

IEEE IAS Electrical Safety Committee  
Meeting Minutes  
March 4, 2019  
Hyatt Regency Riverfront, Jacksonville, FL, USA

Call to order by Scott Seaver: 1 PM; Passed out rosters

Display Summary of Membership Requirements from Bylaws

Display List of 34 Voting Members

Review for Quorum – 23 counted – Quorum achieved.

Reviewed Agenda – No changes

Approval of Minutes of last Electrical Safety Committee Meeting on March 19, 2018

Motion to approve by Steve Wilson, Second by Thomas Domitrovich, Approved

Introductions:

Electrical Safety Committee Officers

Chair – Scott Seaver

Vice Chair – Daniel Roberts

Secretary – Dan Doan

Term ends April 8, 2019

Past Chair – Steve Wilson

(Vice Chair and Secretary positions will rotate to become next Chair and Vice Chair respectively for the 2019 to 2021 term.)

Motion is made by the Advisory and Nominations (A&N) Subcommittee to elect Rachel Bugaris as Electrical Safety Committee Secretary for the 2019 to 2021 term. Motion by A&N member Steve Wilson, second by Tim Gauthier. Approved.

Report from the Chair:

- Internal Newsletter was published this year to facilitate communication of subcommittee activities. Plan to publish each year.
- Increase International involvement by the committee.
- Effort to streamline operations, including automation of paper submittal process for ESW.

Business from the Executive Subcommittee Meeting:

- Addressed several items to IAS through our visitor, Steve Coppinger, who is the IAS Process Industries Department Chair.
- Approved updates to the ESW operating manual

Introduction of new subcommittee chairs:

- Awards and Recognition: Kevin Lippert
- Government, Regulator, Inspectors and Laboratory: Lloyd Gordon
- International: Marcelo Valdes
- Publicity: Nehad El-Sherif

Summary reports of activities from Subcommittee Chairs:

(See separate file of slides from these reports.)

Academic Development - Afshin Majd  
Awards and Recognition – Kevin Lippert  
Codes and Standards Development - Arthur Smith  
Construction – Mike Doherty  
Corporate Relations - Frank Tyler  
Early Career Development - Jay Prigmore  
Facilities and Finance - Stephen Wilson  
Government, Regulator, Inspectors and Laboratory – Lloyd Gordon  
Historical and Records - Lanny Floyd  
IAS Committee Relations - Hugh Hoagland  
Industry Segment Development – Rachel Bugaris  
International – Marcelo Valdes (see separate file – report not available at meeting)  
Occupational Health and Safety – Rene’ Graves  
Papers Review - Daniel Doan  
Products and Services Development - Irozenell Pruitt  
Publications - Thomas Domitrovich  
Publicity Subcommittee – Nehad El-Sherif  
Technical Program Subcommittee - Ken White

Reports on global activities of Electrical Safety:

Information on Costa Rica - G. Moya spoke on the plan to have an ESW in Costa Rica, scheduled for May 22, 2019 - May 24, 2019 in San Jose, Costa Rica. Website is: <http://sites.ieee.org/esw-cr/home-page/>

Information on PowerAfrica - H.L. Floyd reported on the Electrical Safety track planned for the PowerAfrica conference. Website is: <https://ieee-powerafrica.org/about/>

2019 ESW Brasil is scheduled to be held at the Salto Plaza Hotel - Av Getúlio Vargas, 444 - Salto - SP, Brasil, on July 16th to 18<sup>th</sup>, 2019. Website is: <http://www.ieee.org.br/eswbrasil/>

Introduction to the 2019 ESW – Jacksonville, FL - Chair: Rene’ Graves

Information presented on the 2020 ESW – Peppermill, Reno, NV, USA Chair: Scott Seaver  
Call for Papers, Presentations and Tutorials is open.

Announcement of 2021 ESW Location: El Conquistador, Tucson, AZ, USA Chair: Kevin Lippert

New Business: No items

Show chart with schedule and locations for subcommittee meetings from 3PM to 6PM

Motion to Adjourn by Steve Wilson, Second by Kevin Lippert

Next meeting is scheduled for March 1, 2020 in Peppermill, Reno, NV, USA – watch for announcement.

(Note: See next page for roster of attendees)

#### Roster of Attendees:

Arunkumar Aravamudhan , Andeavor  
Adams Baker , Eaton  
Terry Becker , TWBecker Electrical Safety Consulting  
Chip Boertlein , Toyota  
Michael Bryant , ABB Thomas+Betts Power Solutions  
Rachel Bugaris , Panduit  
Eldridge Byron , Schneider Electric  
Eric Campbell , Brown & Caldwell  
Ken Cheng , Kinectrics Inc  
Eva Clark , Sandia National Lab  
George Cole , Palo Verde Nuclear Gen Station  
Steve Coppinger , Calportland  
Charles Crosby , DTE  
D Ray Crow , DRC Consulting  
Richard Dale , Littelfuse  
Sonny Dela , Nestle USA  
Daniel Doan , Retired - Dupont  
Paul Dobrowsky , Innovative Technology Services  
Mike Doherty , E-Hazard  
Thomas Domitrovich , Eaton  
Andrew Drutel , SRNS, LLC  
Nehad El-Sherif , MNKYBR Technologies Inc  
Deborah Erbach , IBEW Local 701 Safety Comm  
Brian Erga , ESCI  
Lanny Floyd , Retired - Dupont  
Frederick Gantzer, II , E-Hazard  
Timothy Gauthier , AVO  
Mikhail Golovkov , Arc Flash - CRT  
Walter Gonzalez , ETAP  
Lloyd Gordon , LANL  
Rene' Graves , Texas Instruments  
Kirk Gray , Hydro-Quebec  
Al Havens , E-Hazard  
John P. Herron , Paytech USA Inc  
Dennis Hill , AECOM  
Hugh Hoagland , E-Hazard  
Matt Hussey , Eaton  
Jonathan Kacal , Shell  
Joshua Kerr , Google  
Michael Kovacic , ES Squared Inc  
Kristina Krivkova , Leaf Electrical Safety  
Vincent Leffler , Schweitzer Engineering Lab  
Robert LeRoy , Lee Inc.  
Kevin Lippert , Eaton  
Afshin Majd , AWS  
Jerry McGlynn , McWilliams Electric Co  
Terry McKinch , M.A. Mortenson  
Andrew Meikle , Ontario Power Generation  
German Moya , Costa Rica Section  
Martin Nagel , General Motors Co

David Pace , Olin  
Joel Palma , Land O'Lakes  
Sergio Panetta , I-Gard Corp  
Thomas Papallo , Siemens  
Steve Park , Electrical Reliability Services  
Stephen Penley , Panduit Corp  
Mike Powers , Tri-City Electrical  
Jay Prigmore , Exponent Failure Analysis Associates  
Irozenell Pruitt , Corteva  
Joe Rachford , e-hazard  
Rahul Rajvanshi , Siemens  
Adam Reeves , Eaton  
Jeremy Renken , DuPont  
David Rewitzer , Hood Patterson & Dewar  
Simon Robert , Hydro-Quebec  
Daniel Roberts , Schneider Electric  
William Rodeman , Land O'Lakes  
Pat Roder , IEEE SA  
Zia Salami , CDM Smith  
Joel Sandel , JRS Consulting Inc  
Dave Scheuerman , Littelfuse  
Mark Scott , Lawrence Berkley Nat'l Lab  
Scott Seaver , TE Connectivity  
Arthur Smith , W S Nelson  
Jeremy Smith , BP  
Paul Sullivan , DuPont  
Jesus Talavera , Schneider Electric  
Esperanza Torres Gutierrez , University of Los Andes, Colombia  
Frank Tyler , DuPont  
David Wallis , ESCI  
Doug Wettekin , Olin  
Jim White , Shermco-NETA  
Ken White , Retired - Olin  
Stephen Wilson , Retired - Dofasco  
Jason Wolf , The ESCO Group  
Yevgen Yevsyeyev , Leaf Electrical Safety

## **International Subcommittee of the IEEE Electrical Safety Committee**

Chair; Marcelo E. Valdes

March, 2019

### **International activity of interest**

1. **IEEE PowerAfrica 2019 Conference**, <https://ieee-powerafrica.org/about/>, 6th IEEE PowerAfrica 2019 Conference with the theme: “Power Economics & Energy Innovations in Africa” to be held in Nigeria August 20th-23rd, 2019. IEEE PowerAfrica 2019 is a premier conference providing a forum for research scientists, engineers, & practitioners to present & discuss latest research findings, ideas, & emerging technologies & applications in the area of power systems integrations, business models, technological advances, policies & regulatory frameworks for the African continent. IEEE PowerAfrica 2019 will include keynote addresses & invited presentations by distinguished scientists & engineers within the context of the SPES vis-à-vis Sustainable Development Goals (SDGs).

Among the various areas of focus is Electrical safety with the following safety related areas of interest identified <https://ieee-powerafrica.org/topics-interests/> :

- Overhead Power Line Safety Issues in Africa and developing countries
- Latest Updates on IEEE 1584 – IEEE Guide for Performing Arc Flash Hazard Calculations
- Safety by Design
- Globalization of Electrical Safety Standards
- Commercial and Industrial System Protection
- Lightning protection and ground methods with high resistivity African soils
- Application of surge and lightning protective devices

To submit papers, due February 28<sup>th</sup>, <https://ieee-powerafrica.org/submit-paper/> ;

The Conference solicits original state-of-the-art contributions as well as review papers. Manuscripts should be at most Six (6) pages maximum in IEEE two-column format & must be submitted in Ms-word 2007 format via the Conference web-site. Please use Microsoft Word template to prepare your manuscript (template available on <http://bit.ly/2matQIB>). Accepted, peer-reviewed papers may be published in the Conference proceedings. Conference content will be submitted for inclusion into IEEE Xplore as well as other Abstracting & Indexing (A&I) databases.

For additional information you may contact Mr. John Nelson at [jnelson@neieng.com](mailto:jnelson@neieng.com)

2. **Electrical Safety Workshop, San Jose Costa Rica**

<https://www.facebook.com/ESWCOSTARICA>

<http://sites.ieee.org/esw->

[cr/?fbclid=IwAR1CG5SUI6niVjQcUSUgUqBYJZNSCLouBo5Z2d0Rfeja\\_mue6CoNJVVR3TQ](http://sites.ieee.org/esw-cr/?fbclid=IwAR1CG5SUI6niVjQcUSUgUqBYJZNSCLouBo5Z2d0Rfeja_mue6CoNJVVR3TQ)

**Committee:** German Moya, Juan Carlos Chavarría, Ismael López, Claudio Muñoz

The **1ST Latin American Electrical Safety Workshop Costa Rica 2019 (ESW)**. Hosted by the IEEE Costa Rica Section & the Professional IAS Costa Rica Chapter in the Hotel Wyndham, Herradura, San José on May 22 to 24, 2019.

For those companies interested in reaching the Central American market, the workshop has a 3-day Trade Show starting on Wednesday 22 at 2:30 PM until Friday 24 at 5:00 PM. For those who would like to explore the country, the organization offers tourism packages with activities before or after the event.

**Seminars to be offered at the workshop include:**

- 2 Day Electrical Safety Seminar by Ray Crow & Marcelo Valdes, presented in English & Spanish, with simultaneous translation to Spanish
- ½ Day IEEE 1584-2018 by Albert Marroquin & Marcelo Valdes. Presented in Spanish
- 2 Day Electrical Maintenance Seminar by Karl Cunningham & Michael Kovacic. Presented in English with simultaneous translation to Spanish

**Papers to be presented include as authors:**

Mr. Landis H. Floyd, Mr. Mike Dougherty, Mr. Dennis Hill & Mr. Marcelo Valdes. Papers may be presented in English, Spanish or Portuguese. Simultaneous translation to Spanish will be available.

At this point attendance is expected in the 200 range. Response to the call for papers was weak and the committee is personally reaching out to authors to obtain more papers.

### **3. March ESW Conference**

I, Marcelo Valdes, was not able to attend the ESW in 2019. David Pace held a meeting of the international sub-committee. In attendance:

David Pace, German Moya, Esperanza Torres Gutierrez, Steve Adams and Kenneth Cheng.

**Marcelo E. Valdes**

ESW International Sub-committee Chair

March 11, 2019

# IEEE IAS Electrical Safety Committee Executive Subcommittee

## Subcommittee Reports

March 3, 2019

Noon – 5PM



# Academic Development Sub-committee

Members: 8 members (4 attended ESW 2018)

- 4 of our members were actively contributing to the IEEE 1584 standard development
- We are working with the University of Washington/ George Washington Univ. on research projects/provide internship opportunities
- Subcommittee members presented total of 3 papers in 2018 ESW/PCIC events
- The chair will be lecturing on Elec. Safety & Power Quality as an IAS Distinguished Lecturer in 2019/20.
- We provided input to select the best student paper for ESW 2019

# Academic Development Subcommittee

- 2 members are faculties at U of Texas, Arlington & George Washington Univ. (teaching Elec. Safety courses)
- Dr. Dehghanian chairs the ESW 2019 Student Program, where 6 students are awarded for their submittals (students were from USA, Poland, China, New Zealand, Canada, and Columbia)
- There will be a presentation at I&CPS 2019 (Calgary, AB) on “Electrical Safety in Academic Laboratories” by one of our members



# Awards and Recognitions

- A&N approved the nominations for the Outstanding Service award, the Excellence in Prevention through Design Technical award, and the William C. Jordan award.
- A&N decided that we should only recognize people who have been given awards at the IEEE or IAS level. We will no longer recognize people who received awards from other committees such as PCIC. This is to help elevate our Committee awards to the same level as the other committee's awards.
- We will continue to ask Fellows and Senior members to stand. We will also ask first time attendees to stand and be recognized.
- Updated the Nominations forms for the ESC Awards.
- Consider documenting the operations of each subcommittee.
- Consider a 'Student Poster' award.

# Awards and Recognitions

## 2019 ESW Awards

- Recognition of Attendees: All Safety-Related Standards Committee Members; Senior Members; Fellows
- ESW Papers Published
- Recognition of IAS Paper Award
- ESW Prize Papers
  - 2 Honorable Mentions
  - Second Place Paper
  - Best Focus Session Paper
  - Best Overall Paper

# Awards and Recognitions

## 2019 ESW Awards

- Outgoing Awards & Recognition Subcommittee Chair
- Outgoing (and prior) ESC Chairs
- Outgoing ESW Chair
- Other Special Recognition
  - SA Managing Director's Special Recognition Award
  - Charles Proteus Steinmetz Award
  - Fellow Elevation
- Excellence in Prevention Through Design Award
- Outstanding Service Award
- William C. Jordan Award

# Codes and Standards Sub-committee

**Members: Chair, Secretary, 20 Meeting Attendees**

## **Progress To-Date:**

**5-Working Group Meetings at 2019 ESW**

P463, P1458, P1814 and P1584.1

**ESafeC now sponsors 5 members of SCC18 “Standards Coordinating Committee”:**

Frank Tyre (CMP-1 Alternate), Paul Sullivan (CMP-9 Principal), Peter Walsh (CMP-10 Alternate), JJ Dai, and Don Zipse. This is approximately 14% of the current SCC18 membership.

## **In Progress - New Standards Development:**

**Develop PARs for:**

Working Safely with Hazardous Capacitors – Mark Scott/A. Smith

Complete Electrical Risk Assessment Method - Lloyd B. Gordon/A. Smith

# Construction Subcommittee

Members: Chair, Vice Chair, 14 members (changes due to jobs, ability to attend)

In 2018:

Held annual face to face meeting at ESW

Held elections for exec. All members continued to stand.

Report on NAC / IEEE meeting in Washington DC

Discussed tutorial potentials.

Discussed papers for 2019

In Progress:

Current papers for 2019.

Meeting on Monday for tutorials / papers in Reno  
2020 / elections

# **IEEE/IAS Electrical Safety Committee – March 2019 Executive Subcommittee - Corporate Relations**

Chair – Frank Tyler  
Vice-Chair – Scott Seaver

# **Role of Corporate Relations Subcommittee/Activities**

## **Provide Oversight for...**

- Annual solicitation of financial support for the ESW from corporations and/or individuals.
- The Vendor Product Exposition during the ESW.
- The Vendor Hospitality suites management process.
- Oversight for each item includes ensuring the activity is performed per the ESW Operating Manual.
- Review and recommend updates to the Corporate Support, Product Exposition, and Hospitality sections of the ESW Operating Manual as needed.
- Address any issues concerning Corporate Relations.

# ESW Corporate Support

- **Chair – Tim Gauthier**

- Vice-Chair – Frank Tyler

- Works closely with ESW Finance Chair

- No price increases for corporate support for this years' ESW.
- Slow start for this year, but picked up leading up to the ESW.
- A few previous supporters were not able to include corporate support in their budget for this year.
- Solicited support, from new supporters to makeup for some of the lost support.
- Approximately \$28,100 in support for this the 2019 ESW.



# ESW Corporate Support



- 10 companies supporting 12 opportunities.
- Continue to add support opportunities as they are identified, such as the mobile charging station added this year. Any other ideas? We're all EARS!
- Listing supporters for recognition for Mobile App as well as the ESW website. This has been well received by the supporters.
- Personally thanking the supporters during the workshop.
- Sends Thank You certificates to all supporters. This was started after the 2017 workshop. Certificates were very well received by the supporters and will continue this after the 2019 workshop is complete.



# ESW Product Expo

- **Chair – Kevin Warren**
- **Vice-Chair – Scott Seaver**



- Typically, between 50 and 70 exhibitors. (approx. 61 spaces purchased (48 Companies) for this year out of 65 spaces.
- Using the “passport” system to ensure contest entrants visit at least 15 booths.
- Excellent networking/social opportunity.
- Good for new business for participating companies



# ESW Hospitality Suites

- **Chair – Steffie Owen**
- Works closely with Meeting Planner Steve Glass
- Four Hospitality Suites for 2019 workshop.  
Evenings - Monday (1), Tuesday (1) and  
Wednesday (2).

Excellent networking and  
social opportunity





## Early Career Development Sub-committee

Members: Chair, Vice-Chair, 7 additional members

In 2018:

Vice-chair was named (Paymen Dehghanian)

3 additional member joined the sub-committee

Targeting a first time attendee/early career professional  
tutorial for ESW 2020

Targeting an early career development social event

Possible breakfast, happy hour, or other event

Need to recruit additional members



## Facility and Finance Subcommittee

Members: Allison Halluik, Steven Glass, Steve Wilson

In 2018:

2017 ESW Reno Audit completed

2018 ESW Fort Worth internal audit review complete sent to  
external auditors

2019 ESW contracts and purchase orders set up

2020 ESW Bank account open

2021 ESW Hotel contract signed

3 year contract with American Audio Visual 2019 - 2021

# Facility and Finance Subcommittee

In Progress:

2021 – 2025 Contract with Glass & Associates LLC

ESW Locations 2022 and on

2019 ESW Costa Rica May 22 - 24, 2019

250 attendees, \$256K revenue, \$105K expenses, \$150 K surplus

2019 Power Africa August 20-23, 2019

# Historical and Records Subcommittee

- Chair: Lanny Floyd
- Scope:
  - Develop and maintain historical materials and information of the life and evolution of the committee and the ESW.
  - Information is to be kept on the committee website.
  - Encourage individual and companies who have supported the committee or the ESW to submit memories.

# Historical and Records Subcommittee

- Recent Activity
  - Updating Body of Knowledge Index, listing all presentations, papers, tutorials to date
  - Compiling all post conference highlight articles published in IEEE Industry Applications Magazine 1992-2018 ESW, ESW Brazil, ESW India
    - Award photos, best paper recipients, brief overview articles
  - Updating documents
    - Award Nomination Forms
    - Meeting Minutes
    - Committee Award recipients



# Historical and Records Subcommittee

## Issues:

- One person subcommittee
- Photo archives – how to manage

# IAS Committee Relations Subcommittee

Chair: Hugh Hoagland

Key leaders in the following committees were sent invitations to the 2019 ESW:

- PCIC
- PPIC
- I&CPS
- PES
- Industrial Automation Controls
- Metal Industry Technical Committee
- Mining Industry Committee
- TSC



# Industry Segment Development Subcommittee

Members: 10

In 2018:

Partnered with IAS to create webinars on safety topics

In Progress:

Webinar selection guidelines

Better publicity for webinars

Recognition for presenters

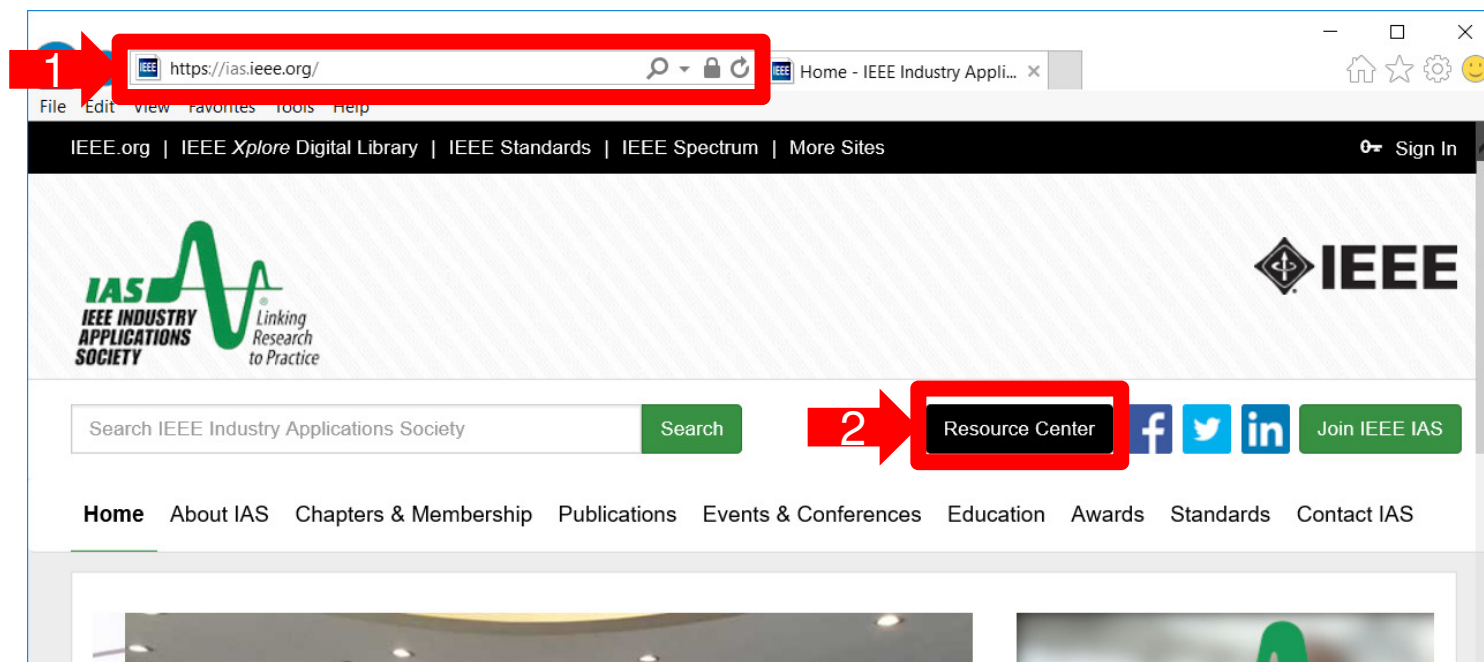
Promote previously recorded webinars

# Industry Segment Development Subcommittee

Electrical Safety Webinars

Visit <https://ias.ieee.org> and select **Resource C**

**Free** to IAS members  
IEEE members \$11  
Non-members \$15



# Industry Segment Development Subcommittee

## Electrical Safety Webinars

Visit <https://ias.ieee.org> and select **Resource C**

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### COMING SOON!

<b>April 24, 2019</b>	Marcelo Valdes	Electrical Safety Prevention through Design – Part 2: The Future is Already Here
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### ARCHIVED

<b>February 20, 2019</b>	Lanny Floyd	Electrical Safety Prevention through Design – Part 1: Pushing the Envelope in Electrical Injury Prevention
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<b>January 31, 2018</b>	Mark Scarborough	Electrical Safety Integration into New Production Facility Planning
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<b>May 3, 2017</b>	Christa Swafford & Paul Sullivan	Electrical Injury Drills: Approaches, Learnings, and Best Practices
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<b>January 6, 2016</b>	Dr. Massimo Mitolo	Understanding NEC and IEC in the matter of bonding and grounding of low-voltage power systems
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<b>August 2, 2015</b>	Lanny Floyd	Advanced Concepts in Occupational Electrical Safety
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# International Subcommittee

- Chair: Marcelo Valdes
- (See separate file)



## Paper Review Sub-committee

Members: Chair, 3 Associate Editors, 77 Reviewers

In 2018:

32 Papers Reviewed in ScholarOne

(31 from ESW, 1 from IAS co-sponsored conference)

5 Papers sent to IEEE Transactions on Industry Appl.

11 Papers sent to Industry Applications Magazine

2 Papers being revised by authors

In Progress:

27 papers for 2019 ESW under review in ScholarOne



# Products and Services Sub-committee

Chair: Irozenell Pruitt

2018 Accomplishments:

- Daily Safety Tips for the May Electrical Safety Month:  
Daily safety tips were issued Monday – Friday during the month of May.

Plans:

- We plan to issue Electrical Safety Tips once a month throughout the year.
- Need more members for this committee.



# Publications Sub-committee

## Publications

- ESW Book:
  - 2019 review process found great edits that will carry over.
  - USB sticks put together with papers
  - Closely working with Dennis Hill helped considerably
- Lessons learned
  - Better engagement with papers review subcommittee
  - Establish fixed dates / timeline for conference pre and post work
- **Domitrovich** [thomasdomitrovich@eaton.com](mailto:thomasdomitrovich@eaton.com)

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# Technical Sub-committee

Members: 20

In 2018:

- Guideline for removing paper or tutorial- can only remove a paper if it does not meet the original proposal
- ESW Manual updated
- Electronic Submittal of papers and Presentations went well
- Will continue to distribute Presentations via the thumb drive
- Still an issue with timely submittals
- Which Papers go into conference record and when