



**IEEE PELS Administrative Committee Meeting**

**Cincinnati, Ohio,  
Duke Energy Convention Center**

**2:00 pm – 5:30 pm**

Thursday, October 5, 2017

Meeting Minutes

**Welcome and Roll Call**

	<b>Name</b>	<b>Title</b>	<b>Present</b>	<b>Absent</b>
1	Alan Mantooth	President	x	
	Open	President Elect		
2	Liuchen Chang	VP Conferences	x	
3	Frede Blaabjerg	VP Products	x	
4	Yan-Fei Liu	VP Technical Operations	x	
5	Jinjun Liu	Exec VP Membership	x	
6	Mario Pacas	Exec VP Global Relations	x	
7	Peter Wilson	Exec VP Standards	x	
8	Braham Ferriera	Immediate Past President	x	
9	Don Tan	Senior Past President	x	
10	Treasurer	Jian Sun	x	
11	Patrick Wheeler	Constitution & Bylaws Chair	x	
		<b><u>TC Chairs</u></b>		
12	Rolando Burgos	TC 1: Technical Committee Chair Power & Control Core Technologies		x
13	Robert Pilawa-Podgurski	TC 2: Technical Committee Chair Power Conversion Systems and Components	x	
14	Uday Desphande	TC 3: Technical Committee Chair Motor Drives and Actuators	x	
15	Alireza Khaligh	TC4: Technical Committee Chair Vehicle and Transportation Systems		x
16	Sudip Mazumder	TC 5: Sustainable Energy Systems	x	

17	Yaow Ming Chen	TC 6: Technical Committee Chair High Performance and Emerging Technologies	x	
18	Keiichi Hirose	TC 7: Technical Committee Chair Communications Energy Systems	x	
<b><u>Members at Large 2015-2016-2017</u></b>				
19	Robert Balog	Member-at-Large	x	
20	Johan Enslin	Member-at-Large	X	
21	Helen Li	Member-at-Large	X	
22	William A. Peterson	Member-at-Large	X	
23	Pradeep Shenoy	Member-at-Large	X	
24	Shinzo Tamai	Member-at-Large	X	
<b><u>Members at Large 2015-2016-2017</u></b>				
Duplicate	Liuchen Chang	Member-at-Large		duplicate
25	William Gerard Hurley	Member-at-Large	X	
26	Katherine Kim	Member-at-Large		x
27	Ernie Parker	Member-at-Large	X	
28	Grant Pitel	Member-at-Large	X	
29	Seung Ki-Sul	Member-at-Large	X	
<b><u>Members at Large 2016-2017-2018</u></b>				
30	Sibylle Dieckerhoff	Member-at-Large	X	
31	Dan Kinzer	Member-at-Large	X	
32	Marco Liserre	Member-at-Large		x
33	Annette Mütze	Member-at-Large	X	
34	João O.P. Pinto	Member-at-Large	X	
35	Mark Dehong Xu	Member-at-Large	X	
<b><u>Non-Voting</u></b>				
	Andreas Lindemann	Awards Chair	x	
<b><u>STAFF</u></b>				
	Mike Kelly	Society Executive Director	X	
	Donna Florek	Technical Community Program Specialist	X	
	Becky Boresen	Technical Community Program Specialist		X
	Jane Celusak	Project Manager	x	
	Alicia Tomaziewski	TEC Project Manager	x	

Arthur Kelley	Past Newsletter Editor in Chief	X
Dean Paterson		
Phil Krein		
Johnathan Kimball		
Tom Jahns	Past President	
Qing-Chong Zhang		
Tom Habetler	Past President	

Quorum Met

Approval of Agenda





Motion to approve the agenda Pradeep Shenoy  
Second Sudip Mazumder  
Motion Carried

Approval of AdCom Minutes APEC 2017 TAMPA

Motion to approve the minutes Peter Wilson  
Second Pradeep Second  
Motion Carried

Review of Remaining Action Items: ECCE 2016 Milwaukee, WI


Action MC issue mailing to authors

Re: Question about Manuscript Central - printed copies  February 6, 2018   



Kristin Falco <k.falco@ieee.org>

10/11/17   

to Lindsay, me 

Hi Lindsay,

As of now, there is not a way for an author to voluntarily opt out of print copies on a case-by-case basis, although it could be added as an enhancement for both Manuscript Central and/or Author Gateway.

We could set up a question either in Manuscript Central or Author Gateway to ask if the author would want a complimentary copy, the problem is we currently don't have anything set up in our system (WMS) to record the response, and this would have to be where the enhancement comes in. We could try to add it in, but it would have to be approved and coincide with a system upgrade which generally happens 4 times a year, so it would take a few months.

There are societies that have omitted comp copies completely in an attempt to save money on printing and shipping, that is always an option that could be administered immediately. The author would then just receive a PDF of their finalized article.

In my experience, if you start asking authors whether they want a comp copy or not, they're likely to say yes.

Hope this helps,  
-Kristin

\*\*\*\*\*  
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IEEE - Advancing Technology for Humanity

### **President Report: Alan Mantooth**

Recognition of Senior Members at Large

Plaques will be given out at APEC for all outgoing officers

### **FEPPCON Chair Recognition Plaque**

Frede Blaabjerg was recognized for 2015 and Johan Enslin for 2017

Incoming chair for Fellows Committee is Robert Guenther

Outgoing Fellows Committee Chair is Dushan Boroyevich

PRAC Reviews (June 17 Nov 17 and June 18)

Society Review (Feb 2018)

### **Mentorship Plan**

Goals:

- Form Steering Committee
- Define the scope
- Hold a pilot

We met starting in May 2017

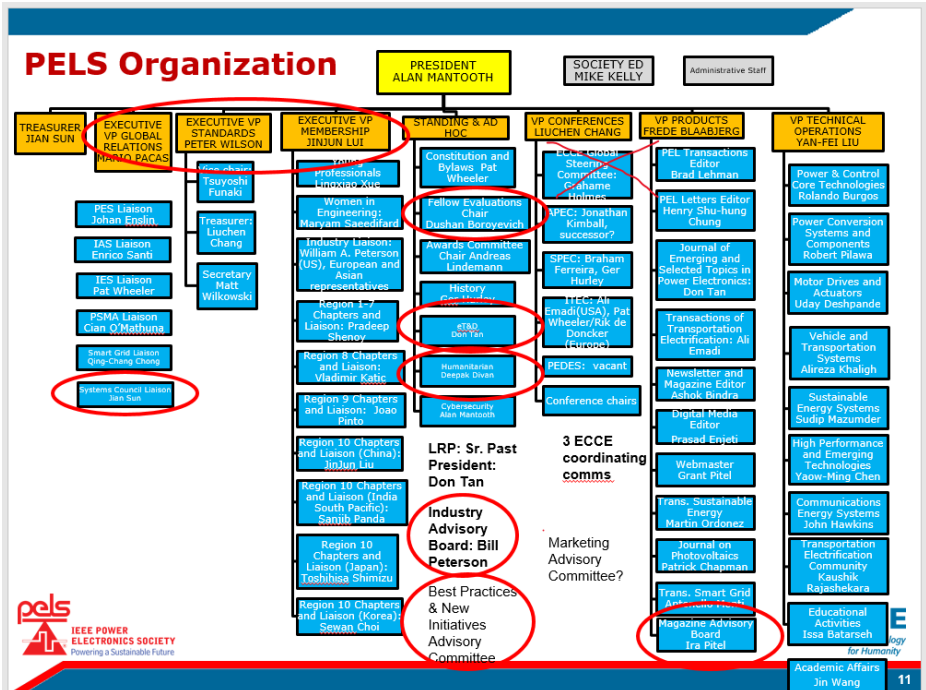
- Held first event Sunday evening chaired by Harish
- First event was a 30-minute rotating mentorship program with the following topics:
  - How to Write a Prize-winning Paper - Brad
  - Developing Leadership Skills – Alan
  - Entrepreneurship – Ira, Deepak, and Bob G.
  - Work/Life Balance – Annette
  - Networking – Brian, Uday
  - Job Transition – Johan
- 50 participants

### **Restructuring**

- eT&D studying the possibility of becoming a TC
- Humanitarian Activities standing committee
  - Jane Celusak new Project Manager for PELS
- Executive Vice-Presidents becoming elected officers -> Vice-Presidents
  - This will now allow all the VPs to be able to run for President

- New Initiatives and Best Practices

## PELS Organization



## Fellows Report

- 22 nominations (most ever)
- Over 1/2 were exceptionally well-qualified with great nominations
- New committee structure has been formalized
- Fellows Advisory Committee will advise and give best practices suggestions

## ECCE Co Location

Branding was an issue IAS/ECCE appeared and was not the correct branding for the colocation of the two conferences. The Convention Center did the banners it was not checked on by Smith Bucklin nor by the Organizing Committee

YP Event was too large and not enough food – Same issue as the Banquet

Banquet – Food problem. We have outgrown the way the events are run. Too many attendees

Registration – Is there a better way to integrate ECCE with the IAS Annual Meeting

No infrastructure was created to support registration for both meetings

## Upcoming Activities

- PELS Presidential Election - NomCom

- Society Review – Exec Team
- APEC in San Antonio (AdCom meeting time)
- Long Range Planning – Don Tan
- 30<sup>th</sup> Anniversary celebration @ ECCE '18 opening reception – Ger Hurley
- All members meeting at ECCE '18 (streamed live) Sunday before reception from 3:30-5:30pm
- Most of the Events will happen at ECCE for the 30<sup>th</sup> Anniversary
- Discussion regarding promoting PELS 30<sup>th</sup> at APEC

### 30<sup>th</sup> Anniversary Committee

- PELS 30<sup>th</sup> Anniversary Committee
- To be celebrated at ECCE 2018
- Video to be produced
- Gifts to be decided
- Main event at Welcome Reception
- Budget request \$20k
- 10<sup>th</sup> ECCE in 2018
- IEEE Milestone Program: SCR

**Motion 20K for the 30<sup>th</sup> Anniversary – 30<sup>th</sup> Anniversary Committee - Ger Hurley**  
**Motion Carried**

### **Milestone Program – Ger Hurley**

- Milestone proposal is submitted by a Member on ethw.org, sponsored by a Section, a Society, or a Chapter,
- Advocate is chosen to review proposal and assist proposers
- When the sponsoring unit is not an IEEE Section, endorsement by the appropriate Section is required.
- Approval by Advocate, including wording of citation
- Approval by IEEE History Committee
- Approval by IEEE Board of Directors
- Milestone Dedication Ceremony
- It will take about a year to get a milestone in place.
- Discussion regarding getting SCR – thyristor – in the IEEE Milestone Program

### **Treasurers Report – Sun**

## Outline:

- Developments since APEC
- 2017 Forecast
- 2018 Budget
- Statistics and Trends

## 2016 FM14 Summary Report

	INCOME		EXPENSE		NET		VARIANC
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	
INVESTMENT RETURNS	0.0	0.0	0.0	-347.5	0.0	347.5	347.5
PERIODICALS	1,969.9	1,879.4	1,201.2	1,126.5	768.7	752.8	-15.8
NEWSLETTERS (CTR 01500)	0.0	109.6	0.0	11.6	0.0	98.0	98.0
NON PERIODICAL SALES	0.4	0.2	13.3	20.5	-12.9	-20.3	-7.4
MEETINGS/CONFERENCES	3,778.5	4,477.3	2,636.5	3,639.0	1,142.1	838.3	-303.8
GRANTS (CTR 01702)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ADMINISTRATION	0.0	0.0	584.4	559.1	-584.4	-559.1	25.3
COMMITTEE/OTHER	0.0	0.0	1,060.8	1,098.6	-1,060.8	-1,098.6	-37.8
SUBTOTAL	5,748.8	6,466.5	5,496.2	6,107.8	252.7	358.7	106.0
OU RESERVE SPENDING	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL w Investment</b>	<b>5,748.8</b>	<b>6,466.5</b>	<b>5,496.2</b>	<b>6,107.8</b>	<b>252.7</b>	<b>358.7</b>	<b>106.0</b>
<b>TOTAL w/o Investment</b>	<b>5,748.8</b>	<b>6,466.5</b>	<b>5,496.2</b>	<b>6,455.3</b>	<b>252.7</b>	<b>11.2</b>	<b>-241.5</b>

2016 Project Spending (1930): \$133.5K

Total Net Excluding Project Spending: \$144.7K

**50% of Net: \$72.4K**



## 2017 Project Funding Allocation

- \$71.7K Requested (\$72.4K Available)
  - Products \$13K
    - Publish 600 Additional Pages in TTE
  - Membership \$25K
  - Conference Workflow \$10K
  - Technical Operations \$23.7K

In May the IEEE had an overall Net forecast with a deficit of \$25.2

## 2018 Budget

- First Pass Budget Submitted in June
  - Based on Inputs Collected at APEC
  - Included \$180K New Initiatives Based on 3% Spending Rule
  - \$106K Surplus from Operations
- Second Pass from IEEE
  - Reduced (to \$117K) New Initiative Budget

- \$85K Net from Operations
- \$32K Deficit when Including Initiative Spending

### **Recommendation**

- Motion to Approve 2018 Second-Pass Budget
- Additional Funding for New Initiatives Through 1<sup>st</sup> Quarter Forecast in 2018
  - Contingent upon 2017 Actual Surplus
- Timely Budget Submission and Financial Closing of All Conferences

Motion to approve the 2018 Second Pass Budget – Jian Sun

Second: Peter Wilson

Motion Carried

### **Summary**

- PELS Continues on a Growth Trajectory
- Products and Conferences Incomes Have Both Doubled Since 2007
  - Products Net Growth is Steady
  - Conferences Net Fluctuates Significantly
    - 2016 Almost the Same as 2007 & 2008

Discussion: IEEE Budget deficit

Humanitarian Power Electronics AdHoc Committee - Billion Lives

- Direct reporting because of significance and special characteristics.
- Executive committee plus
  - Steering Committee
  - Competition Committee
  - Regional Operations Committees
  - Finance Committee

Action Item: Form a Standing Committee called Humanitarian Activities

### **Products – Frede Blaabjerg**

- PELS Transactions Editor: Brad Lehman
  - Impact factor is 7.151, placing it in the top five journals in impact factor in electrical engineering
  - In 2016 more TPEL papers were downloaded more than any other IEEE journal (464k).
  - Review time is the lowest of the larger IEEE Transactions



- Acceptance rate is around 31 %
  - We will receive +2800 new papers in 2017
  - We will publish in 2018 - 11000 pages (+400 papers ready now)
  - PRAC review – Report positive – used for best Practice
  - New EiC in 2019 – recruitment late 2017 – start 2018
- PELS Letters Editor: Henry Shu-hung Chung
    - Impact factor is 7.151, placing it in the top five journals in impact factor in electrical engineering
    - In 2016 more TPEL papers were downloaded than any other IEEE journal (470k).
    - Review time is around 20 days
    - Acceptance rate is 20 %
    - We will receive + 450 new letters in 2017 - 40 % increase
    - Part of PRAC review in 2017
    - Award for 2016 given at ECCE
    - New EiC in 2019 – recruitment late 2017 – start 2018
    - It is a real letter now – fast review – fast publication

- IEEE Journal of Emerging and Selected Topics in Power Electronics: Don Tan
- IEEE Journal of Emerging and Selected Topics in Power Electronics
- After four years the impact factor is 4.269
- It is attractive to publish in this journal
- More regular papers than special issue papers
- New special issues all the time – seem to work ok
- Acceptance rate is 33%
- PRAC review postponed to spring 2018
- Review time is higher than TPEL
- We will receive + 600 new papers in 2017
- Expect 1900 pages in 2018
- New EiC in 2019 – recruitment late 2017 – start 2018
- Continuous work to have topics – TC's, conferences etc

#### IEEE Transactions on Transportation Electrification: Ali Emadi

- Started in 2014 – few papers
- Increase in 2016 and 2017 – now more publications
- Also special/thematic issues are done for 2017
- 1000 pages in 2018 and maybe 50 % more in 2019
- Fast first review time – 49 days

- Acceptance rate below 40 %
- Reviewed to be indexed in WOS
- Reappoint EiC in 2018
- Undergoing PRAC review in autumn 2017
- ITEC is also an important place for getting papers

#### IEEE Power Electronics Magazine – Ashok Bindra

- Started in 2013 – 4 issues pr year
- A hired editor - extra support added
- More and more downloads
- Income through advertisement – now in balance
- Different themes – advisory board
- PRAC review in June in 2017 – good comments
- Successful platform for PELS chapters/committees
- Industrial advisory board giving valuable input
- Should be indexed soon – is already in Scopus
- 390 pages in 2018 instead of 300 pages due to success
- 30 Y anniversary edition for consideration 2018

- Newsletter and Magazine Editor: Ashok Bindra

#### Global Outreach: Three New Chinese Journals

- **The Chinese Journal of Electrical Engineering** – by China Machine Press (CJEE)
- 1<sup>st</sup> issue, Dec., 2015, pub # obtained
- **The Transactions on Electric Machines & Systems** (CES TEMS) – by China Electro-technical Society - 1<sup>st</sup> issue, March, 2017, in process of obtaining pub #
- **The CPSS Transactions on Power Electronics and Applications** – by China Power Supply Society (CPSS TPEA) 1<sup>st</sup> issue, Dec., 2016,
- In IEEEExplore

#### Summary for Publications

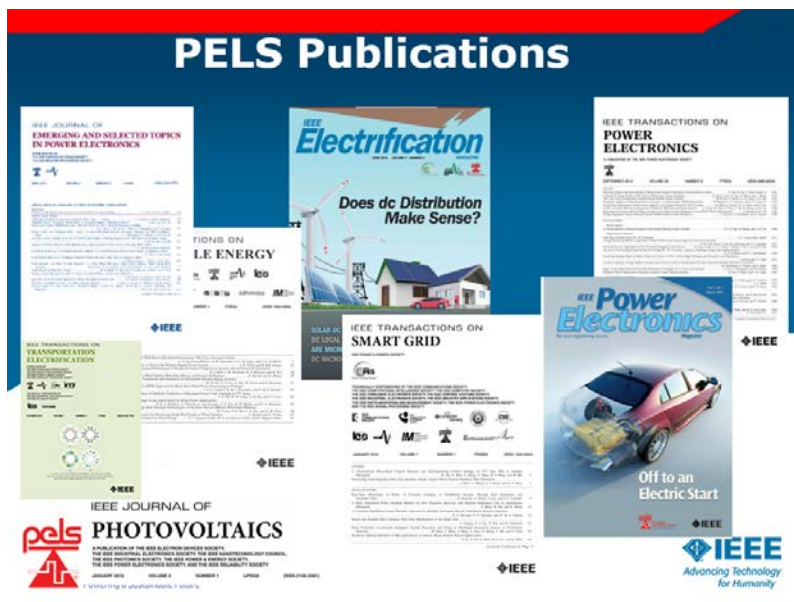
#### PELS Transactions/journals/Magazine

- Increasing reputation of all journals – IF for two journals now
- Good standing on publications – no delays
- A lot of downloads and citations (5 papers in top 100, August 2017)
- Now conferences into WOS – higher impact factor in the future
- Very short process time from submission to final publication – despite more papers every year eg TPEL
- Magazine a success – more downloads

- PRAC reviews are in process for all
- Electrification Magazine for renewal in terms of agreement
- New EiC's to be found
- Better integration with co-sponsored journals now
- Update of documents in terms of operation and PELS Bylaws

### **PELS Digital Media – Prasad Enjeti Editor**

- Updated website - [www.ieee-pels.org](http://www.ieee-pels.org)
  - Webinars Running (both YP and Normal)
  - Following with Coursera.org and the IEEE for possible partnerships with IEEE.
  - Virtual 1-day meetings/workshops in emerging fields- still in process
  - ALL TCs have a website as a part of IEEE PELS Website
  - Engage the next generation of researchers with journals and products
- 
- IEEE Journal on Photovoltaics: Patrick Chapman
  - IEEE Trans. Smart Grid: Antonello Monti
  - IEEE Electrification Magazine : Bulent Sarioglu



Summary;

### **PELS Transactions/journals/Magazine**

- PRAC review TPEL – June 2017 OK
- PRAC review Magazine – June 2017 OK

- PRAC review TTE – November 2017 OK
- PRAC review JESTPE – November 2017 Not OK
- More PELS-share of JESTPE – to be investigated with IAS Not OK
- Conferences faster in IEEEEXPLORE – then in WOS OK
- Keep short process time from submission to final publication OK
- Magazine – make a long term plan – indexed - sustainable ? OK
- TTE WOS indexed ? Discuss dissemination for more papers Not OK
- Process new EIC TPEL and announce – approval spring 2018 Not OK
- Process new EIC JESTPE and announce – approval spring 2018 Not OK
- Run tutorials on publication ethics/how to write papers OK-Webinar
- Increase no. of pages for all journals OK
- Better interaction with our co-sponsored journals – meeting at APEC Partly OK

#### Summary Digital Media;

- Webinars to be Running (both YP and Normal) – TC's should feed ideas in – at least one monthly event OK
- Add volunteering possibility on the web-site OK
- Advertise our “digital” possibilities Not OK
- Following with *Coursera.org* and the IEEE for possible partnerships with IEEE. OK – other platforms also considered
- Form a sub-committee to develop PELS Education Committee Business Plan – make a strategy – Issa/Enjeti/Frede/.. – select success for 2017, 2018 etc incl continued education Half OK
- Social media - form a strategy – maybe form a committee Not OK
- Virtual ½-1-day meetings/workshops in emerging fields – one in 2017 Not OK
- ALL TCs will have a website as a part of IEEE PELS Website – still not 100 % yet – should be implemented in 2017 OK
- Get involved new volunteers to the products activities, Not OK

Motion: Increase page budget of 290 pages to 390 pages for the IEEE Power Electronics Magazine in 2018

From Committee

Second: Peter Wilson

#### Technical Operations – Yan-Fei Liu

- Society level student travel grant
  - TC sponsored conference / workshop

- Around \$8K / year student travel grant
- All TC except one has established travel grant
- Distributed model administered by each TC
- Each TC to provide one webinar each year
  - Each TC has committed as least one Webinar
  - Some committed 3
  - Enough Webinar for 2018
  - On going business from TC side
- TC Website: Up to date and maintenance
- TC website: up to date
  - Ask for web content from each TC
  - Keep the website up to date by Dec 2017

#### TC Website: Future maintenance

- Website content provider for each TC
- Smartsheet template to get the information
- Enter the content into the website
- TC can focus on the content
- Various stages of development
  - Name of TT
  - Activities / plan of TT
- Can we finalize them by ECCE 2018?
  - APEC 2018: Skeleton
  - ECCE 2018: finalized
  - Dec 2018: Updated in TC website
- Various stages of development
- Plan set up by ECCE 2018?
  - APEC 2018: Skeleton
  - ECCE 2018: Finalized
  - Go through approval process

#### **Other Activities**

- Standard activities
- Travelling Lecture program
- Supporting other initiatives
- Technical Committee =
  - Conferences + Webinar + Special Issues + Others

- TC Strategic Plans
- Looking at new areas to grow

### **Outlines**

- Strengthen the technical operations!
  - Serve our members better
- Tasks Almost accomplished
- Tasks Working in progress
- Highlights of TC activities



**IEEE PELS**  
**Power and Control Core**  
**Technologies**

**TC1 ECCE Meeting**

**Rolando Burgos, Ryan Li, and Chun Ri**  
*Chair, Vice Chair, Secretary*

**ECCE 2017, Cincinnati, OH**  
**October 4, 2017**

 **IEEE POWER ELECTRONICS SOCIETY**  
Powering a Sustainable Future

 **IEEE**  
Advancing Technology  
for Humanity

- TC1-Sponsored JESTPE Special Issues
- Technical Thrusts
- ICDCM 2017
- COMPEL
- Webinars
- Website

**IEEE  
Power Electronics Society**

**TC2 - Power Conversion Systems And  
Components**

Robert Pilawa (*TC2 Chair*)

PELS Meeting Series –  
ECCE 2017, Cincinnati, Ohio, USA  
Operations Meeting



- Three strong workshops
  - PowerSoC (with PSMA, financial co-sponsorship)
  - IWIPP (with four other societies, financial co-sponsorship)
  - High Frequency Magnetics Workshop (with PSMA, technical co-sponsorship)
  - Student travel grants awarded to all three workshops
- Two new workshops
  - Capacitor Workshop (with PSMA, technical co-sponsor)
  - Energy Harvesting Workshop (with PSMA, technical co-sponsor)
- Other new initiatives
  - Traveling lecturer program
  - IEEE Fellow Nomination Committee

**IEEE  
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**TC3 Chair Report**

**Uday Deshpande**  
*TC3 Chair*

ECCE – Cincinnati, OH  
Wednesday, October 4, 2017



- Some traction in getting more notice
  - Ali Bazzi hosted a “Get to know TC3” during IEMDC 2017.
  - Now planning to do more at other conferences, e.g. ECCE Asia, SPEC?
- Antonio Cardoso will be POC for TC3 website
- TC3 will support Diagnostics & best paper awards for SDEMPED
- Student travel grant plan pending. Is this managed at TC level?
  - Propose: Student applications will be reviewed and accepted or denied. Support multiple conferences/workshops
- TC3 approves proposal to host IEMDC 2021 in Hartford, CT chaired by Ali Bazzi.
- Webinar proposals from TC3 will be forthcoming.
- TC3 underspent in 2017.

**IEEE**  
**Power Electronics Society**

**TC4: Vehicle and Transportation Systems**

**Alireza Khaligh**  
**Chair, PELS Technical Committee on Vehicle and Transportation Systems**

**ECCE 2017, Cincinnati, OH, USA**  
**October 2017**

 **IEEE POWER ELECTRONICS SOCIETY**  
 Powering a Sustainable Future

 **IEEE**  
 Advancing Technology for Humanity

- ITEC Global Series
  - ITEC 2017 Highlights
  - ITEC 2018
  - ITEC Asia & Pacific 2017
  - ITEC India 2017
- IEEE Transactions on Transportation Electrification
- TC 4 (Technical Committee on Vehicle and Transportation Systems) Website



**IEEE  
Power Electronics Society**

**TC5: Sustainable Energy  
Systems**

**Sudip K. Mazumder**  
*Chair, TC5*

**PELS Operations Committee Meeting –  
ECCE 2017, Cincinnati, Ohio, USA  
Oct. 4, 2017**



- The TC meets semi-annually:
  - APEC and ECCE
- New and modified thrusts and chairs
- The TC's flagship annual conference - Int. Symp. on Power Electronics for Distributed Generation Systems (PEDG) booked up till 2020 with prelim proposal already in place for 2021
- TC5 now has an annual Technical Achievement Award in sustainable energy systems (presented at PEDG)
- TC5 has annual Prize Paper Awards in sustainable energy systems (presented at PEDG)
- Several new initiatives being undertaken including a) New/modified thrust and thrust-leader incorporation; b) Student travel grants; c) A new JESTPE special issue; d) New TC5 initiated webinars; e) Special session/workshop co-located at APEC/ECCE; and f) Lecturers for knowledge dissemination
- TC5 website is being updated using previously functional materials that were apparently lost in transition to new system

# IEEE Power Electronics Society

## TC6: High Performance and Merging Technologies

**Yaow-Ming Chen**  
*Chair, TC6*

PELS Operations Committee Meeting –  
ECCE 2017, Cincinnati, Ohio, USA  
Oct. 4, 2017



1. Welcome & Self-introduction
2. Officer Reports:
  - a. Confirmation of meeting agenda (Yaow-Ming)
  - b. Confirmation of the meeting minutes at APEC 2016 (Yaow-Ming) (Annex 1)
  - c. TC officers and TC Members: 125 in APEC 2017 ( 105 as of ECCE 2016) (Yaow-Ming) (Annex 2)
  - d. Fellow committee (Peter)
    - e. TC6 Website and Digital Media (Robert)
    - f. ECCE 2016 TC6 paper awards (Yaow-Ming)
    - g. ECCE 2017 Track K- Emerging Technologies and Applications (Yaow-Ming)
    - h. ECCE Student Project Demonstration on Emerging Technology Program (Huai Wang)
3. Technical activities:
  - a. IEEE Workshop on WBG Power Devices and Applications, WiPDA (2017, Maryam)(2018, Maryam)
  - b. IEEE WiPDA-Asia 2018 (Laili)
  - c. IEEE Workshop on Emerging Technologies: Wireless Power, WoW (2017, Xin) (2018, Chun)
  - d. IEEE International Future Energy Challenge, IFEC (2017, Yaow-Ming) (2018, Zhengming)
  - e. IEEE IFEEC 2017-ECCE Asia (Yaow-Ming)
4. Any other business

# IEEE Power Electronics Society

## TC7 (INTELEC) Report

**Keiichi Hirose**  
*TC7 chair*

PELS Technical Operations Committee Meeting–  
ECCE 2017, Cincinnati, Ohio, USA  
Oct. 4, 2017



- INTELEC 2017, Gold coast
- Future INTELECs
- One-day Seminar, Thermal management
- Other activities by TC7

**IFEC 2017 Finished and 2018, 2019 Planned**

**2016.10.14 Proposal Due**

23 proposals have been received.

15 teams were selected to enter the 2<sup>nd</sup> round competition at APEC 2017.



**2017.3.26 Workshop at APEC 2017**

14 teams attended workshop and present their progress.

10 teams were selected to enter the final competition.

**2017.7.24-25 Final Competition at Virginia Tech**

9 teams will participate.

Motion to Adjourn: Alan Mantooth 2:51 pm  
 Second Pradeep

Friday , October 6, 2017  
 Meeting Minutes

**Day 2 8:00 am – 12:00 noon**

	<b>Name</b>	<b>Title</b>	<b>Present</b>	<b>Absent</b>
1	Alan Mantooth	President	X	
	Open	President Elect		
2	Liuchen Chang	VP Conferences	X	
3	Frede Blaabjerg	VP Products	X	
4	Yan-Fei Liu	VP Technical Operations	X	

5	Jinjun Liu	Exec VP Membership	X	
6	Mario Pacas	Exec VP Global Relations	X	
7	Peter Wilson	Exec VP Standards	X	
8	Braham Ferriera	Immediate Past President	X	
9	Don Tan	Senior Past President	X	
10	Treasurer	Jian Sun	X	
11	Patrick Wheeler	Constitution & Bylaws Chair	X	
		<b><u>TC Chairs</u></b>		
12	Rolando Burgos	TC 1: Technical Committee Chair Power & Control Core Technologies		x
13	Robert Pilawa-Podgurski	TC 2: Technical Committee Chair Power Conversion Systems and Components		X
14	Uday Desphande	TC 3: Technical Committee Chair Motor Drives and Actuators	x	
15	Alireza Khaligh	TC4: Technical Committee Chair Vehicle and Transportation Systems		x
16	Sudip Mazumder	TC 5: Sustainable Energy Systems	X	
17	Yaow Ming Chen	TC 6: Technical Committee Chair High Performance and Emerging Technologies	X	
18	Keiichi Hirose	TC 7: Technical Committee Chair Communications Energy Systems		X
		<b><u>Members at Large 2015-2016-2017</u></b>		
19	Robert Balog	Member-at-Large	X	
20	Johan Enslin	Member-at-Large	X	
21	Helen Li	Member-at-Large	X	
22	William A. Peterson	Member-at-Large	X	
23	Pradeep Shenoy	Member-at-Large	X	
24	Shinzo Tamai	Member-at-Large	X	
		<b><u>Members at Large 2015-2016-2017</u></b>		
Duplicate	Liuchen Chang	Member-at-Large		duplicate
25	William Gerard Hurley	Member-at-Large	X	
26	Katherine Kim	Member-at-Large		X
27	Ernie Parker	Member-at-Large	X	
28	Grant Pitel	Member-at-Large	X	
29	Seung Ki-Sul	Member-at-Large	X	
		<b><u>Members at Large 2016-2017-2018</u></b>		
30	Sibylle Dieckerhoff	Member-at-Large	X	
31	Dan Kinzer	Member-at-Large	X	

32	Marco Liserre	Member-at-Large		x
33	Annette Mütze	Member-at-Large	X	
34	João O.P. Pinto	Member-at-Large	X	
35	Mark Dehong Xu	Member-at-Large	X	

**Non-Voting**

Andreas Lindemann	Awards Chair		X	
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**STAFF**

Mike Kelly	Society Executive Director		X	
Donna Florek	Technical Community Program Specialist		X	
Becky Boresen	Technical Community Program Specialist			X
Jane Celusak	Project Manager		X	
Alicia Tomaziewski	TEC Project Manager		X	

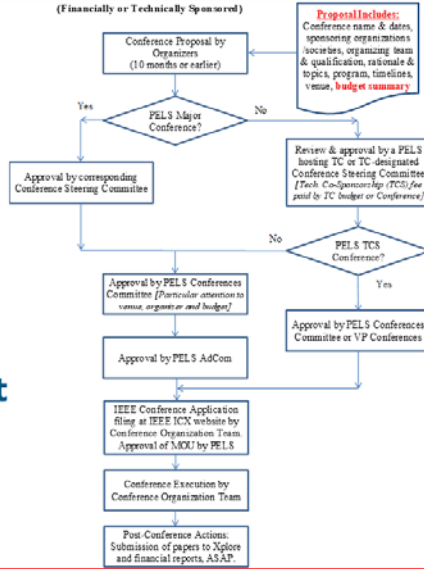
**GUEST**

Arthur Kelley	Past Newsletter Editor		X	
Johathan Kimball				
Phil Krein	Past President			
Dean Patterson	Past President			
Antonio J. Cardoso				

**Conferences Committee Report Liuchen Chang**

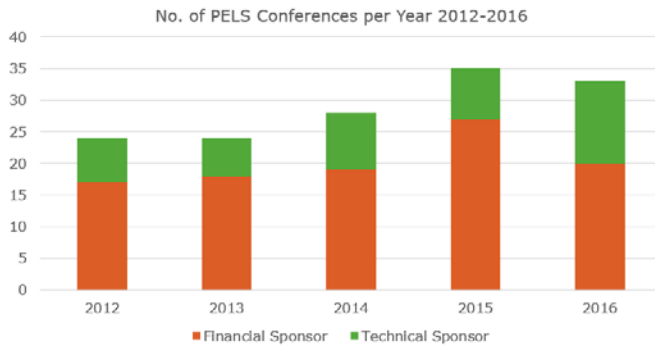
- Complete a resource center for PELS conference organizers. The resource center will serve as a one-stop online site for conference organizers to access tools and information for conference proposal, budget, report and execution.
- **+Conferences Tracking Tool has already been implemented;**
- **+Collecting materials to integrate into a document for PELS website.**
- Enhance the organization and operation of the PELS Conferences Committee with defined members from broad PELS constituencies, to ensure consistency and quality of conferences.
- **+Policies and Operating Procedures of the PELS Conferences Committee approved by AdCom in March 17. Committee membership was formalized.**
- Establish a streamlined conference application and approval process. Clear guidelines will be available for PELS conference organizers and sponsors.
- **+Conference application and approval flow chart was established.**

## Flowchart: Conference Approval & Management Process



## PELS Conferences

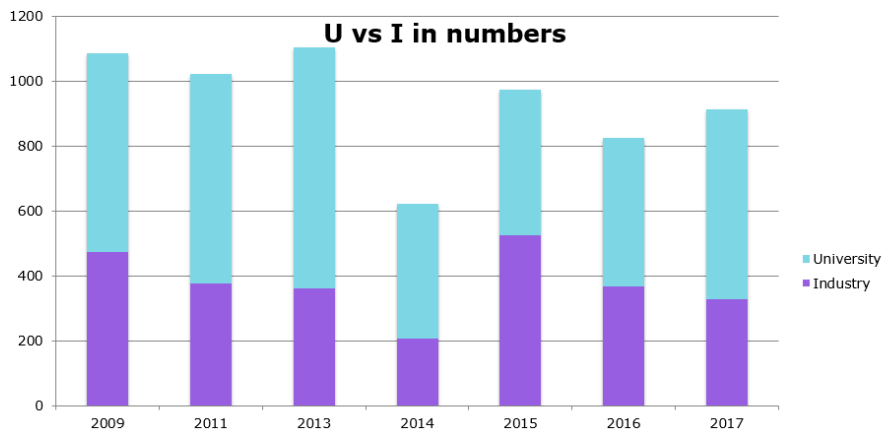
- ▣ Our major conferences are successful and growing.
  - 20 Financially sponsored/co-sponsored conferences in 2016
  - 13 Technically co-sponsored conferences in 2016



## Recent APEC's

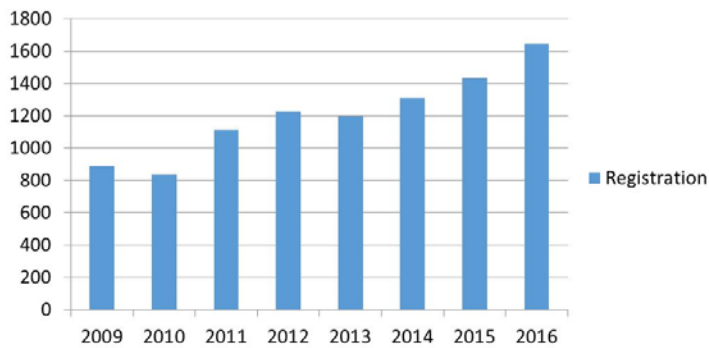
	2014 Ft. Worth	2015 Charlotte	2016 Long Beach	2017 Tampa
<b>Full Conference</b>	673	1041	831	835
<b>Technical Sessions</b>	620	725	699	732
<b>Education Seminars</b>	56	40	49	58
<b>Exhibitor</b>	1470	1332	2283	1972
<b>Exhibits Only</b>	846	676	1211	949
<b>Press</b>	41	28	40	53
<b>Seminar Speakers</b>	21	19	21	18
<b>Guests</b>	160	181	1	
<b>Total Attendees</b>	3887	4042	5135	4688
<b>Paid Attendees</b>	1349	1806	1579	1625

## ECCE Europe Attendees



## ECCE (N.A.)

### Registration



	2014	2015	2016	2017
Surplus	\$282,448	\$295,060	\$241,260	>>\$155,000

## Conferences Committee Updates

- PELS Conferences Committee business meeting: 1 hour discussions at every ECCE and APEC on policies and guideline and solutions to issues
- Review of ECCE-IAS co-location
  - Experience of the attendees
  - Financial impact
  - Coordination between PELS and IAS
- Issues addressing now:
  - PELS conference registration fee discounts for PELS members on top of the discounts for IEEE members (roughly twice the membership fee)
  - No-show papers at a conference: guidelines
  - Responsible/appropriate conduct of conference activities (at social events): awareness and guidelines consistent with IEEE policies
  - Cross promotion of ECCE series: booth, videos, flyers in an organized manner
- Timely closing of PELS conferences: important issues
  - Monthly status review of completed conference by IEEE MCE and PELS staff
- Notices to TC chairs and VP Conferences for follow-ups and actions for late-closing conferences, in additions notices from IEEE MCE to organizers



## ECCE Europe Finance

	Birmingham 1002	Lille 1107	Lappeenranta 653	Geneva 978	Karlsruhe 862	Warsaw 900 913	
						PELS Budget	Prov. Closing
<b>Expenditures</b>							
Management Services Expenses	53,426	85,762	77,468	83,287	59,799	78,000	96,631
Registration expenses	62,761	46,072	26,883	78,679	52,421	50,400	48,411
Promotion expenses	16,949	19,423	9,942	7,953	7,491	18,100	13,740
Publication expenses	53,983	54,302	50,036	96,041	51,443	47,700	53,890
Exhibit expenses	19,236	16,220	15,896	35,674	34,984	15,000	41,921
Local Arrangements Expenses	176,370	112,932	22,376	75,406	103,899	65,348	78,732
Social functions Expenses	156,013	141,944	73,290	187,611	159,204	119,885	88,325
Programme Expenses	99,500	104,500	74,500	113,500	116,500	120,000	120,000
Administration expenses	507,500	532,500	382,500	577,500	587,500	61,000	61,000
Committee Expenses	25,756	37,471	25,973	22,276	24,725	39,500	21,359
<b>TOTAL</b>	<b>714,744</b>	<b>671,876</b>	<b>414,614</b>	<b>758,177</b>	<b>668,214</b>	<b>614,933</b>	<b>634,008</b>
<b>Income</b>							
Registration Fees	630,509	641,057	336,645	643,717	494,976	525,239	568,750
Exhibit	145,437	162,300	102,050	280,222	242,469	180,000	123,173
<b>TOTAL</b>	<b>775,946</b>	<b>803,357</b>	<b>438,595</b>	<b>923,938</b>	<b>737,445</b>	<b>705,239</b>	<b>691,923</b>
<b>Balance</b>	<b>61,202</b>	<b>131,481</b>	<b>23,980</b>	<b>165,762</b>	<b>69,231</b>	<b>90,307</b>	<b>57,915</b>
<b>in % expenditures</b>	<b>9%</b>	<b>20%</b>	<b>6%</b>	<b>22%</b>	<b>10%</b>	<b>19%</b>	<b>9%</b>
<b>TOTAL Expenditures</b>	<b>714,744</b>	<b>671,876</b>	<b>414,614</b>	<b>758,177</b>	<b>668,214</b>	<b>614,933</b>	<b>634,008</b>
<b>TOTAL Income</b>	<b>775,946</b>	<b>803,357</b>	<b>438,595</b>	<b>923,938</b>	<b>737,445</b>	<b>705,239</b>	<b>691,923</b>
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Note about the wasting of food at ECCE North America during the Awards Lunch:  
EPE uses the tickets for the Dinners and Lunches to calculate a predicted number for the next year of how many people will attend.

## Motion from Committee

### Coming from: **Conferences Committee**

- INTELEC 2018
- Torino, Italy, 7-11 Oct 2018
- TC7 requests a loan of up to \$50,000 from PELS
- Motion to approve the INTELEC 2018 proposal and a loan of up to \$50K from PELS for INTELEC 2018
  - by TC7
- Motion Carried

Motion submitted through the Conference Committee  
 No Discussion  
 Motion Carried

## Motion from Committee

### Coming from: **Conferences Committee**

- ACEPT 2018 (Asian Conference on Energy, Power and Transportation Electrification)
- Singapore, Oct. 23-15, 2018
- Motion to approve technical co-sponsorship of ACEPT 2018 by PELS and the TCS fees of \$925 from TC5's budget
  - TC5
- Motion Carried

Motion Submitted through the Conference Committee

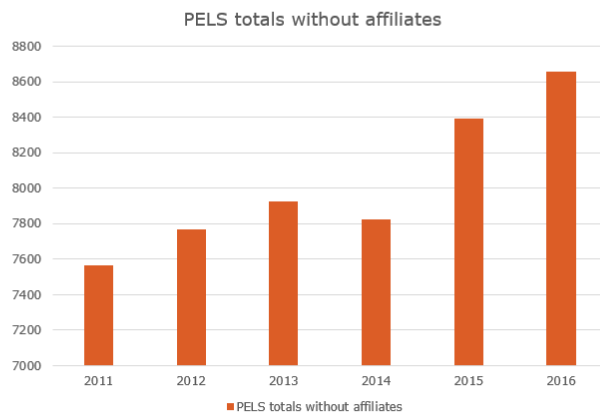
Motion Carried

### Membership Report – Jinjun Liu

- 2007-2013, 1~2%
- 2014, -0.5~-1.5%
- 2015, 3~7%
- 2016, 3~7%
- Recent months in 2017
- 4~6% YoY increasing

## Membership Status (YoY data of December)

Year	PELS totals without affiliates
2011	7566
2012	7767
2013	7925
2014	7825
2015	8393
2016	8654



3

### Review on Recent Actions

#### Operational Procedures

- Handling of best chapter award
- DL travel request, approval, and information sharing
- Membership information sharing
  - Website on-demand chapter reports on membership
  - Circulate IEEE MD monthly reports among Region Chairs
  - PELS Chapter Chairs Newsletter
  - Staff to respond to the requests from the committee members for membership data
  - Staff to coordinate with IEEE on improving the on-line process/interface for submitting chapter reports
- Procedure to re-activate chapters
  - Need to get feedback from the follow-up actions of regional chairs
- Procedure to reach out to potential areas for new chapters
  - Recent status on chapter forming
  - Staff to identify potential areas from membership data

#### Updates – New chairs and Open Positions

- Regional Chairs/Liaisons

- Region 1-7:
  - Vice Chairs: Kalya Sen, and ? – Looking for an additional person
- Region 8: Vladimir Katic
  - UK Liaison/Chair: Looking for a new liaison – working with Peter Wilson
- Chairs/Liaisons on specific member group/service
  - Young Professional Chair: Somasundaram Essakiappan – New chair
  - Women in Engineering: Maryam Saeedifard / Katherine Kim – adding a new co-chair

Motion to approve creation of a new award for the Best Student Chapter Award in the amount of \$1.5k prize plus travel expense of one person for accepting the award from Committee  
Motion carries

Investigate the option of sponsoring members within Ethiopia (similar to the CPSS agreement), what countries does IEEE discount dues for already, how many from Ethiopia – would minimum income also apply

### **Standards**

Continuing Standards Activities in various live standards projects

- 1789, 1573, 1662, 388, 389, 1820, 1547

1789:

Last year a study group was formed to review further information regarding IEEE

Recommended Practice 1789 (in the area of LED lighting)

The study group delivered its findings to PELSC 2<sup>nd</sup> October 2017

The report and associated material is being posted on a Collabratec site for deliberation by the PELSC

New PAR 2004 underway

- Recommended Practice for Hardware-in-the-Loop (HIL) Simulation Based Testing of Electric Power Apparatus and Controls
- Chair is Mischa Steuer
- First meeting held at ECCE this week
- Liaison with TC2 – Brad Lehman

ITRW - International Technology Roadmap for Wide band-Gap Power Semiconductors

Past Meetings:

- Meetings held at APEC march 2017
  - Inaugural Industry Advisory Board Meeting
  - Technical Working Group Meetings
  - Steering Committee and structure approved
- Meetings held at ECCE 2017
  - Technical Working Group Meeting
  - Steering Committee Meeting

Upcoming Meetings:

WiPDA 2017 (Albuquerque)

- Sunday 29<sup>th</sup> October 1-530pm
- Technical Working Group Workshop
- Goal: Cross group sharing and Application domain definitions

APEC 2018

- Technical working group meetings
- Steering group Meeting
- Industry advisory board Meeting
- Goal: first draft of position paper

WiDPA-Asia (Xi'an China) May 2018

- Goal : Panel Session (or similar open mtg)

ECCE-Asia (Niigata Japan) May 2018

- Goal : Panel Session (or similar open mtg)

PCIM (Germany) June 2018

- Outreach
- PELS/ITRW exhibition stand

CCE (Portland USA) Sep 2018

Collaboration Activities:

As part of our strategic goal is to increase collaborative efforts within the IEEE and beyond

- P1547.\*: Liuchen Chang has offered to engage going forward as this is in his technical area (1547 almost at ballot, 1547.\* efforts ongoing)
- IEC TC51: PELS standards will (partially) support a workshop to be held at APEC 2019 when this returns to the USA
- P2004: PELS standard – Brad Lehman (TC2 Standards Liaison) to work with the WG
- Working with other societies on various roadmapping efforts across the IEEE

**Committee News**

- Matt Wilkowski will step down from his role as Secretary, we hope to appoint a replacement very soon
- Coordinated a call for volunteers at APEC and had a great response, we hope to have some new faces in a variety of PELSC roles by APEC 2018

### **PELS Standards Award**

- The next nominations call will be raised on November 15th 2017
- Following the process laid out by Andreas Lindemann this requires:
  - A Nomination, 2 reference letters
  - Nominations Deadline March 31<sup>st</sup> 2018

### **Initiatives budget**

- At the present time ITRW is well within its budget
  - we offered to reduce from our originally approved budget to help the society & are still OK
  - Supporting Workshops at ECCE/WiPDA/APEC in 2017
  - Continuing activities at APEC/WiPDA-Asia/ECCE-Asia/PCIM/ECCE in 2018
- We will monitor the status with the PELS staff to ensure we stay within our means

### **Revised P&P**

- Revised P&P sent to Pat back in March
- Up for approval in this meeting

Reach out to ECPE after PCIM to engage with IEEE PELS Standards Activities  
 Look into organizing a session/panel session at PCIM and ECPE

High-Level discussion – external organizations are reaching out to IEEE to engage in roadmap activities – coordinating between multiple road mapping activities within IEEE

### **Global Relations – Mario Pacas (see report)**

- The Executive Vice-President for Global Relations now chairs the
  - Intersociety Liaison Committee (in the past chaired by the VP for technical operations) and the
  - International Relations Committee
- A single meeting was held
- The Bylaws have to be accordingly modified
- Operating Procedures are defined

**Short Update:**

- Promotion of PELS in Mexico: meetings with Jaime Arau and Victor Cárdenas
- Coordination of activities with Membership VP and Regional Chairs has to be improved
- Formal reporting of liaisons to the other IEEE societies is implemented

**Upcoming Activities:**

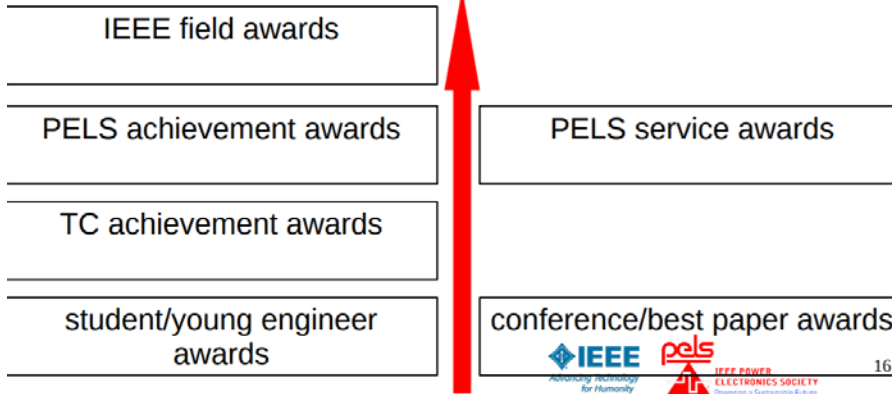
- Update MoUs
- Meeting in Bogota, Colombia October 17
- Meetings in Argentina March 18
- Support of Power Electronics activities in Italy, especially the Italian PhD-School  
<http://www.magento-expert.it/phdschool/>
- Evaluation of the potential in Russia

**Awards Report – Andreas Lindemann ( See Report)****Prospective awards - not released**

- COMPEL Best Paper Award
  - ?USD
  - → TC Power & Control Core Technologies
- SDEMPED Prize Paper Award
  - ?USD
  - → SDEMPED Steering Committee within TC Power & Control Core Technologies, Thrust on Diagnostics

## Work in progress - discussion

- award dedicated to Tom Wilson
  - new or rename existing
- awards hierarchy / typical career



## Constitution & Bylaws - Patrick Wheeler

### Standing Committees

#### New: Operating Procedures Documents

- New Bylaws come into force on 2<sup>nd</sup> November 2017
- All Standing Committees need an Operating Procedures Document
- Changes just require agreement from PELS AdCom
  - Updating is easy to implement
  - Documents are accessible and are on the PELS Web site
  - Documents are under the control of Committee Chairs

#### Standing Committees

- Constitution and Bylaws 😊 03/17
- Fellow Evaluation 😊
- Awards 😊
- History 😊
- Intersociety Liaison 😊 03/17
- Global Relations 😊
- Standards 😊
- Membership 😊
- Conferences 😊 03/17
- Products 😊
- Technical Operations 😊
- Nominations N/A
- Long Range Planning 😊 03/17



## About FEPPCON 2017

- Location
  - Protea Hotel Kruger Gate, South Africa.
  - Same location as original FEPPCON in 1991.
- Theme
  - Technological Opportunities and Obstacles for Applications of Power Electronics in Generation, Storage, Transmission, Distribution, and Efficient Consumption of Electric Energy
  - Recently it has been used as a strategic planning workshop for the Power Electronics Society every 2<sup>nd</sup> year.
- Objectives discussed at each session:
  - Understanding the electromagnetic, reliability, topology, thermal and control limitations applicable to electronic power conversion.
  - Identifying future key R&D tracks and the possible roadblocks in power electronics technology, as applicable to power electronic systems.
  - Identifying possible opportunities for disruptive technology research (materials, components, equipment, systems)
- Outcomes:
  - Proceedings with Presentations in [PELS Resource Center](#)
  - PELS Power Electronics Magazine [Summary Paper](#)
  - Other PELS Magazine and Transactions Papers (Pending)
  - Inputs to PELS Strategic Plan and to Technical Committees



**Action: Send message through e News that the FEPPCON proceedings are on the resource Center**

Organized by

IEEE Power Electronics Society (PELS)

Organizing Committee:

Chairman: Prof. Johan Enslin, Clemson University, USA

Co-Chairman: Prof. Frede Blaabjerg, Aalborg University, Denmark

Long Range Planning Chairman: Dr. Don Tan, NGAS, USA

Honorary Chairman: Prof. Daan Van Wyk, South Africa

Local Organizing Committee: Prof. Jan-Harm Pretorius, University of Johannesburg, ZA

Donna Florek (PELS); Dina O'Rourke (IEEE);

Elsabe Enslin (Smart Energy Solutions);

Janine Meyer-Hoffmann (idna) – Travel Agent

Prof Willie Cronje, University of Witwatersrand, ZA (Photos)

FEPPCON Outcomes




- 48 participants and 30 companions
  - Global representation
- Around 27 presentations in total – slides based
- Discussions at high level and forward looking
- Networking forum valuable between participants
- Each topic session had conclusions presented

- Material for future PELS articles
- Companions program went very well
- Logistics and social program were very successfully
- Proceedings Published
- Summary Wrap-up Paper published
- Propose FEPPCON 2019 location
- Finalize Topic Papers

### Final Financials

REVENUE	
Registration	\$75,786.30
Support from PELS	\$6,000.00
Interest	\$103.43
<b>TOTAL</b>	<b>\$81,889.73</b>
EXPENSE	
Local Arrangements	(\$79,685.20)
Promotion	(\$3,650.00)
Wire Fee	(\$108.36)
Reg. Card Fees	(\$2,273.59)
Committee Costs	(\$465.60)
Travel	(\$836.35)
Misc.	(\$220.00)
<b>TOTAL</b>	<b>(\$87,239.10)</b>
<b>LOSS</b>	<b>(\$5,349.37)</b>

**Budgeted for Loss (\$10,617)**

- Digital Power Grid and Internet of Energy (IoE)
- Cyber and physical security impacts and mitigation
- Reliability of power electronic systems.
- Focus EMI and EMC, both conducted and radiated
- Micro- and nano-scale energy harvesting and processing
- Focus on control and communications of power electronics
- Medical Devices and Assistive Technologies
- Robotics and electro-mechanical actuators
- Impact of AI on power electronics architectures
- Multi-timescale modeling and validation of power electronic systems
- Magnetics and materials for balance of systems

Discussion: Our next board meeting will take place at APEC 2018 AdCom Meeting March 8<sup>th</sup> and March 9<sup>th</sup> Motion to Adjourn Don Tan 10:30 am

Second Bill Peterson