Meeting Minutes, 16 April 2020

IEEE Power Electronics Society Administrative Committee Meeting

Agenda

	Name	Title	Virtual
1	Frede Blaabjerg	President	x
	Liuchen Chang	President Elect	x
2	Liuchen Chang	VP Conferences	X
3	Brad Lehman	VP Products	X
4	Yan-Fei Liu	VP Technical Operations	X
5	Jinjun Liu	VP Membership	X
6	Mario Pacas	VP Global Relations	X
7	Johan Enslin	VP Standards	X
8	Alan Mantooth	Immediate Past President	X
9	Braham Ferriera	Senior Past President	X
10	Jian Sun	Treasurer	X
11	Patrick Wheeler	Constitution & Bylaws Chair	X
		TC Chairs	
12	Rolando Burgos	TC 1: Technical Committee Chair Power & Control Core Technologies	X
13	Hanh-Phuc Le	TC 2: Technical Committee Chair Power Conversion Systems and Components	x
14	Antonio Cardoso	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	Jin Wang	TC 6: Technical Committee Chair High Performance and Emerging Technologies	X
18	Brian Zahnstcher	TC 7: Technical Committee Chair Communications Energy Systems	x
		Members at Large 2018-2019-2020	
19	Marco Rivera	Member-at-Large	
20	Joahn Enslin	Member-at-Large	X
21	Helen Li	Member-at-Large	x
22	Pradeep Shenoy	Member-at-Large	x
23	Brad Lehman (dup)	Member-at-Large	X
24	Noriko Kawakami	Member-at-Large	X
		Members at Large 2019-2020-2021	
25	Vladimir Blasko	Member-at-Large	x
26	Antonio Cardoso	Member-at-Large	X
27	Udaya K. Madawala	Member-at-Large	x
28	Axel Mertens	Member-at-Large	X
29	Maryam Saeedifard	Member-at-Large	X
30	Shinzo Tamai	Member-at-Large	X
		Members at Large 2020-2021-2022	
31	Christina DiMarino	Member-at-Large	X
32	Marco Liserre	Member-at-Large	X
33	Sudip K. Mazumder	Member-at-Large	X
34	Brendan McGrath	Member-at-Large	X
35	Xiongfei Wang	Member-at-Large	x
36	Mark Dehong Xu	Member-at-Large	X
		Ex Officio Members of the AdCom (Non-Voting Members)	
	Andreas Lindernann	Awards Chair	X

Ger Hurley	History Chair		X
John Shen	Distinguished Lecture Chair		X
Harish Krishnamoorthy	Young Professionals Chair		X
Don Tan	Past President		x
Rik deDonker	Past President		X
Philip Krein	Past President		X
	Staff		
Mike Kelly	Society Executive Director		x
Becky Boresen	Technical Community Program Specialist		X
Megan Cichoki	Technical Community Program Specialist		X
Jane Celusak	Project Manager		X
Alicia Tomaziewski	TEC Project Manager		X
Lindsey Sorensen	Publications Administrator		X
	Guests in attendance		
Yaow- Ming Chen	Ralph Kennel		
Francisco Azcondo	Robert Balog		
Stephanie Butler	Po-Tai Cheng		
Nayara de Fretis	Henry Chung		
Katherine Kim	Mark Johnson		
Fang Lou	Avoki Omekanda		
Cian Ó Mathúna	Ernie Parker		
Sanjib Panda	Fred Wang		
Joao Pinto	Huai Wang		

Quorum Met

Approval of Agenda

MOTION: to approve the Agenda:

    Second: Alan Mantooth

    MOTION: Carried

Approval of AdCom Minutes ECCE-NA 2019, Baltimore, Maryland

MOTION: to approve the minutes: Sudip Mazmunder

    Second: Maryam Saeedifard

    MOTION: Carried

Review of Remaining Action Items   Frede Blaabjerg

- https://app.smartsheet.com/b/publish?EQBCT=da9ab7b6cb7644f2ba8ed8bc8ba60511

President's Report   Frede Blaabjerg

Overview or IEEE and PELS

- Welcome new AdCom Members at Large
- Overview of PELS Organizational structure and voting members
- Recognition of the IEEE PELS Fellows

Officers Retreat 2020

- Output shared

Highlights of 2019

- More than 30 conference
- Smaller events like DAPE, CYBER doing very well
- FEPPCON 2019, went very well 60 participants
- 10K PELS Members

APEC '2020 in New Orleans

Corona Virus implications for PELS
- Pandemic has stopped all travel
- More conferences are going virtual or moved to the fall
- All conference need to have a virtual plan if needed – IEEE offers a tool ON24
- PELS has given free access to the PELS Resource Center
- IEEE has lost a lot of money – that goes down to society level

Other business - Reorg of the PELS TC structure

Focus of 2020
- New strategic plan 2020-2024 – process imitated
- FEPPCON 2021
- Open Access Journal – success? Other new journals?
- Roadmaps – standards – what is next?
- Grow chapters in new areas
- Take on Full Time PELS ED – Mike Kelly

Treasurer's Report   Jian Sun
- 2019 FM 14 (Pre-COVID-19)
  - Reserve = $8.255 + $2.976 (2019 revenue) = $11.231M
  - Additional Funds for 2020: 50% of 2019 Operational Net (0.5*$1,774.4K = $887.2K)
  - Up to 3% of Reserve for New Initiatives in 2021 (3%*$11M = $330K)
- Operating at 704K for 2020
- Requested 237K for 2020 initiatives
  - Approved by IEEE 145K
- 2019 FM14 : PELS Reserves 11.23M
- Additional funds for 2020 = 50% of 2019 operational net
- Up to 3% of reserve for New Initiatives in 2021
  - -3%*11M - $330K

COVID impacts
- Revenue
  - Conference (Ex. Download) – Mostly Affected
  - Publication (Ex. Download) – Likely Neutral
  - IEEE xplore Download – Likely Unaffected but Uncertain
  - Investment – Assume Negative
- Expense
  - Conference – Depends on Situation & Response
  - Publication – Set Budget; Pressure to Add Pages
  - Committee – 20-50% Lower
  - Administration – to be Determined by IEEE
  - Executive Office – Expect No Change
- Recommendations for Cost Containment
  - No volunteer expense – no cost to contain
  - Activities and programs that can currently continue should be maintained, or expanded for the benefit of members and future of PELS
    - E.g. Invest in Publications & Membership
  - Reevaluate budget and plan depends on how and when situation improves

Nominations Report – Alan Mantooth
Election in the fall
- 3 VP Roles – Operations, Conferences, Products, and 6 new Member At Large
- Think of names – share with Alan Mantooth

Strategic Planning Committee   Braham Ferreira
- 5 year Strategic Plan is due in 2020

- o   Remote meeting in July
    - ▪   Currently created the framework for remote participation
  - o   Still on target to have document approved at ECCE-NA
- Committee:
  - o   Braham Ferreira
  - o   Alan Mantooth
  - o   Harish Krishnamoorthy
- LRP Members – for approval
  - o   Prasad Enjeti
  - o   Mark Dehong
  - o   Pradeep Shenoy
  - o   Noriko Kawakami
  - o   Rik de Doncker
  - o   Deepak Divan
- Advisors:
  - o   Frede Blaabjerg
  - o   Jian Sun
  - o   6 PELS VP
- Support:
  - o   Mike Kelly (PELS)
  - o   Becky Boresen (PELS)

MOTION FROM Strategic planning committee to approve the LRP Slate.
Braham Fererria
Second: Liuchen Chang
Motion Passes

Milestone Program/ PELS/History Chair   Gerard Hurley
Invited speaker to APEC- Werner – History of Technology – a speaker with insights as to how we can leverage our milestone program.

VP Products Report   Brad Lehman
- Overview of EiC's and Representatives for Tech Journals

Summary
- Excellent – journals and magazines – by all measures (IF, $, downloads)
- Magazine a strong asset for the society (financially ~break-even)
- Digital offerings/webinars/conferences are doing well and expanding
  - o   16 PELS webinars in 2019
  - o   PELS webinars are now free to all during COVID
- Big idea being discussed PELS-ipedia

In general: Goals
1. Keep high quality and high revenue profit stream for pubs
2. Improved member benefits
3. Keep up with social media and digital products

Threats
- Major expansion needed of i) social media ii) web presence for all publications – DELAYED DUE TO VIRUS
- February: funding approved for staff person ($$?) for web and multi-media work. ON HOLD (PELS finance is tough this year)
- Backlog JESTPE is critical (>1 Yr), OJ-PEL needs papers
- Finance in PELS under threat. Losses in conferences. How about pubs??
- Overall submission to journals seems unaffected by covid so far: February might have had submission drop from covid, but March had more than expected. (Submissions to TPEL in 1st Quarter rose from last year)

Motion from Products Committee: Additional 600 page budget in TPEL for 2020. Additional 1700 page budget in JESTP for 2020.
MOTION Passes
Motion from Products Committee: Increase page budget TPELS to 14520 pages, JESTPE 5000 pages, TTE 2200 pages, magazine 350 pages for 2021.
MOTION Passes
Motion from Products Committee: Increase digital medial budget $9.5K to include support of IEEE TC to record Webinars/tutorials in 2021.

MOTION Passes

VP of Standards & Update on Roadmaps   Johan Enslin

New officers
- Vice Chair: Matt Wilkowski
- Secretary: Xu She

Electronics Transformers Technical Committee (ETTC)
- New Chair:- George Slama, (Wurth Electronics)
- IEEE 393 Working Group – Matt Wilkowski
    - Update of Near Magnetic Field Characterization Working Group

PELS active IEEE SA Subcommittees
- WG-P389: Recommended Practice for Testing Transformers and Inductors for Electronics Applications - Standard was Approved by RevCom.
- WG-P1573: Recommended Practice for Electronic Power Subsystems: Parameters, Interfaces, Elements, and Performance - PAR expires in 2020 – Move to ballot soon.
- WG-P2030.1: Guide for grid infrastructure for electric transportation – No open PAR.
- WG-P2004: Hardware-in-the-Loop (HIL) Simulation Based Testing of Electric Power Apparatus and Controls – Developing Draft
- WG-1662: Design and Application of Power Electronics in Electrical Power Systems on Ships - In Ballot

ITRW Update
- ITRW in 2018/19 were very active years
    - Workshops at several venues
    - 5 papers in the PELS Magazine on ITRW
    - Developed and finalized ITRW Roadmap
- Continuation of ITRW-2.0.
    - Evaluate IEEE-SA Standards Development
    - Possible seed funding proposal
    - Plan activities for ITRW 2020
    - Interests from SCC-21 on ITRW Outcomes
    - Budget Impact for 2021 - $10 k

ITRD update
- ITRD was approved as an initiative for three years (2020-2022)
- The ITRD was started in 2019 with preparation for a formal launch in 2020 (likely in PEDG 2020)
- Promotion of ITRD at conferences: PEDG 2019, ECCE 2019, CPERE 2019, TC5 meeting
- Draft Whitepaper under preparation
- Signup of members for ITRD
    - Forming the working groups in the next step
- Stakeholders include industry (manufacturers, technology providers, consultants and utilities), national labs and research institutions, academia/students and professional associations.

New Standards Initiatives
- Broaden PELS involvement in SCC-21 i.e. P2030 SmartGrid and IEEE 1547 DER Series.
- SCC-21 Interest in ITRW activities.
- New SSC-21 Study Group on Grid-forming Inverters.
- Involvement into P2800 - Standard for Interconnection and Interoperability of Inverter-Based Resources Interconnecting with Associated Transmission Electric Power Systems
- Action Item:
    - Investigate new Standards Initiatives for 2021

Discussion: Rik De Donker: Grid connected inverters – IEC - grid working group DC grids – converters, solid state transformers – create a linkage with those activities – please get involved

Mario Pacas – get more involvement of European industry and work with European standards

MOTION from Standards: Road mapping (IRTW & ITRD) budget 2021 request $35k, and Investigate new Standards Initiatives Proposed Budget request for 2021 $15k

Sudip Mazmunder

Second: Xiongfang Wang

Motion Passes

Awards   Andreas Lindemann

Overview of Awards – IEEE level, PELS Awards, and publication awards

- Today travel 12,100 USD nominal in total/budgeted
- 2019: 2,851USD paid in total travel for awards (partially lower/no claims, no award)

Introduce concept: same rules for all award(ee)s, compliant to IEEE regulations – amount reasonably covering typical expenses (but receiving an award remains an honor and not a business)

Proposed policy to unify travel refund: – maximum 1000USD (limited to the amount of prize money, if lower) per award (can be split between multiple awardees) – travel refund covers ● transportation ● accommodation ● conference fees

Motion from Awards: to revise the description of IEEE Power Electronics Society Transactions Prize Paper Award

0,5% papers for 1st place award à 1000USD – 1% papers for 2nd place award à 500USD

Moved- Jian Sun

Motion passes

Motion: to revise the description of IEEE Power Electronics Society Prize Letter Award

1% of the papers awarded with 1000USD

Moved- Jian Sun

Second- Brad Lehman

Motion Passes

VP for Membership   Jinjun Liu

Review of PELS Membership stats – broke 10K in 2019

Growing - # 8 in total members of IEEE Societies

Review Members of the Membership organization structure

Recent actions:

- Restructure of best chapter awards
- Website on-demand chapter reports on membership – Tableau – all Reg Reps have access
- Piloted Regional Distinguished Lecturer Program – push this more in 2020+
- Work with national organizations for membership growth and retention
- Mentorship program – at flagship conferences
- Annual Members Meeting/Town-hall Meeting
- PELS Day celebration
- PhD Schools

Motion from Membership: to extend current Membership 2020 projects for 2021.

$10k for PELS Day celebrations project approved on-going new initiative

$15K for PhD Schools project, approved on-going new initiative

$24K for mentorship program, Completed new initiative transferring to operational budget

Second: Alan Mantooth

Motion Passes

VP for Global Relations   Mario Pacas

Relation to IEEE Societies

- Ernie Parker attended the TC Meeting and informed about the Systems Council

Relation to National Professional Societies

- Proposal to approach The Institution of Engineering and Technology (*IET*) former IEE

Other Associations

- EPE is still strong in Europe the cooperation until now limited to the conference and should be extended
- EPE has a strong link to European Industry
- PCIM, ECPE, Power Electronics UK
  - PCIM is growing and addressing emerging topics
  - ECPE is quite active in the area of workshops with a strong cooperation with Fraunhofer and Industry
  - Power Electronics UK (industry association)

What can PELS offer?
- PCIM co-sponsoring in China
- Key-Note speakers for PCIM events
- Tutorials
- Joint events with ECPE
- New Workshop(s)
  - Outcome and Lessons learned in Latin America (Colombia, Argentina, Mexico)
  - Different expectations in each country
- Joint Chapters with IAS, IES, PES,…
- PhD Schools as "new product"
  - 2019: China and Italy
- Webinars in different languages are necessary – need to expand in native language

Objectives, concrete plans
- Until now Focus on Latina America and some European countries
- More activities in Asia and other regions - India
- Being proactive regarding the specific needs in a country / region
  - Ad hoc operation is not possible any more - A team is necessary!

Actions:
- Set up of a task force / team for Global Relations
- Definition of a Structure for PhD Schools
- Continuation with the WSs, extension and modification based on the learned lessons
- Approaching ECPE and PCIM, UK associations
- More involvement in EPE
- Cooperation with Sister Societies in the regional chapter

VP Technical Operations Report   Yan Fei Liu

TC activates
- Webinars doing well – 9 committed and 9 planned
- Special issues in JESTPE - 7 proposed, in preparation, planned
- Conferences: All the TC's have one or more
- Awards: Technical Achievement Award
  - 5 TC established
  - 2 TC in progress, set up by 2021
- TC Student Travel lumped to VP budget from 2021

New TC Structures
- PELS Growth – 2019 10K members creates a need…
  - Better organized, more activities
  - Providing more TCs with diverse areas for members to find a "home"
- PELS: Field of Interest
  - Development and applications of Power electronic systems and technologies
  - Components, design, analysis, control
  - Theory, tools, efficiency,
  - Sustainable use of energy.
  - Cover existing and future technical fields
    - Providing home for growing technical fields
    - Enhancing collaborations with other societies

- Core people, conferences, activities, critical mass
- Balance among TCs
  - Avoiding super-big TC; Supporting TC growth in emerging areas
  - o Periodic review of TC structure
    - Every 6 years (three terms)

Proposed new PELS TC

	Proposed
TC1	Control and Modeling of Power Electronics (more accurate description, expand the area)
TC2	Power Components, Integration, and Power ICs (more accurate description; packaging, reliability, more effort on power IC, thermal management, sensors)
TC3	Electrical Machines, Drives and Automation (minor name change)
TC4	Electrical Transportation Systems (more accurate description)
TC5	Sustainable Energy Systems (focus on renewable and distributed energy resources side)
TC6	Emerging Power Electronic Technologies (same function) (bio applications, pulsed power, energy harvesting, catch all, etc.)
TC7	Critical Power and Energy Storage Systems (revamped from existing TC7) (Power components for data center and communication systems, battery interface technologies, energy storage systems)
TC8	Electronic Power Grid Systems (new, focus on grid side, bulk power system. More equal ground with PES.)
TC9	Wireless Power Transfer Systems (new, short range and long range wireless power transfer)
TC10	Design Methodologies (new, design automation, artificial intelligence, machine learning, cyber-physical security)
TC11	Aerospace Power (new, Power electronics in air, aircraft and spacecraft propulsion, electric power distribution systems)
TC12	Energy Access and Off-Grid Systems (EBL, off-grid systems)

Actions and Timeline:
- Approval of new TC structure in principle (motion 1) – by Constitution and Bylaws
- Budget approval of 2021 new TCs (15K X 5 = 75K)
- Between April and October 2020
  - o Propose Revise Bylaws and new TC P&P draft
  - o TCs and Conferences matching
  - o Identifying key persons for new TCs
- ECCE 2020 (Oct 2020)
  - o AdCom approval of updated Bylaw, P&P
- December 2020: President appoints new TC chairs
- APEC 2021: New TCs fully operational

MOTION from Tech Ops committee: to approve 105K to support 7 PELS TC in 2021
MOTION from Tech Ops committee to approve 70K to support Student Travel grants from PELS TC sponsored conferences in 2021.
MOTION to approve 40k from PELS to support the 2021 International Future Energy Challenge Updates (IFEC)
MOTION to approve to $75k from the IEEE Power Electronics Society to support the operation expenses of new TCs to be created in 2021
Move: Alireza Khaligh
Second: Jinjun Liu
Motion Passes

VP Conferences Report   Liuchen Chang
PELS Conferences continue to grow
Financial performance is good
3 new conferences in recent years – eGrid, WOW, and WiDPA
New – DAPE, CyberPELS, DEAS, and CPERE

Business updates:

- PELS members (and members of other financial sponsors) get a discount for registration fees (
- Timely closing of PELS conferences - PELS conferences are closed within 12 months
- More accurate budgeting (alleviate the impact of conference net fluctuations on PELS operation) – implemented by MCE staff, PELS staff and VP Conference by internally and manually adjusting the current budget using the 3-year average data and projected trend
- IEEE TCS fees will increase in 2021 for 100% recovery (v.s. current model of 2/3 recovery): $1450/event + $22/paper to Xplore [PELS has been requesting conference to pay, and thus will not be negatively impacted]
- To work with conference organizers and partners in adapting the changing landscape of some conferences in student participations, industry attendance, emerging technologies and PCO services:
    - ECCE
    - INTELEC 2021
- To establish guidelines (evaluation criteria, approval process and funding mechanism) for events/activities organized by non-IEEE OU (not a conference, but an event for which PELS provides sponsorship) (Alicia Tomaszewski has started); Working with VP Tech. Operation and IEEE staff; Ensuring consistency:
    - IEEE Sponsorship Agreement Form (legal review by hosting organizations, may be too complex in some cases)
    - Registration at IEEE ICS as TCS (PELS needs to pay the TCS fees)
    - Straight invoicing is not feasible
- Each TC may choose to have a flagship conference as a home network where most of its members are attending

MOTION from Conference Committee: Approve a total of 110K loan to ECCE Asia 2021 (60K) and ECCE 2022 (50K)
Motion Passes

Constitution and Bylaws   Patrick Wheeler

CURENT		Proposed with Additional TCs	
ELECTED	18	ELECTED	18
BALLOTED	7+6	BALLOTTED	12+6
APPOINTED	2	APPOINTED	2
DEFAULT	3	DEFAULT	3
TOTAL	36	TOTAL	**41**

- **Elected:** AdCom Members at Large, elected by membership
- **Balloted:** TC Chairs and Vice-Presidents
- **Appointed**: Treasurer and Constitution/ByLaws Chair
- **Default**: President and two Past-Presidents

Number of Elected Members MUST be equal or greater than number of Un-elected (Balloted, Appointed and Default)
The PELS AdCom is considered to be larger than average by IEEE
Possible Solutions:

1. **Technical Committee Chairs (s)elect a number of '*TC Chair Representatives*' to Adcom**
- Function and visibility of representation would seem to be unclear
- (S)elected TC Chairs to be voting members of AdCom and eligible for VP elections
- Maintains approximately size of **AdCom to 35**

2. **Remove all Technical Committee Chairs from voting members**
- Technical Committee Chairs could still attend AdCom as Observers and could be made eligible for VP elections
- Already represented by Vice-President for Technical Operations
- Reduces voting size of **AdCom to 29** – *IEEE will certainly approve of this idea*

3. **Remove all Vice-Presidents from voting members of AdCom**
- Creates a more 'executive' structure where VPs are accountable to AdCom
- All TC Chairs to be voting members of AdCom and eligible for VP elections
- Reduces voting size of **AdCom to 35**

4. **Add Additional Elected Members of AdCom**

- Already represented by Vice-President for Technical Operations
- All TC Chairs to be voting members of AdCom and eligible for VP elections
- Increases voting size of **AdCom to 46** – *IEEE will push back on this one!*

MOTION: the Constitution and ByLaws Committee works on revised ByLaws to include the additional TCs and the required changes to the PELS AdCom voting rights. *The proposed new ByLaws will be formally proposed at the next AdCom*
Moved: Braham Fererria
Second: Liuchen Chang
Motion passes

MOTION: The PELS AdCom voting rights are changed using one of the following principles:
1. **Technical Committee Chairs (s)elect 'TC Chair Representatives' to Adcom – 12 votes by AdCom members**
2. Remove all Technical Committee Chairs from voting members of AdCom – 2 votes by AdCom
3. Remove all Vice-Presidents from voting members of AdCom – 4 votes by AdCom
4. Add Additional Elected Members of AdCom

Moved: Jinjun Liu
Second: Axel Mertens
Motion passes

MOTION: That the revised Operating Procedures Document for the Strategic Planning Committee is approved.
- OLD: The Society President, Society Treasurer and up to four others may be invited to the meeting as advisers.
- PROPOSED: The Society President, Society Treasurer and Vice-Presidents may be invited to the meeting as advisers.

Moved: Pat Wheeler
Second: Jinjun Liu
Motion Passes

Financial implication of this AdCom   Jian Sun
- 2021 – available of 3% rule = 330K
  - Tech Ops   75K (for new TCs)
  - Standards   15K
  - Membership   49K
- 2021 increases
  - Products   171.5K
  - Standards   35K

Adjourn
- **MOTION from Rik deDoncker** To Adjourn
- **MOTION: Carried**