

IEEE PES TRANSFORMERS COMMITTEE FALL 2018 MEETING

CELEBRATING 100 YEARS OF TRANSFORMER STANDARDS DEVELOPMENT!



August 31, 2018

Dear Committee Members and Guests:

As we continue to celebrate the Committee's 100 year anniversary, we cordially invite you and your spouse/companion to Jacksonville, Florida, USA, to attend the Fall 2018 meeting of the IEEE PES Transformers Committee, October 14–18. We look forward to welcoming you to Florida's youngest city that is equal parts Florida Flavor and Southern Hospitality. From stretches of stunning beaches and waterways to extraordinary cultural spots and many historic neighborhoods, Jacksonville has something for everyone! We are excited for you to experience why *Lonely Planet* ranked Jacksonville on its list of the world's "10 Best Value Destinations for 2018"—the only U.S. city to make the list!—and why Expedia's Viewfinder blog named Jacksonville as one of "21 Supercool U.S. Cities."

HOTEL INFORMATION: Our meeting will be held in the heart of downtown Jacksonville at the newly remodeled **Hyatt Regency Jacksonville Riverfront**, 225 East Coastline Drive. The Hyatt is adjacent to the city's scenic Main Street Bridge, providing beautiful river views and walkable access to all that downtown has to offer. If you do not feel like walking, the hotel offers an eco-friendly bike service that reaches popular locations such as the Landing, Times-Union Center, Museum of Contemporary Art and Florida Theatre.

Our discounted guestroom rate at the hotel starts at US\$149 per night and includes complimentary wireless internet in guestrooms and hotel public space as well as complimentary fitness center access for all overnight guests. Visit the Committee's website for a link to reserve a room, or if you call the hotel, mention "IEEE Transformers" to receive the group rate. The cut-off date for the group rate is Friday, September 21, but we expect the hotel to sell out before this date.

GETTING THERE: The **Hyatt Regency Jacksonville Riverfront** is located approximately 15 miles/24 km from Jacksonville International Airport (JAX). Taxi fare is approximately US\$30 one way from the airport, and taxis are required to accept credit card payments. UBER and Lyft (US\$22) are also approved for ridesharing at the Jacksonville airport. Other paid airport transportation options are available through the hotel's website: [Hyatt transportation options](#). Self-parking across the street in the hotel's garage is a discounted US\$15 per car per night. Valet parking is also available at a standard US\$25 per car per night.

MEETING REGISTRATION: Register on-line at www.transformerscommittee.org for social events, tours and the meeting. Register by **Friday, September 21, 2018**, to receive a US\$50 early registration discount. The on-line registration system will be disabled on Wednesday, October 10, to print name badges and finalize counts. The cost to register on-site is substantially higher than the advance registration price, and some events may not be available for on-site registration.

WEATHER: October in Jacksonville is typically warm during the day and cooler at night with only a small chance of precipitation (average high of 82°F/28°C and evening low of 64°F/18°C). We are planning for an outdoor welcome reception and some fantastic spouse/companion tours with outdoor activities, so we are hoping for these averages to play out! Dress for the meeting is business casual.

SATURDAY EARLY BIRD EVENT: If you arrive early, please join us for an evening of music and great food at **River City Brewing Company**. Order off the menu and set your own return schedule. See flyer for details.

SUNDAY EVENING WELCOME RECEPTION: Renew old friendships and form new ones! This reception will be held outside (weather permitting) on the **Hyatt Regency's River Deck** with spectacular views of the St. Johns River, Main Street Bridge and the Jacksonville skyline. Cash bars, plenty of fabulous food and fun, tropical music will be provided. Registered meeting attendees and spouses/companions are welcome to attend. Please indicate whether you will attend this reception during the meeting registration process.

SPOUSE/COMPANION TOURS: Monday's excursion is an **Amelia Island & Fernandina Beach Adventure**, including a river cruise of Amelia Island, voted third Best Island in the United States by *Conde Nast Traveler*. Lunch dockside at the infamous Brett's Waterway Café follows the cruise as well as a visit to Clay Times Art Center and time to stroll through quaint downtown Fernandina Beach and its colorful shops.

Tuesday is the **Gilded Age Tour of St. Augustine**. The day begins with a narrated trolley ride around St. Augustine, the nation's oldest city. Tour guides will showcase the city's highlights and history before dropping guests off at the Lightner Museum. After the museum, the chartered trolley takes guests on to St. George Street with a stop at the oldest masonry fort in the continental U.S. for those interested in exploring this national monument before heading to enjoy Spanish/Cuban cuisine at the historic Columbia Restaurant. After lunch, time is available to either discover St. George Street's vast offerings or head back to explore the fort before a relaxing coach bus ride back to the hotel.

See flyers for details and register early as attendance is limited.

WEDNESDAY DINNER SOCIAL: Located in the historic Riverside section of Jacksonville, the **Cummer Museum** is home to more than 5,000 works of art, spanning from 2100 B.C. through the 21st century. Thought-provoking exhibitions, some of the most important and delightful gardens in Northeast Florida—including a breathtaking sculpture garden—and several special collections enhance the Museum's artistic offerings. After experiencing the permanent galleries and gardens while enjoying passed appetizers and strolling musicians, browse the delightful gift shop before enjoying a buffet dinner overlooking the gardens. See flyer for dinner menu and details.

ADDITIONAL MEETING INFORMATION: Along with this invitation letter, additional meeting information can be downloaded from the Committee's website at www.transformerscommittee.org:

- Registration Fee Summary – Use this as a guide to review the fees for each activity before you begin the on-line registration process.
- Meeting Schedule and General Sessions Agenda – If any noteworthy changes are made, an updated schedule will be posted on the Committee's website a few days prior to the meeting.
- Other informational flyers, including those for the Saturday Early Bird Event, Spouse/Companion Tours, Wednesday Dinner Social and technical presentations.

We are certain you will enjoy all of what Jacksonville has to offer and look forward to seeing you at the Fall 2018 meeting as we close out this milestone year!

Best regards,

*IEEE Transformers Committee
Meetings Planning Subcommittee*

IEEE PES TRANSFORMERS COMMITTEE

Fall 2018 Meeting
Jacksonville, Florida USA

~ Meeting Registration Fees Summary ~

- Register on-line with credit card at www.transformerscommittee.org on "Next Meeting" page; contact the Committee at tc-meetings@ieee.org if an alternate form of payment is necessary
- Each individual must register for meeting and pay appropriate registration fee to attend any social event or tour
- Print a receipt at the end of the registration process; paper receipts NOT provided at the meeting
- Refund provided only if request received by Wednesday, October 10 and valid once confirmation email received; US\$25 service charge for a refund of entire registration or US\$10 for a partial refund
- US Tax ID No. 13-1656633, Canadian Business No. 12563 4188, Euro Tax Registration No. EU826000081

REGISTRATION FEES AS SHOWN BELOW – all fees in <u>US\$ dollars</u> – all fees stated are per person	On or Before September 21	After Sept 21, on or before October 10	On-site at Meeting
MEETING REGISTRATION			
Attendee — IEEE member (will be verified with IEEE)	\$300	\$350	\$450
Attendee — non-IEEE member	\$350	\$400	\$500
Attendee — IEEE Life or Committee Emeritus (will be verified)	\$100	\$150	\$250
Spouse or Companion* and children age 12 and over	\$100	\$150	\$250
– Attendee registration fee includes Sunday night welcome reception, entry into meeting area, coffee breaks and four breakfasts (Mon, Tues, Wed, Thurs) – Spouse/Companion registration fee includes Sunday night welcome reception, four breakfasts (Mon, Tues, Wed, Thurs) and ability to register for tours			
* Companion is a "significant other", boy/girlfriend, family member, who is attending for non-commercial reasons, i.e. not attending the technical meetings, etc. Spouses/Companions and children (age 12 and over) must be registered for the meeting with above meeting registration fees to attend any tour, social event and/or breakfasts.			
LUNCHEONS			
Monday Standards Development Luncheon – All SC, WG, TF leaders are encouraged to attend – Buffet lunch (no meal selection required)	\$20	\$20	\$20*
Tuesday Awards Luncheon – Meal selection required - indicate beef, chicken or vegetarian	\$30	\$30	\$30*
SOCIAL EVENTS (see flyers for details)			
Sunday Night Welcome Reception: Hyatt Regency River Deck	included in registration fee; <i>please register in advance for headcount purposes</i>		
Saturday Early Bird: River City Brewing Company – Live music and house-brewed beer that pairs well with seafood, steaks and pasta at this pub with river and downtown views	no fee at registration – order off menu and pay for own food, beverages, transportation; <i>please register in advance for headcount purposes</i>		
Wednesday Evening Dinner Social: Cummer Museum** – Exhibits, gardens & gift shop open during reception with passed appetizers, cash bar and live entertainment – Buffet dinner to follow (no meal selection required)	\$95	\$95	\$95*
SPOUSE/COMPANION TOURS (each tour includes lunch; see flyers for details)			
Monday: Amelia Island & Fernandina Beach Adventure**	\$105	\$105	\$105*
Tuesday: Gilded Age Tour of St. Augustine**	\$105	\$105	\$105*
NO TECHNICAL TOURS OFFERED AT THIS MEETING			
* On-site registration for these events only available if space allows.			
** Attendance will be limited for Wednesday evening social event and spouse/companion tours due to space constraints, so register early!			

IEEE PES TRANSFORMERS COMMITTEE

Fall 2018 Meeting; Jacksonville, Florida

Agenda - General Sessions

Chair: Sue McNelly **Vice Chair:** Bruce Forsyth **Secretary:** Ed teNyenhuis
Treasurer: Paul Boman **Awards Chair/Past Chair:** Stephen Antosz **Standards Coordinator:** Jim Graham

Opening Session

Monday, Oct 15: 8:00 am - 9:15 am

(Rosters circulated – attendance required to maintain Member status)

1. Welcome and Announcements Sue McNelly
2. Meeting Minute Tammy Behrens
3. Approval of Agenda Sue McNelly
4. Approval of Minutes from Spring 2018 Meeting Sue McNelly
5. Chair's Report & Administrative Subcommittee Report Sue McNelly
6. Vice Chair's Report Bruce Forsyth
7. Secretary's Report Ed teNyenhuis
8. Treasurer's Report Paul Boman
9. Standards Report Jim Graham
10. Liaison Representative Reports
 - 10.1. CIGRE Craig Swinderman
 - 10.2. IEC TC-14..... Phil Hopkinson
 - 10.3. Standards Coordinating Committee, SCC18 (NFPA Standards) David Brender
 - 10.4. Standards Coordinating Committee, SCC4 (Electrical Insulation) Evanne Wang
 - 10.5. ASTM Tom Prevost
11. Approval of Revised P&P Manual Bruce Forsyth
12. Hot Topics for the Upcoming Week Subcommittee Chairs
13. New Business & Wrap-up Sue McNelly

Closing Session

Thursday, Oct 18: 11:00 am - 12:00 pm

1. Chair's Remarks and Announcements Sue McNelly
2. Meetings Planning Subcommittee Tammy Behrens
3. Reports from Technical Subcommittees (decisions made during the week)
 - 3.1. Standards Jerry Murphy
 - 3.2. Subsurface Transformers & Network Protectors Dan Mulkey
 - 3.3. Bushings Peter Zhao
 - 3.4. Dielectric Tests Ajith Varghese
 - 3.5. Distribution Transformers Steve Shull
 - 3.6. Dry Type Transformers Chuck Johnson
 - 3.7. HVDC Converter Transformers & Reactors Mike Sharp
 - 3.8. Instrument Transformers Ross McTaggart
 - 3.9. Insulating Fluids David Wallach
 - 3.10. Insulation Life Sheldon Kennedy
 - 3.11. Performance Characteristics Craig Stiegemeier
 - 3.12. Power Transformers Bill Griesacker
4. Additional Report from Standards Coordinator (issues from the week) Jim Graham
5. New Business (continued from Monday) and Wrap-up Sue McNelly

IEEE PES TRANSFORMERS COMMITTEE
FALL 2018 MEETING: OCTOBER 14 TO OCTOBER 18
Hyatt Regency Jacksonville Riverfront Hotel; Jacksonville, Florida USA

10/9/2018

-- Room locations designated as (1), (2), etc., indicate the "button to press" in the elevator.

For instance, a room on (1) is located on First Level, and a room on (2) is located on Second Level.

KEY

Note: A PC projector will be furnished in each meeting room. Arrive early to ensure equipment operates/syncs correctly.

> = activity continued into another session / from another session

++ = not a Transformers Committee activity

TBD = To Be Determined

TRACK LEGEND

Admin	Administrative SC	Ins Life	Insulation Life SC
Bush	Bushings SC	Instr TR	Instrument Transformers SC
DiTests	Dielectric Tests SC	Mtgs	Meetings Planning SC
Distr	Distribution Transformers SC	PCS	Performance Characteristics SC
Dry Type	Dry Type Transformers SC	Power	Power Transformers SC
HVDC	HVDC Converter Transfs. and Smoothing Reactors SC	STNP	Submersible Transf. & Network Protectors SC
IF	Insulating Fluids SC	Stds	Standards SC

STATUS LEGEND

N	New
I	In-Progress
NC	Near Completion
B	Ballot Stage

THURSDAY, OCTOBER 11

No Meeting Registration, Technical Tours, Spouse/Companion Tours, or Social Events Planned

TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)
------	----------	-------	-----------	--------	--------------

FRIDAY, OCTOBER 12

No Meeting Registration, Technical Tours, Spouse/Companion Tours, or Social Events Planned

TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)
------	----------	-------	-----------	--------	--------------

SATURDAY, OCTOBER 13

No Registration and no Meetings, Technical Tours, or Spouse/Companion Tours Planned

TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)
------	----------	-------	-----------	--------	--------------

6:00 PM – ??? Early Bird Event: River City Brewing Company

Social

- Advance on-line registration required

- Meet in hotel lobby at 6:00 PM; take river taxi, Uber/Lyft or regular taxi across the river at own expense

(1 mile / 6 minutes by car / 15 minutes by river taxi)

- Enjoy live music and house-brewed beer that pairs well with seafood, steaks and pasta at this pub with river and downtown views – order off the menu

- See flyer for details

SUNDAY, OCTOBER 14

No Technical Tours or Spouse/Companion Events Planned

TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)
------	----------	-------	-----------	--------	--------------

1:00 PM – 5:30 PM Meeting Registration

Sky Bridge (2)

2:00 PM – 5:30 PM Administrative Subcommittee

Admin

S. McNelly

–

River Terrace 3 (3)

- Closed meeting, by invitation only

2:00 PM – 5:00 PM NEMA Transformers

++

J. Caskey

–

River Terrace 2 (3)

- Closed meeting, by invitation only

6:00 PM – 8:00 PM Welcome Reception

River Deck 2 (3)

Renew old friendships and form new ones! This reception will be held outside (weather permitting) with spectacular views of the St. Johns River, Main Street Bridge and the Jacksonville skyline. Cash bars, plenty of fabulous food and live music will be provided. Please indicate whether you will attend this reception during the meeting registration process. All registered attendees and spouses/companions are welcome to attend.

MONDAY, OCTOBER 15 - Monday Breaks Sponsored by Meramec Instrument Transformers **

No Technical Tours or Social Events Planned

TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)
7:00 AM – 5:00 PM	Meeting Registration				Sky Bridge (2)
7:00 AM – 7:50 AM	Newcomers Orientation - Breakfast meeting; arrive early! - Newcomers and guests are encouraged to attend!		B. Forsyth	–	River Terrace 1 (3)
7:00 AM – 7:50 AM	Distribution & STNP SC Leaders Coordination - Closed breakfast meeting, by invitation only	Distr/STNP	S. Shull / D. Mulkey	–	City Terrace 12 (3)
7:00 AM – 8:00 AM	Breakfast - Attendees (no spouses/companions please)				Conference Center A (3)
8:00 AM – 9:30 AM	Breakfast - Spouses/Companions (no meeting attendees)				St. Johns (3)
8:00 AM – 9:15 AM	Opening Session - All registered meeting participants are encouraged to attend - See separate document on website for meeting agenda - Attendance required to maintain Committee Member status		S. McNelly	–	Grand Ballroom 4 & 5 (2)
9:15 AM – 3:15 PM	Spouses/Companions Tour: Amelia Isl./Fernandina Beach - Advance on-line registration required - Bus departs 9:15 AM from Newnan Street entrance and returns ~3:15 PM; includes lunch - See flyer for details	Tour			
9:15 AM – 9:30 AM	Break (beverages only) - Sponsored by Meramec Instrument Transformers *				Grand Ballroom Foyer (2)
9:30 AM – 10:45 AM	WG Std Transf. Terminology C57.12.80	Stds	C. Claiborne	I	Grand Ballroom 1 (2)
9:30 AM – 10:45 AM	TF LTC Diagnostics	PCS	M. Ferreira	N	Grand Ballroom 2 & 3 (2)
9:30 AM – 10:45 AM	TF Transf Efficiency & Loss Evaluation (DOE Activity)	Distr	P. Hopkinson	I	Grand Ballroom 4 (2)
9:30 AM – 10:45 AM	WG Thermal Evaluation C57.100	Ins Life	R. Wicks	N	Grand Ballroom 5 (2)
9:30 AM – 10:45 AM	WG Dry Type Reactors PC57.16	Dry Type	A. Del Rio	I	Grand Ballroom 6 (2)
9:30 AM – 10:45 AM	TF External Dielectric Clearances	DiTests	E. Davis	–	Grand Ballroom 7 (2)
10:45 AM – 11:00 AM	Break (beverages only) - Sponsored by Meramec Instrument Transformers *				Grand Ballroom Foyer (2)
11:00 AM – 12:15 PM	WG Control Cabinets PC57.148	Power	J. Watson	I	Grand Ballroom 1 (2)
11:00 AM – 12:15 PM	WG Moisture in Insulation PC57.162	Ins Life	T. Prevost	I	Grand Ballroom 2 & 3 (2)
11:00 AM – 12:15 PM	WG Overhead Distr. Transf. C57.12.20	Distr	A. Traut	I	Grand Ballroom 4 (2)
11:00 AM – 12:15 PM	TF PCS Cont. Rev. to Test Code C57.12.90	PCS	H. Sahin	–	Grand Ballroom 5 (2)
11:00 AM – 12:15 PM	WG Bushings Gen. Require. C57.19.00	Bush	P. Zhao	I	Grand Ballroom 6 (2)
11:00 AM – 12:15 PM	WG Ventilated Dry Type PC57.12.51	Dry Type	S. Som	I	Grand Ballroom 7 (2)
12:15 PM – 1:30 PM	Standards Development Review Luncheon Everyone is welcome to attend. All SC/WG/TF leaders are highly encouraged to attend. Doors open ~12:00 pm. Come early, get a good seat and start eating. Advance on-line registration required. Admission verified with RFID badge at the door. To listen to the presentation without eating lunch, arrive by 12:30 pm.				Conference Center A (3)
1:45 PM – 3:00 PM	WG Installation of Power Transf. C57.93	Power	M. Lau	B	Grand Ballroom 1 (2)
1:45 PM – 3:00 PM	TF Audible Sound Revision to Test Code	PCS	R. Girgis	–	Grand Ballroom 2 & 3 (2)
1:45 PM – 3:00 PM	WG 1-ph Padmount Dist Transf. C57.12.38	Distr	A. Ghafourian	I	Grand Ballroom 4 (2)
1:45 PM – 3:00 PM	WG Guide of FRA for Liquid Filled Transf. C57.149	PCS	C. Sweetser	I	Grand Ballroom 5 (2)
1:45 PM – 3:00 PM	WG Transformer Impulse Test Guide PC57.98	DiTests	T. Hochanh	N	Grand Ballroom 6 (2)
1:45 PM – 3:00 PM	WG Dry Type Gen. Requirements C57.12.01	Dry Type	C. Ballard	I	Grand Ballroom 7 (2)
3:00 PM – 3:15 PM	Break (beverages and treats) - Sponsored by Meramec Instrument Transformers *				Grand Ballroom Foyer (2)
3:15 PM – 4:30 PM	WG Bushing Applicat. Guide C57.19.100	Bush	T. Spitzer	I	Grand Ballroom 1 (2)
3:15 PM – 4:30 PM	WG Transformer Monitoring C57.143	Power	M. Spurlock	I	Grand Ballroom 2 & 3 (2)
3:15 PM – 4:30 PM	WG 3-ph Padmount Dist Transf. C57.12.34	Distr	R. Stahara	I	Grand Ballroom 4 (2)
3:15 PM – 4:30 PM	TF PD Limits for Factory Tests	DiTests	V. Mehrotra	–	Grand Ballroom 5 (2)
3:15 PM – 4:30 PM	WG on Loss Measurement C57.123	PCS	E. teNyenhuus	N	Grand Ballroom 6 (2)
3:15 PM – 4:30 PM	SC HVDC Converter Transfs & Smoothing Reactors	HVDC	M. Sharp	–	Grand Ballroom 7 (2)
4:30 PM – 4:45 PM	Break (beverages only) - Sponsored by Meramec Instrument Transformers *				Grand Ballroom Foyer (2)
4:45 PM – 6:00 PM	TF IEEE-IEC Cross Reference	Stds	V. Mehrotra	I	Grand Ballroom 1 (2)
4:45 PM – 6:00 PM	WG High Temp Liquid Transformers C57.154	Ins Life	R. Marek	N	Grand Ballroom 2 & 3 (2)
4:45 PM – 6:00 PM	WG Tank Pressure Coordinat. C57.12.39	Distr	C. Gaytan	I	Grand Ballroom 4 (2)
4:45 PM – 6:00 PM	TF PCS Cont. Revisions to C57.12.00	PCS	T. Ansari	–	Grand Ballroom 5 (2)
4:45 PM – 6:00 PM	TF Bushing Overload	Bush	M. Weisensee	N	Grand Ballroom 6 (2)
4:45 PM – 6:00 PM	WG Sec. Network Protectors C57.12.44	STNP	M. Faulkner	NC	Grand Ballroom 7 (2)

TUESDAY, OCTOBER 16 - Tuesday Breaks Sponsored by M&I Materials **

No Technical Tours or Social Events Planned

TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)
7:00 AM – 11:30 AM	Meeting Registration				Sky Bridge (2)
7:00 AM – 7:50 AM	EL&P Delegation (End-users only please) - Breakfast meeting; arrive early!		J. Murphy	–	City Terrace 12 (3)
7:00 AM – 8:00 AM	Breakfast - Attendees (no spouses/companions please)				Conference Center A (3)
8:00 AM – 9:30 AM	Breakfast - Spouses/Companions (no meeting attendees)				St. Johns (3)
9:15 AM – 4:00 PM	Spouses/Companions Tour: St. Augustine Gilded Age - Advance on-line registration required - Bus departs 9:15 AM from Newnan Street entrance and returns ~4:00 PM; includes lunch - See flyer for details	Tour			
8:00 AM – 9:15 AM	WG Dry Type PD Detection PC57.124	Dry Type	T. Prevost / R. Marek	I	Grand Ballroom 1 (2)
8:00 AM – 9:15 AM	TF on Winding Insulation PF	DiTests	D. Robalino	–	Grand Ballroom 2 & 3 (2)
8:00 AM – 9:15 AM	WG Encl Int C57.12.28, C57.12.29, C57.12.31, C57.12.32	Distr	D. Mulkey	I	Grand Ballroom 4 (2)
8:00 AM – 9:15 AM	WG Wind Turbine Generator Transformers, P60076-16	PCS	P. Hopkinson	B	Grand Ballroom 5 (2)
8:00 AM – 9:15 AM	WG Tap Changer Applicat. Guide 60214-2	Power	C. Colopy	B	Grand Ballroom 6 (2)
8:00 AM – 9:15 AM	WG Station Service Volt. Transf. C57.13.8	Instr TR	D. Wallace	I	Grand Ballroom 7 (2)
9:15 AM – 9:30 AM	<i>Break (beverages only) - Sponsored by M&I Materials *</i>				<i>Grand Ballroom Foyer (2)</i>
9:30 AM – 10:45 AM	WG 1-Ph Submersible Transf. C57.12.23	STNP	A. Traut	NC	Grand Ballroom 1 (2)
9:30 AM – 10:45 AM	WG Shunt Reactors C57.21	PCS	S. Som	I	Grand Ballroom 2 & 3 (2)
9:30 AM – 10:45 AM	WG Temp Measurement PC57.165	Ins Life	P. McClure	I	Grand Ballroom 4 (2)
9:30 AM – 10:45 AM	TF Condition Assessment Guide	Power	B. Sparling	I	Grand Ballroom 5 (2)
9:30 AM – 10:45 AM	TF Low Frequency Test Guide	DiTests	D. Sauer	N	Grand Ballroom 6 (2)
9:30 AM – 10:45 AM	WG Tests for Instrument Transf. C57.13.5	Instr TR	P. Riffon	I	Grand Ballroom 7 (2)
10:45 AM – 11:00 AM	<i>Break (beverages only) - Sponsored by M&I Materials *</i>				<i>Grand Ballroom Foyer (2)</i>
11:00 AM – 12:15 PM	WG Liquid-immersed Sec. Network TRs C57.12.40	STNP	D. Blew	N	Grand Ballroom 1 (2)
11:00 AM – 12:15 PM	WG Semicond. Power Rectifier Transfs C57.18.10	PCS	S. Kennedy	I	Grand Ballroom 2 & 3 (2)
11:00 AM – 12:15 PM	WG PLC Caps & CCVTs PC57.13.9	Instr TR	Z. Roman	I	Grand Ballroom 4 (2)
11:00 AM – 12:15 PM	WG Transportation Issues C57.150	Power	G. Anderson	I	Grand Ballroom 5 (2)
11:00 AM – 12:15 PM	WG PD Acoustic Detection C57.127	DiTests	D. Gross	I	Grand Ballroom 6 (2)
11:00 AM – 12:15 PM	WG Distrib. Transf. Bushings PC57.19.02	Bush	E. Smith	I	Grand Ballroom 7 (2)
12:15 PM – 1:30 PM	Awards Luncheon All meeting attendees are encouraged to attend to show appreciation and recognize accomplishments. Doors open ~12:00 pm. Come early, get a good seat and start eating. Advance on-line registration is required. Admission verified with RFID badge at the door.				Conference Center A (3)
1:45 PM – 3:00 PM	WG Submersible Transf. C57.12.24	STNP	G. Termini	N	Grand Ballroom 1 (2)
1:45 PM – 3:00 PM	TF Cont. Revision to Low Frequency Tests	DiTests	B. Griesacker	–	Grand Ballroom 2 & 3 (2)
1:45 PM – 3:00 PM	WG Instrument Transf. Tests PC57.13.2	Instr TR	T. Sizemore	I	Grand Ballroom 4 (2)
1:45 PM – 3:00 PM	WG Consolidation Insulating Fluid Guides PC57.166	IF	T. Prevost	N	Grand Ballroom 5 (2)
1:45 PM – 3:00 PM					Grand Ballroom 6 (2)
1:45 PM – 3:00 PM	WG Therm Eval of Insul Systems, Dry Type C57.12.60	Dry Type	R. Wicks	I	Grand Ballroom 7 (2)
3:00 PM – 3:15 PM	<i>Break (beverages and pretzels) - Sponsored by M&I Materials *</i>				<i>Grand Ballroom Foyer (2)</i>
3:15 PM – 4:30 PM	WG Partial Discharge Test - C57.113	DiTests	A. Naderian	N	Grand Ballroom 1 (2)
3:15 PM – 4:30 PM	WG Gas Interpretation Guide C57.104	IF	C. Beauchemin	B	Grand Ballroom 2 & 3 (2)
3:15 PM – 4:30 PM	WG High-Temp Insulat. Materials, P-1276	Ins Life	R. Wicks	I	Grand Ballroom 4 (2)
3:15 PM – 4:30 PM	WG Sw Transients Ind by TR/Bkr Interaction PC57.142	PCS	J. McBride	N	Grand Ballroom 5 (2)
3:15 PM – 4:30 PM					Grand Ballroom 6 (2)
3:15 PM – 4:30 PM	WG Std Terminal Markings C57.12.70	Stds	J. Varnell	I	Grand Ballroom 7 (2)
4:30 PM – 4:45 PM	<i>Break (beverages only) - Sponsored by M&I Materials *</i>				<i>Grand Ballroom Foyer (2)</i>
4:45 PM – 6:00 PM	TF Cont. Rev to Imp. Test Sect of C57.12.00 & C57.12.90	DiTests	P. Riffon	–	Grand Ballroom 1 (2)
4:45 PM – 6:00 PM	WG Dry Type Test Code C57.12.91	Dry Type	D. Walker	I	Grand Ballroom 2 & 3 (2)
4:45 PM – 6:00 PM	WG Loading Guide PC57.91	Ins Life	D. Wallach	I	Grand Ballroom 4 (2)
4:45 PM – 6:00 PM	WG Short Circuit Withstand PC57.164	PCS	S. Patel	I	Grand Ballroom 5 (2)
4:45 PM – 6:00 PM					Grand Ballroom 6 (2)
4:45 PM – 6:00 PM	WG Guide for Monitoring Distr Transf PC57.167	Distr	G. Hoffman	N	Grand Ballroom 7 (2)

WEDNESDAY, OCTOBER 17 - Wednesday Breaks Sponsored by Brockhaus Measurements **

No Registration and no Technical Tours or Spouse/Companion Events Planned						
TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)	
7:00 AM – 8:00 AM	Breakfast - Attendees (no spouses/companions please)				Conference Center A (3)	
7:00 AM – 8:00 AM	SC Meetings Planning - Breakfast meeting; arrive early! - All interested individuals welcome	Mtgs	T. Behrens	–	City Terrace 11 (3)	
7:00 AM – 8:00 AM	IEC TC-14 Technical Advisory Group - Breakfast meeting; arrive early! - All interested individuals welcome	++	P. Hopkinson	–	River Terrace 2 (3)	
8:00 AM – 9:30 AM	Breakfast - Spouses/Companions (no meeting attendees please)				St. Johns (3)	
8:00 AM – 9:15 AM	SC Instrument Transformers	Instr TR	R. McTaggart	–	Grand Ballroom 1 (2)	
8:00 AM – 9:15 AM	SC Insulation Life	Ins Life	S. Kennedy	–	Grand Ballroom 5 (2)	
9:15 AM – 9:30 AM	<i>Break (beverages only) - Sponsored by Brockhaus Measurements *</i>				Grand Ballroom Foyer (2)	
9:30 AM – 10:45 AM	SC Distribution Transformers	Distr	S. Shull	–	Grand Ballroom 2 & 3 (2)	
9:30 AM – 10:45 AM	SC Bushings	Bush	P. Zhao	–	Grand Ballroom 5 (2)	
10:45 AM – 11:00 AM	<i>Break (beverages only) - Sponsored by Brockhaus Measurements *</i>				Grand Ballroom Foyer (2)	
11:00 AM – 12:15 PM	SC Submersible Transf. & Network Protectors	STNP	D. Mulkey	–	Grand Ballroom 1 (2)	
11:00 AM – 12:15 PM	SC Dielectric Test	DiTests	A. Varghese	–	Grand Ballroom 5 (2)	
12:15 PM – 1:30 PM	<i>Lunch (on your own)</i>					
1:30 PM – 2:45 PM	SC Dry Type Transformers	Dry Type	C. Johnson	–	Grand Ballroom 1 (2)	
1:30 PM – 2:45 PM	SC Power Transformers	Power	B. Griesacker	–	Grand Ballroom 5 (2)	
2:45 PM – 3:00 PM	<i>Break (beverages and treats) - Sponsored by Brockhaus Measurements *</i>				Grand Ballroom Foyer (2)	
3:00 PM – 4:15 PM	SC Insulating Fluids	IF	D. Wallach	–	Grand Ballroom 2 & 3 (2)	
3:00 PM – 4:15 PM	SC Performance Characteristics	PCS	C. Stiegemeier	–	Grand Ballroom 5 (2)	
4:15 PM – 4:30 PM	<i>Break (beverages only) - Sponsored by Brockhaus Measurements *</i>				Grand Ballroom Foyer (2)	
4:30 PM – 5:45 PM	SC Standards	Stds	J. Murphy	–	Grand Ballroom 2 & 3 (2)	
6:15 PM – 9:30 PM	Evening Event: Dinner Social at Cummer Museum - Advance on-line registration required; admission confirmed with RFID name badge at entrance - First shuttle bus departs hotel's Newnan Street entrance at 6:15 PM for Cummer and will run every 15 minutes until 7:00 PM - Doors open & event begins at 6:30 PM; exhibits, gardens & gift shop open 6:30–7:30 PM with passed appetizers, cash bar, live music — buffet dinner at 7:45 pm - See flyer for details					

THURSDAY, OCTOBER 18

No Meeting Registration, Technical Tours, Spouse/Companion Tours, or Social Events Planned						
TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)	
7:00 AM – 8:00 AM	Breakfast - Attendees (no spouses/companions please)				Conference Center A (3)	
8:00 AM – 9:30 AM	Breakfast - Spouses/Companions (no meeting attendees please)				St. Johns (3)	
8:00 AM – 9:15 AM	Technical Presentation 1 Tutorial on the Guide for Application of Tertiary and Stabilizing Windings By: Enrique Betancourt (Chairman of working group) and other key working group members (TBD) See flyer on website for details **	Tutorial			Grand Ballroom 4 & 5 (2)	
9:15 AM – 9:30 AM	<i>Break (beverages only)</i>				Grand Ballroom Foyer (2)	
9:30 AM – 10:45 AM	Technical Presentation 2 Condition Assessment of Power Transformers and Assessment Indices Cigré WG A2.49 By: Brian Sparling, Ed teNyenhuis, Joe Watson and Thomas Prevost See flyer on website for details **	Tutorial			Grand Ballroom 4 & 5 (2)	
10:45 AM – 11:00 AM	<i>Break (beverages only)</i>				Grand Ballroom Foyer (2)	
11:00 AM – 12:00 PM	Closing Session - All attendees are encouraged to attend - See separate document on website for meeting agenda				Grand Ballroom 4 & 5 (2)	
12:00 PM	<i>Lunch (on your own)</i>					
1:00 PM – 6:00 PM	Cigre A2.53 M - Closed meeting, by invitation only		P. Picher		Clearwater (3)	

* Contact Ed Smith (edsmith@ieee.org) if you are interested in sponsoring a day of coffee breaks at a future meeting.

** Contact Tom Prevost (tprevost@ieee.org) if you are interested in making a technical presentation at a future meeting.

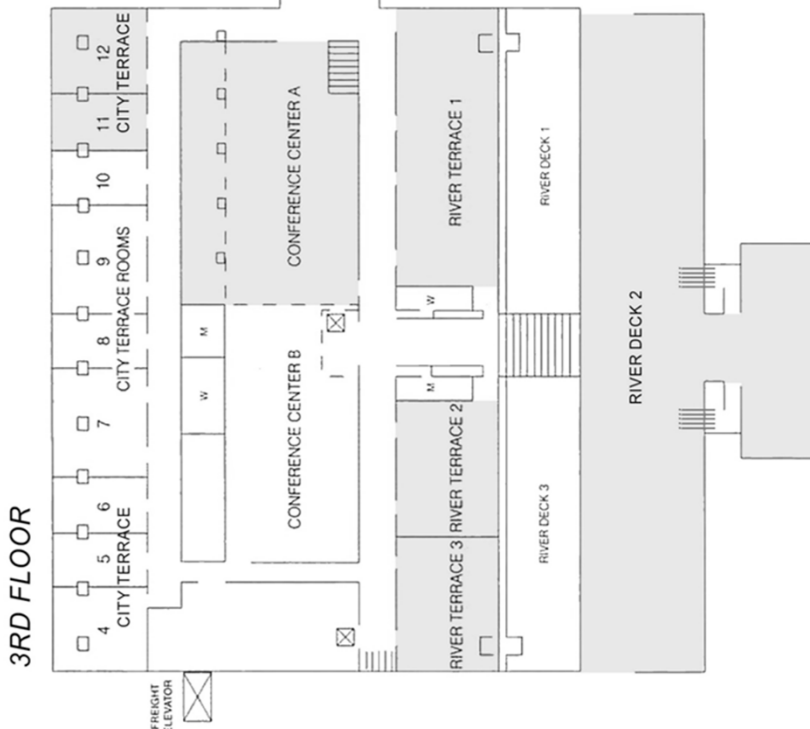
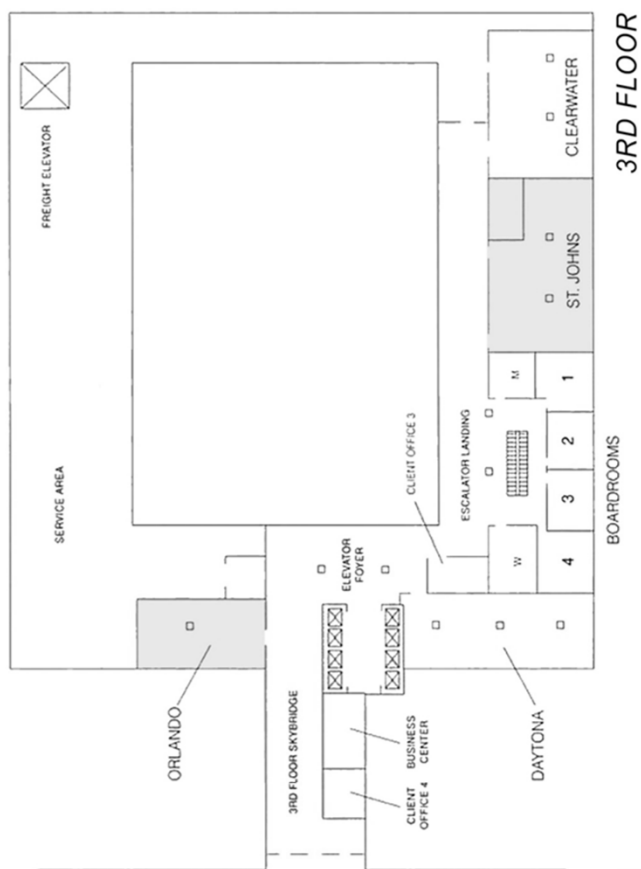
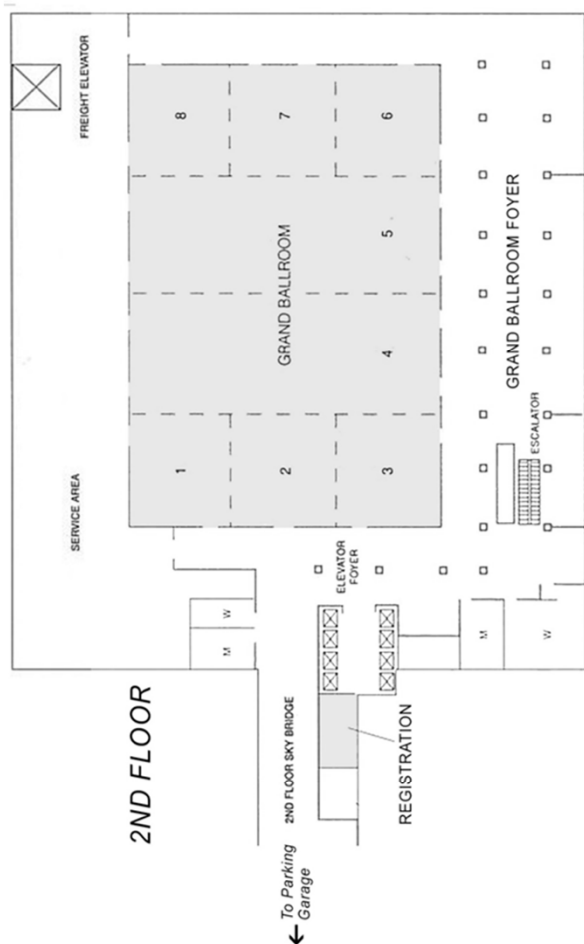
FRIDAY, OCTOBER 19

No Meeting Registration, Technical Tours, Spouse/Companion Tours, or Social Events Planned						
TIME	ACTIVITY	TRACK	MTG CHAIR	STATUS	ROOM (FLOOR)	
8:00 AM – 6:00 PM	Cigre A2.53 M - Closed meeting, by invitation only		P. Picher		Clearwater (3)	

FUTURE COMMITTEE MEETINGS

Spring 2019: March 24–28; Anaheim, California, USA

Fall 2019: October 27–31; Columbus, Ohio, USA



HYATT REGENCY

JACKSONVILLE RIVERFRONT

225 East Coastline Drive
 Jacksonville, Florida 32202
 904-588-1234

Page intentionally left blank

SUBCOMMITTEE MEETING LIST

FALL 2018 MEETING: OCTOBER 14 TO OCTOBER 18

Hyatt Regency Jacksonville Riverfront Hotel; Jacksonville, Florida USA

Date	Time Start	Time End	Session Title	Track	Chair	Room/Location
10/14/2018	2:00 PM	5:30 PM	Administrative Subcommittee - Closed meeting, by invitation only	Admin	S. McNelly	River Terrace 3 (3)
10/15/2018	11:00 AM	12:15 PM	WG Bushings Gen. Require. C57.19.00	Bush	P. Zhao	Grand Ballroom 6 (2)
10/15/2018	3:15 PM	4:30 PM	WG Bushing Applcat. Guide C57.19.100	Bush	T. Spitzer	Grand Ballroom 1 (2)
10/15/2018	4:45 PM	6:00 PM	TF Bushing Overload	Bush	M. Weisensee	Grand Ballroom 6 (2)
10/16/2018	11:00 AM	12:15 PM	WG Distrib. Transf. Bushings PC57.19.02	Bush	E. Smith	Grand Ballroom 7 (2)
10/17/2018	9:30 AM	10:45 AM	SC Bushings	Bush	P. Zhao	Grand Ballroom 5 (2)
10/15/2018	9:30 AM	10:45 AM	TF Transf Efficiency & Loss Evaluation (DOE Activity)	Distr	P. Hopkinson	Grand Ballroom 4 (2)
10/15/2018	11:00 AM	12:15 PM	WG Overhead Distr. Transf. C57.12.20	Distr	A. Traut	Grand Ballroom 4 (2)
10/15/2018	1:45 PM	3:00 PM	WG 1-ph Padmount Dist Transf. C57.12.38	Distr	A. Ghafourian	Grand Ballroom 4 (2)
10/15/2018	3:15 PM	4:30 PM	WG 3-ph Padmount Dist Transf. C57.12.34	Distr	R. Stahara	Grand Ballroom 4 (2)
10/15/2018	4:45 PM	6:00 PM	WG Tank Pressure Coordinat. C57.12.39	Distr	C. Gaytan	Grand Ballroom 4 (2)
10/16/2018	8:00 AM	9:15 AM	WG Encl Int C57.12.28, C57.12.29, C57.12.31, C57.12.32	Distr	D. Mulkey	Grand Ballroom 4 (2)
10/16/2018	4:45 PM	6:00 PM	WG Guide for Monitoring Distr Transf PC57.167	Distr	G. Hoffman	Grand Ballroom 7 (2)
10/17/2018	9:30 AM	10:45 AM	SC Distribution Transformers	Distr	S. Shull	Grand Ballroom 2 & 3 (2)
10/15/2018	7:00 AM	7:50 AM	Distribution & STNP SC Leaders Coordination - Closed breakfast meeting, by invitation only	Distr/STNP	S. Shull / D. Mulke	City Terrace 12 (3)
10/15/2018	9:30 AM	10:45 AM	TF External Dielectric Clearances	DiTests	E. Davis	Grand Ballroom 7 (2)
10/15/2018	1:45 PM	3:00 PM	WG Transformer Impulse Test Guide PC57.98	DiTests	T. Hochanh	Grand Ballroom 6 (2)
10/15/2018	3:15 PM	4:30 PM	TF PD Limits for Factory Tests	DiTests	V. Mehrotra	Grand Ballroom 5 (2)
10/16/2018	8:00 AM	9:15 AM	TF on Winding Insulation PF	DiTests	D. Robalino	Grand Ballroom 2 & 3 (2)
10/16/2018	9:30 AM	10:45 AM	TF Low Frequency Test Guide	DiTests	D. Sauer	Grand Ballroom 6 (2)
10/16/2018	11:00 AM	12:15 PM	WG PD Acoustic Detection C57.127	DiTests	D. Gross	Grand Ballroom 6 (2)
10/16/2018	1:45 PM	3:00 PM	TF Cont. Revision to Low Frequency Tests	DiTests	B. Griesacker	Grand Ballroom 2 & 3 (2)
10/16/2018	3:15 PM	4:30 PM	WG Partial Discharge Test - C57.113	DiTests	A. Naderian	Grand Ballroom 1 (2)
10/16/2018	4:45 PM	6:00 PM	TF Cont. Rev to Imp. Test Sect of C57.12.00 & C57.12.90	DiTests	P. Riffon	Grand Ballroom 1 (2)
10/17/2018	11:00 AM	12:15 PM	SC Dielectric Test	DiTests	A. Varghese	Grand Ballroom 5 (2)
10/15/2018	9:30 AM	10:45 AM	WG Dry Type Reactors PC57.16	Dry Type	A. Del Rio	Grand Ballroom 6 (2)
10/15/2018	11:00 AM	12:15 PM	WG Ventilated Dry Type PC57.12.51	Dry Type	S. Som	Grand Ballroom 7 (2)
10/15/2018	1:45 PM	3:00 PM	WG Dry Type Gen. Requirements C57.12.01	Dry Type	C. Ballard	Grand Ballroom 7 (2)
10/16/2018	8:00 AM	9:15 AM	WG Dry Type PD Detection PC57.124	Dry Type	T. Prevost / R. Ma	Grand Ballroom 1 (2)
10/16/2018	1:45 PM	3:00 PM	WG Therm Eval of Insul Systems, Dry Type C57.12.60	Dry Type	R. Wicks	Grand Ballroom 7 (2)
10/16/2018	4:45 PM	6:00 PM	WG Dry Type Test Code C57.12.91	Dry Type	D. Walker	Grand Ballroom 2 & 3 (2)
10/17/2018	1:30 PM	2:45 PM	SC Dry Type Transformers	Dry Type	C. Johnson	Grand Ballroom 1 (2)
10/15/2018	3:15 PM	4:30 PM	SC HVDC Converter Transfs & Smoothing Reactors	HVDC	M. Sharp	Grand Ballroom 7 (2)
10/16/2018	1:45 PM	3:00 PM	WG Consolidation Insulating Fluid Guides PC57.166	IF	T. Prevost	Grand Ballroom 5 (2)
10/16/2018	3:15 PM	4:30 PM	WG Gas Interpretation Guide C57.104	IF	C. Beauchemin	Grand Ballroom 2 & 3 (2)
10/17/2018	3:00 PM	4:15 PM	SC Insulating Fluids	IF	D. Wallach	Grand Ballroom 2 & 3 (2)
10/15/2018	9:30 AM	10:45 AM	WG Thermal Evaluation C57.100	Ins Life	R. Wicks	Grand Ballroom 5 (2)
10/15/2018	11:00 AM	12:15 PM	WG Moisture in Insulation PC57.162	Ins Life	T. Prevost	Grand Ballroom 2 & 3 (2)
10/15/2018	4:45 PM	6:00 PM	WG High Temp Liquid Transformers C57.154	Ins Life	R. Marek	Grand Ballroom 2 & 3 (2)
10/16/2018	9:30 AM	10:45 AM	WG Temp Measurement PC57.165	Ins Life	P. McClure	Grand Ballroom 4 (2)
10/16/2018	3:15 PM	4:30 PM	WG High-Temp Insulat. Materials, P-1276	Ins Life	R. Wicks	Grand Ballroom 4 (2)
10/16/2018	4:45 PM	6:00 PM	WG Loading Guide PC57.91	Ins Life	D. Wallach	Grand Ballroom 4 (2)
10/17/2018	8:00 AM	9:15 AM	SC Insulation Life	Ins Life	S. Kennedy	Grand Ballroom 5 (2)
10/16/2018	8:00 AM	9:15 AM	WG Station Service Volt. Transf. C57.13.8	Instr TR	D. Wallace	Grand Ballroom 7 (2)
10/16/2018	9:30 AM	10:45 AM	WG Tests for Instrument Transf. C57.13.5	Instr TR	P. Riffon	Grand Ballroom 7 (2)
10/16/2018	11:00 AM	12:15 PM	WG PLC Caps & CCVTs PC57.13.9	Instr TR	Z. Roman	Grand Ballroom 4 (2)
10/16/2018	1:45 PM	3:00 PM	WG Instrument Transf. Tests PC57.13.2	Instr TR	T. Sizemore	Grand Ballroom 4 (2)
10/17/2018	8:00 AM	9:15 AM	SC Instrument Transformers	Instr TR	R. McTaggart	Grand Ballroom 1 (2)
10/17/2018	7:00 AM	8:00 AM	SC Meetings Planning - Breakfast meeting; arrive early! - All interested individuals welcome	Mtgs	T. Behrens	City Terrace 11 (3)

SUBCOMMITTEE MEETING LIST

FALL 2018 MEETING: OCTOBER 14 TO OCTOBER 18

Hyatt Regency Jacksonville Riverfront Hotel; Jacksonville, Florida USA

Date	Time Start	Time End	Session Title	Track	Chair	Room/Location
10/15/2018	9:30 AM	10:45 AM	TF LTC Diagnostics	PCS	M. Ferreira	Grand Ballroom 2 & 3 (2)
10/15/2018	11:00 AM	12:15 PM	TF PCS Cont. Rev. to Test Code C57.12.90	PCS	H. Sahin	Grand Ballroom 5 (2)
10/15/2018	1:45 PM	3:00 PM	TF Audible Sound Revision to Test Code	PCS	R. Girgis	Grand Ballroom 2 & 3 (2)
10/15/2018	1:45 PM	3:00 PM	WG Guide of FRA for Liquid Filled Transf. C57.149	PCS	C. Sweetser	Grand Ballroom 5 (2)
10/15/2018	3:15 PM	4:30 PM	WG on Loss Measurement C57.123	PCS	E. teNyenhuis	Grand Ballroom 6 (2)
10/15/2018	4:45 PM	6:00 PM	TF PCS Cont. Revisions to C57.12.00	PCS	T. Ansari	Grand Ballroom 5 (2)
10/16/2018	8:00 AM	9:15 AM	WG Wind Turbine Generator Transformers, P60076-16	PCS	P. Hopkinson	Grand Ballroom 5 (2)
10/16/2018	9:30 AM	10:45 AM	WG Shunt Reactors C57.21	PCS	S. Som	Grand Ballroom 2 & 3 (2)
10/16/2018	11:00 AM	12:15 PM	WG Semicond. Power Rectifier Transfs C57.18.10	PCS	S. Kennedy	Grand Ballroom 2 & 3 (2)
10/16/2018	3:15 PM	4:30 PM	WG Sw Transients Ind by TR/Bkr Interaction PC57.142	PCS	J. McBride	Grand Ballroom 5 (2)
10/16/2018	4:45 PM	6:00 PM	WG Short Circuit Withstand PC57.164	PCS	S. Patel	Grand Ballroom 5 (2)
10/17/2018	3:00 PM	4:15 PM	SC Performance Characteristics	PCS	C. Stiegemeier	Grand Ballroom 5 (2)
10/15/2018	11:00 AM	12:15 PM	WG Control Cabinets PC57.148	Power	J. Watson	Grand Ballroom 1 (2)
10/15/2018	1:45 PM	3:00 PM	WG Installation of Power Transf. C57.93	Power	M. Lau	Grand Ballroom 1 (2)
10/15/2018	3:15 PM	4:30 PM	WG Transformer Monitoring C57.143	Power	M. Spurlock	Grand Ballroom 2 & 3 (2)
10/16/2018	8:00 AM	9:15 AM	WG Tap Changer Applicat. Guide 60214-2	Power	C. Colopy	Grand Ballroom 6 (2)
10/16/2018	9:30 AM	10:45 AM	TF Condition Assessment Guide	Power	B. Sparling	Grand Ballroom 5 (2)
10/16/2018	11:00 AM	12:15 PM	WG Transportation Issues C57.150	Power	G. Anderson	Grand Ballroom 5 (2)
10/17/2018	1:30 PM	2:45 PM	SC Power Transformers	Power	B. Griesacker	Grand Ballroom 5 (2)
10/15/2018	9:30 AM	10:45 AM	WG Std Transf. Terminology C57.12.80	Stds	C. Claiborne	Grand Ballroom 1 (2)
10/15/2018	4:45 PM	6:00 PM	TF IEEE-IEC Cross Reference	Stds	V. Mehrotra	Grand Ballroom 1 (2)
10/16/2018	3:15 PM	4:30 PM	WG Std Terminal Markings C57.12.70	Stds	J. Varnell	Grand Ballroom 7 (2)
10/17/2018	4:30 PM	5:45 PM	SC Standards	Stds	J. Murphy	Grand Ballroom 2 & 3 (2)
10/15/2018	4:45 PM	6:00 PM	WG Sec. Network Protectors C57.12.44	STNP	M. Faulkner	Grand Ballroom 7 (2)
10/16/2018	9:30 AM	10:45 AM	WG 1-Ph Submersible Transf. C57.12.23	STNP	A. Traut	Grand Ballroom 1 (2)
10/16/2018	11:00 AM	12:15 PM	WG Liquid-immersed Sec. Network TRs C57.12.40	STNP	D. Blew	Grand Ballroom 1 (2)
10/16/2018	1:45 PM	3:00 PM	WG Submersible Transf. C57.12.24	STNP	G. Termini	Grand Ballroom 1 (2)
10/17/2018	11:00 AM	12:15 PM	SC Submersible Transf. & Network Protectors	STNP	D. Mulkey	Grand Ballroom 1 (2)



EARLY BIRD EVENT

Saturday, October 13, 2018

River City Brewing Company

Enjoy an evening of live music and house-brewed beer that pairs well with seafood, steaks and pasta at this pub that took home an OpenTable Diners' Choice Award in 2018! Order off the menu and enjoy music as well as river and downtown views while catching up with old friends and colleagues.



Jacksonville's premier riverfront restaurant located on the Southbank of downtown Jacksonville (and just across the river from the Hyatt Regency) features a casual atmosphere overlooking the beautiful St. John's River and the skyline of downtown Jacksonville. Menu offerings are created with global flavor and culinary expertise, including fresh seafood, tender steaks, creative pasta dishes, salads

and "handhelds" along with daily Chef's creations. River City Brewing Company also offers an extensive wine list, handcrafted British Ales and full bar. www.rivercitybrew.com

Itinerary (times are approximate)

- 6:00 pm: Meet in Hyatt Regency main lobby and take river taxi, uber/lyft, regular taxi across the river at own expense (1 mile / 6 minutes by car – 15 minutes by river taxi)
- 6:15 pm: Arrive at River City Brewing Company and sit together in a reserved space of the indoor/outdoor patio area
- 6:30 pm: Order dinner off the menu and pay on your own; cash bar (credit cards accepted) www.rivercitybrew.com/dinner-menu
- ???: Return back to hotel at your leisure



Sign up on-line when registering for the meeting!



SPOUSE/COMPANION TOUR

Monday, October 15, 2018

Amelia Island & Fernandina Beach Adventure

Start your day with a river cruise of Amelia Island, voted third Best Island in the United States by Conde Nast

Traveler. Enjoy seeing Fernandina's

shrimp boats, historic Old Towne and Ft. Clinch as well as the wild horses of Cumberland Island. Historians will share colorful stories that define the character of this unique part of the world. www.ameliaisland.com

After the cruise, lunch is served right at the dock at Brett's Waterway Café, a long-standing "tradition" on Fernandina Beach. After lunch, stroll and browse quaint downtown shops followed by a visit to Clay Times Art Center. The center is a 5,000 square foot "art studio" with a variety of artists who work out of the studio and often share stories and artist tips with visitors. www.claytimesartcenter.co

Itinerary (times are approximate)

- 9:15 am: Depart on coach bus from Hyatt Regency (Newnan Street entrance across from parking garage)
- 10:00 am: Begin 2-hour chartered river cruise with colorful commentary by local historians
- 12:00 pm: Lunch served at Brett's Waterway Cafe
- 1:15 pm: Stroll/Shop in Fernandina Beach
- 2:00 pm: Walk to Clay Times Art Center
- 2:45 pm: Depart Amelia Island on coach bus
- 3:15 pm: Arrive back at hotel

~ Bottled water provided on bus AM and PM ~

Lunch Menu

Please advise of any special dietary needs at registration.

Entrée choices*:

- Quiche of the day
- French dip with fries
- Shrimp salad on croissant with chips
- Chicken salad on croissant with chips
- Midwest salad with grilled or fried chicken

Dessert choices:

- Key lime pie
- Georgia peach bread pudding

// all entrées served with coffee, iced or hot tea and water //

**Entrée choices collected during morning bus ride to boat dock.*



Amelia Island



Downtown Fernandina Beach

WEAR COMFORTABLE WALKING SHOES!



Brett's Waterway Cafe

Attendance is limited due to boat capacity... REGISTER EARLY!



SPOUSE/COMPANION TOUR

Tuesday, October 16, 2018

Gilded Age Tour of St. Augustine

Tuesday's tour begins with a narrated trolley ride around St. Augustine, the nation's oldest city. Tour guides will showcase the city's highlights and history before dropping guests off at the Lightner Museum. www.oldcity.com

The Lightner Museum is housed in the former Alcazar Hotel, built in 1888 by Henry Flagler. Today it is home to one of the best collections of fine and decorative 19th century art in the country. Docents will discuss hotel/museum history and showcase important and interesting items in its collections. Upon completion of the guided tour, guests will spend additional time exploring exhibits on their own before getting back on the trolley. www.lightnermuseum.org

Once back on the trolley, either choose to stop and explore one of the main attractions in St. Augustine, Castillo de San Marcos, or continue on to St. George Street to start shopping and exploring. Next, head over to the historic Columbia Restaurant for lunch, followed by more time to stroll and shop.

Itinerary (times are approximate)

- 9:15 am: Depart on coach bus from Hyatt Regency (Newnan Street entrance across from parking garage)
- 10:00 am: Begin chartered trolley tour of St. Augustine
- 11:00 am: Arrive at Lightner Museum
- 12:00 pm: Trolley pick up at Lightner Museum
- 12:05 pm: Arrive at Castillo de San Marcos (for those interested; others stay on trolley to St. George Street)
- 12:10 pm: Arrive on St. George Street – explore/shop on own
- 1:00 pm: Lunch at Columbia Restaurant ➡ ➡ ➡
- 2:15 pm: Shop/Explore St. George Street
- 3:15 pm: Depart St. Augustine on coach bus
- 4:00 pm: Arrive back at hotel

~ Bottled water provided on bus AM and PM ~

WEAR COMFORTABLE WALKING SHOES!



St. Augustine



Lightner Museum



Castillo de San Marcos

Lunch Menu www.columbiarestaurant.com

Please advise of any special dietary needs at registration.

Entrée choices*:

- Cuban sandwich
- 1905 Salad
- Chicken with yellow rice "Ybor"
- Boliche (eye round of beef stuffed with chorizo and roasted in gravy with sides)

Dessert choices:

- Flan
- Godiva chocolate cake
- Key Lime pie

// all served with coffee, soft drink, iced or hot tea and water //

*Entrée choices collected during morning bus ride to St. Augustine.

Attendance is limited to one bus... REGISTER EARLY!



DINNER SOCIAL Wednesday, October 17, 2018 Evening at the Cummer Museum

Located in the historic Riverside section of Jacksonville, the Cummer Museum is home to more than 5,000 works of art, spanning from 2100 B.C. through the 21st century. Thought-provoking exhibitions, some of the most important and delightful gardens in Northeast Florida—including a breathtaking sculpture garden—and several special collections enhance the Museum's artistic offerings.



Idyllically located on the banks of the St. Johns River, enjoy an evening exploring the museum's permanent collections and upper gardens, featuring lush plantings, reflecting pools, fountains, arbors, antique ornaments and sculptures. Passed appetizers and beverages will be served and strolling musicians will entertain you while you enjoy the gardens, exhibits and fantastic gift shop before dinner. Dinner follows in the Terry Gallery, overlooking the gardens. www.cummermuseum.org

Itinerary (times are approximate)

6:15 pm: First shuttle bus departs Hyatt Regency from Newnan Street entrance across from parking garage
NOTE: Shuttles run continuously from hotel to the museum, with last bus leaving the Hyatt at 7:00 pm

6:30 pm: Museum permanent collections, upper gardens and gift shop open – cash bar (credit cards accepted; no ATM on-site), appetizers, strolling musicians; NO BEVERAGES OR FOOD ALLOWED IN THE MUSEUM/ EXHIBIT AREAS but are allowed in the gardens

7:30 pm: Reception concludes; exhibits and gift shop close

7:45 pm: Dinner buffet begins in Terry Gallery

8:30 pm: First shuttle bus departs Cummer Museum for the Hyatt with shuttles running continuously until 9:30 pm



Reception & Dinner Menu

Passed appetizers during reception:

- Petite buttermilk chicken and waffle skewers
- Lime-marinated Mayport shrimp skewer
- Cornmeal-crusted fried green tomatoes

Buffet dinner includes:

- | | |
|---------------------------------------|---|
| - Garden salad w/ choice of dressings | - Crème fraiche and butter whipped Yukon potatoes |
| - Southern-style meatloaf | - House-made cornbread and biscuits w/ fresh honey butter |
| - Herb-roasted chicken | - Mini desserts |
| - Vegetable pot pie | |
| - French-style haricot verts | |

Attendance limited ... REGISTER EARLY!



Tutorial on Guide for Application of Tertiary and Stabilizing Windings in Y-Y Connected Power Transformers

— Technical Presentation —
Thursday, October 18, 2018

**By Enrique Betancourt, Dr. Xose Lopez-Fernandez and Krishnamurthi Vijayan
with support from Sukhdev, Hamid and other participants**

1. Abstract

Stabilizing windings are auxiliary elements used in Y connected transformers to mitigate undesired harmonic phenomena and/or to improve zero sequence performance. On the other side, tertiary windings are frequently used to supply additional auxiliary loads at substations. When delta connected, such windings also work as stabilizing windings.

The tutorial will cover four main topics:

- Need for an application guide for tertiary and stabilizing windings in Y connected transformers
- Function of tertiary and stabilizing windings, harmonics and unbalanced loading phenomena, equivalent circuits, short circuit and thermal behavior
- Specification and testing of tertiary and stabilizing windings with some practical examples
- Further work

Based on brief excerpts from the guide and using supplementary material supplied by a group of members and guests, presenters will cover the following subjects during this tutorial:

- Systems engineering - the role of zero sequence impedance in line-to-ground faults
- Brief introduction to symmetrical components
- Application of Y connected transformers
- Zero sequence performance of different transformer connections
- Y connected transformers - transformer banks, three-phase transformers, core or shell type
- Exciting current phenomena on single-phase ferromagnetic cores
- Special operating effects of Y connected transformers - exciting current harmonics and unbalanced loading, stabilizing and tertiary windings
- Need for stabilizing windings in modern transformers
- Modeling and circuit analysis of Y connected transformers
- Thermal performance of Y connected transformers with stabilizing and tertiary windings, faults and temporary unbalanced loads, short circuit analysis
- Basic specification of power transformers with stabilizing or tertiary windings
- Further recommendations for specification/testing of transformers with stabilizing or tertiary windings
- Recommendation for Y connected transformers without a delta connected winding (SW/TW)
- Examples from some utilities in the U.S. and outside
- Conclusion and further work on application of tertiary and stabilizing windings

2. Learning Objectives

In general, this presentation is intended to improve the understanding the application of tertiary stabilizing windings. This presentation will also help improve utility personnel's understanding of the application, specification and testing of Y connected transformers so as to work as a team with transformer engineers and system engineers to improve current specifications and inspection practices.

3. Learning Outcomes

By attending this tutorial, attendees will gain an understanding of the following:

- Application of stabilizing and tertiary windings, from perspective of systems engineering as well as transformers design
- Recommendations from industry specialists for specification, construction and testing of transformers with stabilizing windings
- Open questions which would still require support from specialists, while those topics can be incorporated in future revision of the guide or in other IEEE standards

4. Presenters' Biographies

Enrique Betancourt is currently the Applied Research Manager at Prolec GE, in Monterrey, NL, Mexico, with his current work being on the development of new technologies for design and application of electrical transformers as well as new materials and simulation tools. Enrique started with Prolec SA in 1989. He is co-author of several patents and technical articles, as well as tools for design and analysis of power transformers. Enrique is a member of CIGRÉ national representative for the A2 SC on Transformers. He also worked for the NL State University teaching graduate level courses on High Voltage Engineering and Simulation of Electrical Transients.

Dr. Xose Lopez-Fernandez (IEEE Senior Member) is currently a Professor in the Department of Electrical Engineering, University of Vigo. He is the main editor and co-author of the monograph Transformers, Analysis, Design and Measurement and the founder and General Chairman of The International Advanced Research Workshop on Transformers. Xose is a member of the IEEE Transformers Committee as well as an active member of CIGRÉ working groups, Founder Member and President of the Spanish Association for Transformers Innovation (RedInTransf), Editorial Board Member of IET Science, Measurement & Technology (IET SMT Journal) and Vice President of IEEE PES Spanish Chapter.

Krishnamurthi Vijayan is currently Chief Engineer at PTI Manitoba Inc. in Winnipeg, Canada. He is a certified Professional Engineer in Canada with 37 years of experience in design engineering of large power transformers, EHV shunt reactors, phase-shifting transformers and mobile transformers. He has authored more than 12 technical papers on transformers.





CERTIFICATE OF

EDUCATIONAL ACHIEVEMENT



This certificate is presented to

for attendance at the educational presentation:

"Tutorial on the Guide for Application of Tertiary and Stabilizing Windings"

sponsored by the IEEE/PES Transformers Committee

**and has earned one (1) Professional Development Hours (PDH) unit.
Fall 2018 Committee Meeting; Thursday, October 18, 2018**


Susan McNelly
Committee Chair

Instructors: Enrique Betancourt, Dr. Xose Lopez-Fernandez
and Krishnamurthi Vijayan with support from
Sukhdev, Hamid and other participants



**IEEE PES Transformers Committee
Fall 2018 Meeting
Jacksonville, Florida USA**



Tutorial on CIGRÉ WG A2.49

**— Technical Presentation —
Thursday, October 18, 2018**

By Brian Sparling, Ed teNyenhuis, Joe Watson and Tom Prevost

1. Abstract

The focus of CIGRÉ Working Group A2.49 was to investigate information used to derive transformer assessment indices, their consolidation and how the output should be utilized. Many asset managers currently use a ‘health index’ for this purpose; however, in many cases, the index does not provide any indication of how quickly the worst transformers on the list need to be actioned, nor does it provide any indication of the type of action needed, i.e. replace, repair or refurbish. Many indices also fail to provide any indication of the confidence the asset manager should have in the indexed assessments.

Furthermore, many asset managers use their ‘health index’ to help determine which transformers in their fleet to replace. However, some “unhealthy” transformers can be relatively easily repaired, and, therefore, do not need to be replaced. In these cases, a ‘health’ index may not be the ideal tool to determine transformer replacement.

Chapters 1 through 7 of this tutorial introduce a process that can be used to assess a transformer and develop transformer assessment indices to suit the needs of the user. These chapters also introduce the concept of a scoring matrix, which can be developed and used to ensure that scores are allocated to each transformer’s failure mode or mechanism being assessed in a consistent way and the timing required for action.

Chapters 8 through 12 and Annex A deal with the subcomponents of a transformer and discuss:

- Failure modes and mechanisms
- Methods of diagnosing failure modes and mechanisms for each subcomponent

This section is mostly existing knowledge. Annex A provides tables of diagnostic information that are formatted to allow assessment using the methods described in the technical brochure. The information is from IEC and IEEE guides, CIGRE experts and other industry experts. Users can apply these values as a starting point when assessing a transformer but should consider if the values are suitable for their fleet of transformers, operating conditions, maintenance practices and the time scales used in the scoring matrix.

Annex B provides several examples illustrating how to generate different types of transformer assessment indices and how to use the different scoring methods.

2. Learning Objectives

This tutorial provides the following learning opportunities:

- Overview of transformer asset management and condition assessment requirements
- Analysis of different types of indices, how they may be constructed and their limitations
- Guidance on dealing with missing or obsolete information, including working examples
- Detailed working examples on developing diverse types of indices, including replacement, refurbishment and repair indices
- Guidance on key transformer components that are considered necessary to build a transformer assessment index, along with suitable diagnostic techniques

3. Learning Outcomes

By attending this tutorial, attendees will gain an understanding of the following five key steps to develop a TAI, which are as follows:

- Determine the purpose of the transformer assessment score and index
- Identify the failure modes to be included in the TAI
- Determine how each failure mode will be assessed
- Design a calibrated system for categorizing failure modes (scoring matrix)
- Calculate a TAI score for each transformer

4. Presenters' Biographies

Brian Sparling (IEEE Senior Member) is a Senior Technical Advisor with Dynamic Ratings, Inc. Brian has over 20 years of experience in the field of power and distribution transformers. For the last 26 years, he has been involved in all aspects of on-line monitoring and diagnostics and condition assessment of power transformers. He has authored and co-authored more than 27 technical papers on several topics dealing with monitoring and diagnostics of transformers and has worked on many guides and standards with the Canadian Electricity Association, IEEE Transformers Committee and the CIGRÉ A2 Transformer Committee.

Ed teNyenhuis is currently working for ABB Transformer Service as Operations & Technical Manager in Brampton, Canada. Ed has worked in past positions as a transformer design engineer, research engineer, engineering manager and quality manager at ABB locations in Sweden, U.S. and Canada. Ed is Secretary of the IEEE Transformers Committee, Canadian Chairman of the IEC TC 14 and member of the CIGRÉ A2.49 and A2.59 working groups. He has published more than 10 technical papers and is licensed as a Professional Engineer in the province of Ontario.

Joe Watson (IEEE member) is an independent consultant, specializing in all aspects of power transformers and related equipment. He holds two patents for transformer monitoring and testing devices and has authored or co-authored several papers on transformer and bushing monitoring. He is a licensed Professional Engineer in Power and Controls in California and has worked on the Transformers Committee since 1990. He is also a CIGRÉ member and served on the CIGRÉ A.49 WG that developed the Condition Assessment Guide. He has held engineering and/or management positions at the Los Angeles Department of Water and Power, Florida Power and Light/NextEra, Smit, ZTR USA and Pennsylvania Transformer Technology, Inc.

Tom Prevost (IEEE member) is Vice President of Innovation for Transformer Insulation Products in the Americas region at Weidmann Electrical Technology and has worked at Weidmann for 27 years. He was Chairman of the Transformers Committee from 2008 to 2009 and is the current chair of several IEEE working groups, including PC57.162 (developing a guide for moisture in insulating systems), PC57.166 (developing a guide for acceptance and maintenance of insulating fluids) and PC57.124 (revising a guide for partial discharge measurement in dry-type transformers). Tom is also active in ASTM Committee D27 on Insulating Fluids and is a member of the U.S. National Committee of CIGRÉ. He has written many technical papers on the subject of electrical insulation materials, transformer diagnostics and condition monitoring.





CERTIFICATE OF

EDUCATIONAL ACHIEVEMENT




This certificate is presented to

for attendance at the educational presentation:

**"Condition Assessment of Power Transformers and Assessment
Indices Cigré WG A2.49"**

sponsored by the IEEE/PES Transformers Committee

and has earned one (1) Professional Development Hours (PDH) unit.
Fall 2018 Committee Meeting; Thursday, October 18, 2018


Susan McNelly
Committee Chair

Instructors: Thomas Prevost, Brian Sparling, Ed teNyenhuis and
Joe Watson