Workshop Tutorials**

Noon  

1:00-5:00pm  
Tutorial 5: “Risk NFPA 70E/OSHA Electrical Safety Regulations - FAQ and Panel Q&A”; Al Havens, Paul Dobrowski. Tuscany 9

1:00-5:00pm  
Tutorial 6: “NFPA 70B Recommended Practice for Electrical Equipment Maintenance”; Karl Cunningham, Derek Vigstol. Tuscany 10

1:00–5:00pm  
Tutorial 7: “Generations - Bridging the Gap in the Workplace”; Jennifer Martin, Owen Peters. Tuscany 11

Presentation times and subject are subject to changes. January 16, 2020

Check 2020 ESW EventMobi App for latest information