



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# **IPCSD Department Meeting**

**Pericle Zanchetta**

**IPCSD Chair**

**Saturday, December 4, 2021**



# Agenda

- Welcome and Meeting Opening – 1 min. (Pericle Zanchetta, IPCSD Chair)
- State of the IAS – 10 min. (Wei-Jen Lee, IAS President)
- Report on the IPCSD Awards Committee – 5 min. (Leon Tolbert, IPCSD Awards Chair)
- Report on IAS editorial meeting - 5 min. (Ayman EL-Refaie, , IAS Publications Chair)
- Report on IPCSD standards committee - 5 min. (Emmanuel Agamloh, IPCSD Standards committee Chair)
- IPCSD involvement in APEC update – 5 min (Fernando Briz, IPCSD Vice-Chair)
- Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min (5 min each)
  - ✓ EMC (Akira Chiba, EMC Chair)
  - ✓ IDC (Mahesh Swamy, EMC Chair)
  - ✓ IPCC (Luca Solero, IPCC Chair)
  - ✓ RSECS (Adel Nasiri, RSECS Chair)
  - ✓ TSC (Bulent Sarlioglu, TSC Chair)
  - ✓ PEDCC (Tanya Gachovska , PEDCC Chair)
- IAS Meetings Dept. -5 min (Chiara Boccaletti, IAS Meetings Dept. Chair)
- ECCE 2021 Update -10 min (Giovanna Oriti, ECCE 2021 Chair)
- ECCE 2022 Update -10 min (Emmanuel Agamloh, ECCE 2022 Chair)
- New IPCSD officers for 2022-23 - 10 min (Ayman El-Refaie and Pericle Zanchetta)
- Closing remarks & Motion to adjourn – 1 min. (Pericle Zanchetta, IPCSD Chair)

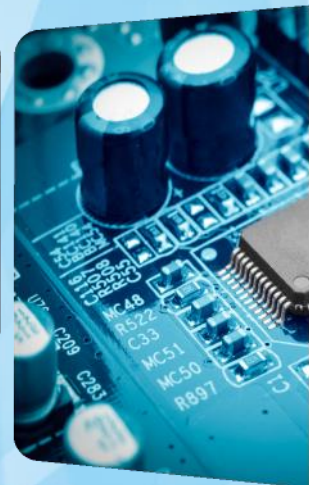


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# Agenda

- State of the IAS – 10 min. (Wei-Jen Lee, IAS President)



# President Report

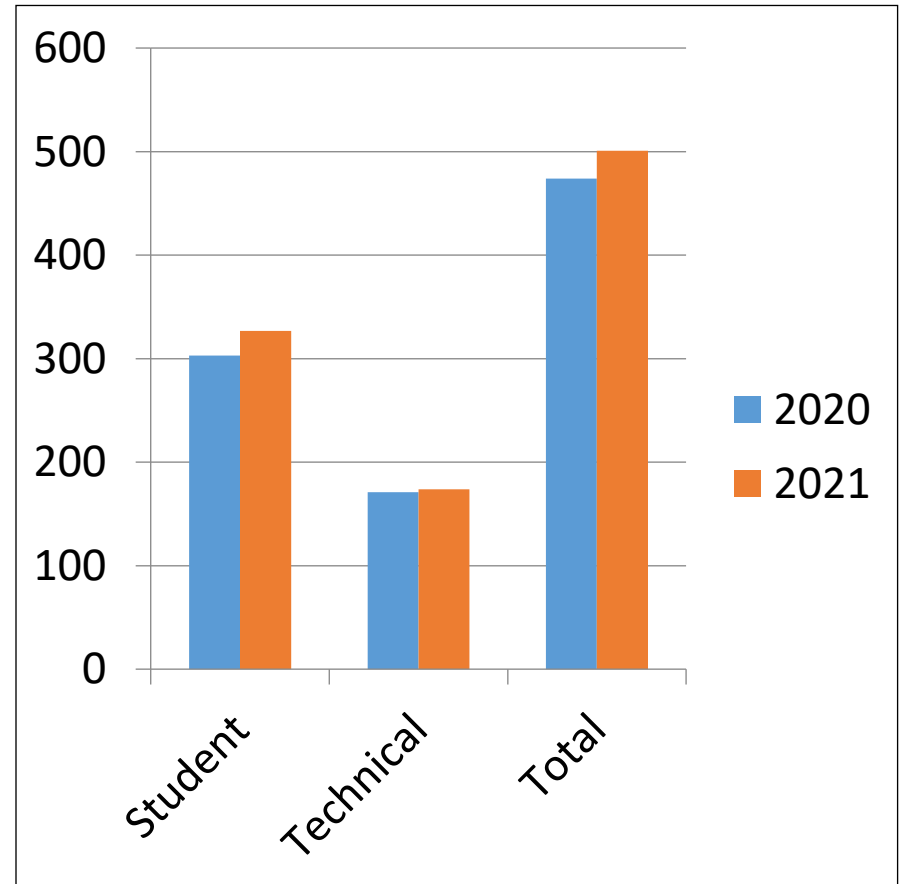
*Wei-Jen Lee, IAS President 2021-22*

*December 4, 2021*

# IAS Chapter Status and Development

2020-2021

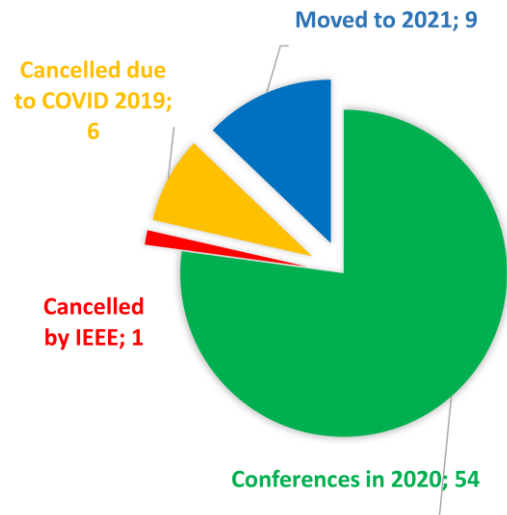
- ▶ Data: October 2021
- ▶ Student Branch Chapters
  - 327 **(+7.9%)**
- ▶ Technical Chapters
  - 174 **(+2.4%)**
- ▶ Total Chapters
  - 501 **(+5.9%)**



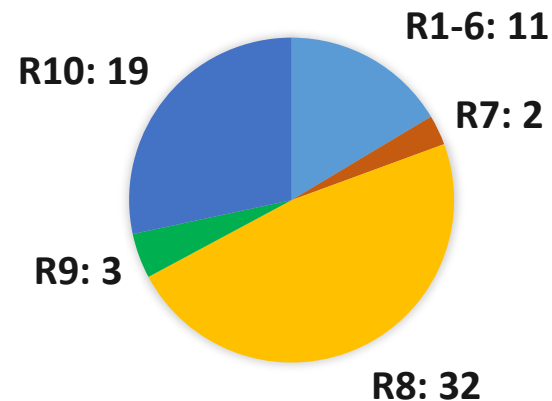
# IAS Conferences activities (2020 Record)

*54 IAS conferences organized in 22 countries*

- ▶ Conferences in 2019 67
- ▶ Application in 2020 70
  - Cancelled by IEEE: 1
  - Cancelled due to COVID 2019: 6
  - Cancelled and moved to 2021: 9
- ▶ Conferences in 2020: 54



## Conferences in 2019 Total: 67



# Fellows Nominated/Elevated By Societies – Class of 2021

Society/Council	PE	IA	IE	PEL
Voting Membership	31,466	10,836	7,582	9,093
Nominations Received	78	31	18	16
Nominees Elevated	17	7	8	8
% of Total Voting Membership	9.4%	3.2%	2.3%	2.7%
% of Total Nominations Received	8.3%	3.3%	1.9%	1.7%
% of Total Nominees Elevated	6.0%	2.5%	2.8%	2.8%
% Success	21.8%	22.6%	44.4%	50%

Source: fellow-stats-summary-years

Overall Success Rate: 30.1% (282/936)

# Fellows Nominated/Elevated By Societies – Class of 2022

Society/Council	PE	IA	IE	PEL
Nominees Elevated	18	10	9	8

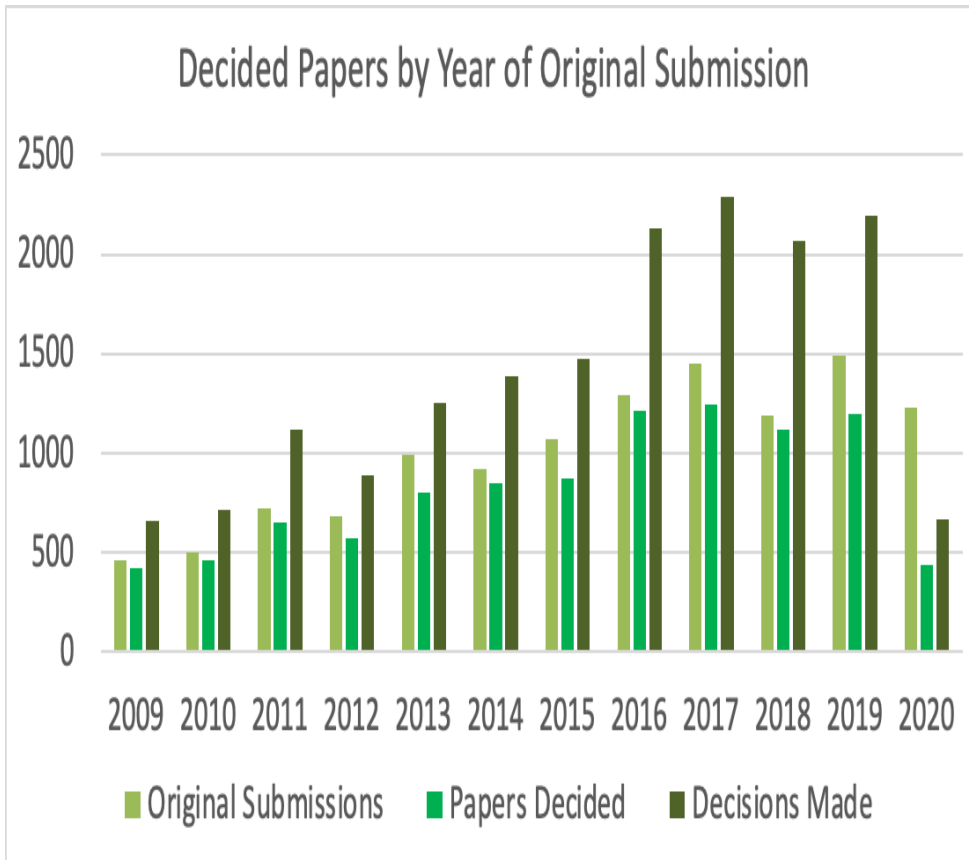
Source: fellow-stats-summary-years

# Financial Situation

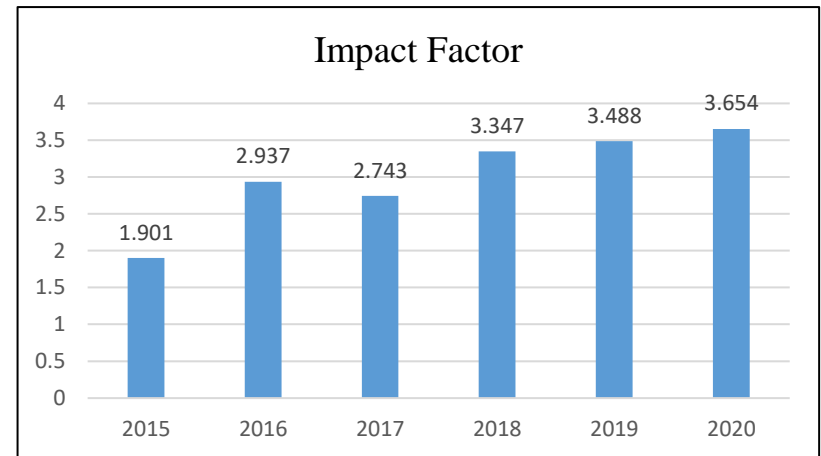
	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Budget	2021 Jul Forecast	2021 Sept YTD
Revenues	5 187,7	5 639,9	6 531,3	3 732,3	4 443,7	4 609,6	2 587,5
Expenses	5 663,5	5 219,7	5 540,4	2 514,0	4 319,8	3 751,9	1 797,0
<b>Operating Net</b>	<b>-475,8</b>	<b>420,2</b>	<b>990,9</b>	<b>1 218,3</b>	<b>123,9</b>	<b>857,7</b>	<b>790,5</b>
Initiative Expense (3% and 50%)	0,0	0,0	27,6	75,0	144,9	61,4	1,2
Invest. Returns Expense	-1 238,1	259,8	-1 286,0	-1 206,6			
<b>Total Net</b>	<b>762,3</b>	<b>160,4</b>	<b>2 249,3</b>	<b>2 349,9</b>	<b>-21,0</b>	<b>796,3</b>	<b>789,3</b>
Society reserves	8 169,0	8 329,3	10 143,7	12 275,0			

# Our Publications

*TIAS and Magazine*



Impact factor on IEEE Transactions  
on Industry Applications



# Open Access Journal



**Editor in Chief:** Pericle Zanchetta

## Summary

- 50 papers accepted on a total of 150 submitted so far
- 23 papers published in the 2020 volume: 285/300 of the 2020 page budget (among these – 6 invited, 17 paying full APC)
- For the 2021 issue we have already 27 papers (among these – 2 invited, 4 special issue, 21 paying full APC) – the number will increase by 31/12/2021
- We have budgeted for 300 pages, but probably we will need 400/450
- Eliminating the invited papers, the acceptance rate so far is **29.5%**
- For papers submitted in 2021, the acceptance rate is lower (**24%**)
- We need better strategies to increase number of citations

# IAS Awards & Distinctions

## 2021 Nikola Tesla Award



**Zi-Qiang Zhu**

For Contributions to the design, modeling, control and application of AC permanent magnet machines and drives.

## IEEE IAS Outstanding Achievement Award



**Prasad Enjeti**

## IEEE IAS Distinguished Service Award



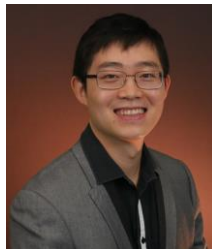
**Adam Skorek**

## IEEE IAS Educator/Mentor Award



**Sri Niwas Singh**

## 2020 IAS Andrew W. Smith Outstanding Young Member Achievement Award



**Zenyu Zhang**

## 2020 IAS Outstanding Young Member Service Award



**Muhammad Hamza Ihtisham**

## New Fellows (elevated through IAS)

- Mohammad Nazmul Anwar
- Hua Geng
- Amit Gupta
- Chandra Namuduri
- Mahesh Swamy
- Mohammad Uddin
- Firuz Zare



# Myron Zucker Faculty Student Grant

- ▶ Call For Nominations Out : Jan 17
- ▶ Nomination Deadline : March 31,
- ▶ Final Selection: May 1, 2021
- ▶ Approval by Board: June 15
- ▶ Inform results to the applicants: June 30
- ▶ Total 14 submissions received
- ▶ Six Member Committee evaluated
- ▶ Two finalists were selected

## **Winner 1**

*“High-Reliability Electric Propulsion Drives based on Digital Twin Technologies”*

Advisor: Jiangbiao He, University of Kentucky, USA

## **Winner 2:**

*“FPGA Based Cost-effective Digital Protection Schemes for Reliable Protection of Large-scale Wind Farms”*

Advisor: Nasir Uddiin, Lakehead University, Canada

# Regarding Our 5-Year IAS Strategic Plan

**For 2020 we created these four (4) IAS Strategic Initiative Committees with volunteers working on:**

## **1) IAS Sustainability Projects**

Team Leader: Abdul Ofala and Surya Doolla

## **2) Bridge-building, Alliances and Partnering Projects**

Team Leader: Surya Doolla and David Eng

## **3) Professional & Career Development Resources for our Members**

Team Leader: Nishad Mendis

## **4) IAS Projects Benefitting Humanity**

Team Leader: John P. Nelson

# IAS Strategic Plan - Actions in 2020 Continued

- IAS Executive Board Member is the leader of each of these Committees.
- We Advertised our “Call for Committee Volunteers” in the: IAS Website; IAS Newsletter; CMD circulars; and Social Media.
- Each Committee has 15 or more volunteer members, including student members.
- Committee work is done online using electronic collaboration tools since committee members are located all around the world.
- “Student Volunteers” are getting valuable exposure to IAS operations and committee work. In recognition of their student time limitations, they receive manageable tasks.
- Our Goal: Build a stronger IAS home for our members.

# Elections Results

## *Department Chairs and Member at Large*

### Election's performance

- Number of Ballots sent out: 96
- Number of vote received: 70
- % return: 73%



**IPCSD Chair  
Fernando Briz**



**MSDAD Chair  
Maciej Noras**



**Member at Large  
Keith Waters**



**Member at Large  
Pericle Zanchetta**



**Thank you !**

# Agenda

- ☐ Report on the IPCSD Awards Committee – 5 min. (Leon Tolbert, IPCSD Awards Chair)



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
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# **IPCSD Award Committee Report**

**Leon M. Tolbert**

IPCSD Awards Chair

December 4, 2021

# 2021 IAS Awardees

- Outstanding Achievement: **Prasad Enjeti**
- Distinguished Service: **Adam Skorek**
- Mentor/Educator Award: **Sri Niwas Singh**
- Andrew W. Smith Outstanding Young Member Achievement Award: **Zheyu Zhang**
- Outstanding Young Member Service Award: **Muhammad Hamza Ihtisham**
- Gerald Kliman Award: **Robert Guenther**
- Seethapahaty Rural Electrification Excellence Award: **Satish Chaparala**

# IAS awards

- IAS IPCSD Gerald Kliman Innovator Award (Deadline: June 1)
- Awards require a nominator (cannot self-nominate)
- Nominations through web-based-form: <https://ias.ieee.org/awards.html>
- IEEE Andrew W. Smith Outstanding Young Member Achievement Award (Deadline: March 15)
- IAS Outstanding Young Member Service Award (Deadline: March 15)
- IAS Distinguished Service Award (Deadline: March 15)
- IAS Outstanding Achievement Award (Deadline: March 15)
- IAS Outstanding Educator/Mentor (Deadline: March 15)
- IEEE Richard Harold Kaufmann Award (Deadline: Jan 15)
- IEEE Fellow (Deadline: March 1)
- IAS Distinguished Lecturers (Deadline: March 31)

# 10 IAS members in IEEE Fellow Class 2022 (nominated through IAS)

Fang Deng

Donald Dunn

Jin Hur

Tseng King Jet

Vinod Khadkikar

Babak Nahid-mobarakeh

Abdolhosein Nasiri

Gianmario Pellegrino

Bulent Sarlioglu

Brij Singh

## IAS members in IEEE Fellow Class 2022 (nominated through other societies)

J Marcos Alonso (PELS)

Rajapandian Ayyanar (PELS)

Subhashish Bhattacharya (PELS)

Joao Paulo Catalao (PE)

Heath Hofmann (PELS)

Qi Huang (PE)

Tian-hua Liu (IE)

Satish Ranade (PE)

Tadashi Sawata (IE)

Anurag Srivastava (PE)

Kiyohisa Terai (PE)



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# Backup Slides

# Gerald Kliman Innovator Award - 2021

- 7 nominations received
- Award Committee – Past Kliman Awardees
- **Robert Guenther** (NWL) cited: *“For developing specialized high voltage power supplies for industrial users”*



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
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## IAS IPCSD Gerald Kliman Innovator Award (Deadline: June 1)

The IEEE IAS Industrial Power Conversion Systems Department (IPCSD) Gerald Kliman Innovator Award was established to honor innovators who contributed to the technical areas of IPCSD Department.

For meritorious contributions to the advancement of power conversion technologies through innovations and their application to Industry.

Needs 3 endorsement letters.

Criteria considered by the Evaluation Committee shall include: impact of the nominee's work on the technology; discernable and salient innovative aspect of the nominee's work; the breadth of use of the work; the depth of the work's impact on the industry; the technical leadership value of the work.

# IAS Gerald Kliman Award – past recipients

**2021 – Robert Guenther**

2020 – Vlado Blasko

2019 – Alex Huang

2018 – Fred Wang

2017 – Richard Lukaszewski

2016 – Jason Lai

2015 – Manoj Shah

2014 – Jan Abraham Ferreira

2013 – Fang Zheng Peng

2012 – Thomas Habetler

2011 – Leo Lorenz

2010 – William Peterson

2009 – John Miller

2008 – Ira J. Pitel

2007 – Bruno Lequesne

2006 – Kaushik Rajashekara

2005 – Russel J. Kerkman

# IAS Distinguished Lecturer (Deadline: March 31)

- Nominator and Candidate contact information
- One page biography of the Candidate with a color photo in the upper left corner and contact email address
- List of the lecture topics with the titles and short abstracts (max. 600 characters each)

# IAS Distinguished Lecturers 2019-2021

[https://engage.ieee.org/ES-TA-1017-2019-IAS-NLTR-June\\_IAS-DL.html](https://engage.ieee.org/ES-TA-1017-2019-IAS-NLTR-June_IAS-DL.html)

- **Afshin Majd**
- **Bulent Sarlioglu**
- **Pablo Simon Narvaez**
- **Giuseppe Parise**
- **Jose Antonino-Daviu**
- **Lucia Pia Torres**
- **Po-tai Cheng**
- **Ronghai Qu**
- **Niwas Singh**



## IEEE IAS Andrew W. Smith Outstanding Young Member Achievement Award (Deadline: March 15)

- Established in 1996, renamed in 2009 and 2015.
- Recognizes outstanding achievement and contribution to the profession through involvement in IEEE IAS activities by an IAS member less than 35 years of age.
- Prize: \$2,500, Plaque and travel expenses to attend an IAS sponsored conference for presentation and recognition.
- Eligibility: **Nominees must be age 35 or less at the specified award nomination due date.** To be considered as a nominee, a one page form must be completed describing IAS activities and associated contributions made by the nominee. The form must be submitted and received by the IAS President before the specified due date of March 15. Self nomination is not permitted for this award.
- Basis for Judging: Outstanding contribution to the profession in the form of IEEE/IAS activities such as (but not limited to) authorship of technical papers, IAS chapter leadership, IAS committee work, conference leadership, and standards working groups.
- **2021: Zheyu Zhang, Clemson University**



## IEEE IAS Andrew W. Smith Outstanding Young Member Award – past recipients

2020	Yue Zao	2007	Leila Parsa
2019	Jiangbao He	2006	Burak Ozpineci
2018	Pinjia Zhang	2005	Ganesh K. Venayagamoorthy
2017	Xu She	2004	Dan Neeser
2016	David C. Mazur	2003	Michael J. Hittel
2015	Tiefu Zhao	2002	Giovanna Oriti
2014	Bin Lu	2001	Leon Tolbert
2013	Akshay Kumar Rathore	2000	Annette von Jouanne
2012	Zhi Gao	1999	Kimberly K. Eastwood
2010	Wei Qiao	1998	Iqbal Husain
2009	Ayman M. EL-Rafaie	1997	Mark Halpin
2008	Nadeza A. Dvurechenskaya	1996	Christine M. Kent

## IAS Outstanding Young Member Service Award (Deadline: March 15)

- Recognizes outstanding service and contribution to the profession through involvement in IEEE IAS activities by an IAS member less than 35 years of age.
- Prize: \$2,500, Plaque and travel expenses to attend an IAS sponsored conference for presentation and recognition. Funded by the IEEE Industry Applications Society.
- Eligibility: Nominees must be less than age 35 at the specified award nomination due date. To be considered as a nominee, a one page form must be completed describing IAS activities and associated contributions made by the nominee. The form must be submitted and received by the IAS President before the specified due date of March 15. Self nomination is not permitted for this award.

Basis for Judging: Outstanding contribution to the profession in the form of IEEE/IAS activities such as (but not limited to) authorship of technical papers, IAS chapter leadership, IAS committee work, conference leadership, and standards working groups.

- **2021: Muhammad Hamza Ihtisham**



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## IAS Outstanding Young Member Service Award – past recipients

2020	Zhaohao Ding
2019	Srikanth Vasudevan Pillai
2018	Richard Cselko
2017	Megha Tak
2016	Christina P. Malliou



## IAS Outstanding Achievement Award (Deadline: March 15)

- Honors an individual who has made an outstanding contribution in the application of electricity to industry in accordance with the scope of the IEEE Industry Applications Society.
- Prize: \$5,000 and engraved statuette, Funded by the IEEE Industry Applications Society.
- Basis for Judging: Any of the following criteria apply: invention in the field as exemplified by issued patents; contribution to the general engineering or scientific basis of the technologies found within the scope of the IAS; executive or managerial contribution in the organization or operation of enterprises as associated with the scope of the IAS. Self nomination is not permitted for this award.
- **2020: Prasad Enjeti, Texas A&M University**

## IAS Outstanding Achievement Award – Past Recipients

2020	Fang Zheng Peng	2002	Rik DeDoncker
2019	Zi-Qiang Zhu	2001	L. Bruce McClun
2018	Dianguo Xu	2000	Kouki Matsuse
2017	Braham Ferreira	1999	Akira Nabae
2016	Seung-Ki Sul	1998	Don Novotny
2015	Pragasen Pillay	1997	Joachim Holtz
2014	Thomas A. Nondahl, Longya Xu	1996	Austin H. Bonnett
2013	Muhammad H. Rashid	1995	James Erickson
2011	Thomas Jahns	1994	Ray Stratford
2010	Tomy Sebastian	1993	B.K. Bose
2009	Kaushik Rajashekara	1992	Azizur Rahman
2008	Paresh C. Sen	1991	Thomas E. Sparling
2007	Caio Ferreira	1990	George W. Walsh
2006	J. D. van Wyk	1989	Donald Ross
2005	Nobuyuki Matsui	1988	Curtis Herskind
2004	Hirofumi Akagi	1986	Thomas A. Lipo
2003	Bob Lorenz	1984	Russell W. Mills



## IAS Distinguished Service Award (Submission Deadline is March 15)

- Recognizes an individual for dedication and service to the IEEE Industry Applications Society.
- Prize: \$5,000 and Plaque, Funded by the IEEE Industry Applications Society.
- Basis for Judging: Exceptional administrative, managerial and leadership achievement; proposal and/or implementation of innovative new Society programs; dedication to the growth and advancement of the Society and/or its geographic and technical entities. Self nomination is not permitted for this award.
- **2021: Adam Skorek**

## IAS Distinguished Service Award – Past Recipients

2020	Bruno Lequesne	2008	Clayton H. Reid
2019	Mark Nelms	2006	Peter Magyar
2018	John Nelson	2005	Satish Chaparala
2017	Jerry Hudgins	2004	Dayne Aldridge
2016	Barry Brusso	2003	Andrew W. Smith
2015	Carlton Speck	2002	Frederick C. Trutt
2014	Louie J. Powell	2001	Michael J. Foley
2013	H. Landis (Lanny) Floyd	2000	Donald S. Brereton
2012	William D. Greason	1999	Baldwin Bridger, Jr.
2011	Robert Lorenz	1998	F. A. Furfari
2010	Mark Harris	1997	Edward A. E. Rich

## IAS Outstanding Educator/Mentor (Deadline: March 15)

### New Award

- The purpose of the Society Outstanding Educator/Mentor Award is to honor an individual who has made outstanding contributions to education and mentorship of students and young engineers within the fields of interest of the IEEE Industry Applications Society.
- Prize: \$3,000.
- Basis for Judging: Selection is based on total contribution to the profession through any and all IEEE IAS activities in which the candidate is engaged.
- **2021 Awardee: Sri Niwas Singh**

## IAS Outstanding Educator/Mentor (Deadline: March 15)

### Basis for Judging:

- Development of educational materials: books, course materials, papers on education, audiovisual teaching materials, on-line courses, etc.
- Relevant teaching/mentorship activities and stimulation of students and young professionals: bachelor, master and doctorate courses and supervision activities, conference tutorials, webinars, on-line tutorials, etc
- Mentoring of students or professionals within the industry to help further their understanding of technology and market dynamics, aiming to enhance their career.
- Innovations in teaching/mentoring: development of new teaching methodologies and materials, courses, teaching laboratory equipment development, industry training, etc.
- Research activities relevant to excellence in teaching and training of students and young professionals: inventions, patents, utility models, etc. and description on how these activities increase teaching/mentoring excellence
- Excellence in teaching/mentorship: awards and recognitions received by the candidate and former students/young co-workers, relevant positions held by former students/young co-workers, etc.
- Development/presentation of tutorials at IAS conferences and content at the IAS Resource Center.
- Creation/participation of/in university/industry training actions for students and young professionals.
- Tutoring university master/doctorate students in enterprise internship training.



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# IEEE Richard Harold Kaufmann Award

The IEEE Richard Harold Kaufmann Award was established by the IEEE Board of Directors in 1986.

The Award is named in honor of Richard Harold Kaufmann in memory of his many important contributions to industrial systems engineering and his dedicated service to the IEEE Industry Applications Society. Recipient selection is administered through the Technical Field Awards Council of the IEEE Awards Board.

Sponsor: IEEE Industry Applications Society

Presented to: An individual or team of up to three persons

Scope: For outstanding contributions in industrial systems engineering

Prize: The award consists of bronze medal, certificate, and honorarium.

Basis for judging: In the evaluation process, the following criteria are considered: exceptional contributions to design or application of systems technology, application of systems technology, apparatus, devices or materials for plant power distribution, drive systems, process control or other utilization systems, and the quality of the nomination.

Nomination deadline: 15 January

Endorsement deadline: 31 January

**2022: Paresh C. Sen, “For contributions to the theory, practice, education, and development of advanced industrial motor drives and power electronics systems.”**

# IEEE Richard Harold Kaufmann Award Past Recipients

2021 – Stephen McArthur  
2020 – Kouke Matsuse  
2019 - Susumu Tadakuma  
2018 - Greg Stone  
2017 - Erling Hesla  
2016 - G.S. Peter Castle  
2015 - Charles John Mozina  
2014 - Robert D. Lorenz  
2013 - Kaushik Rajashekara  
2012 - John P. Nelson  
2011 - David D. Shipp  
2010 - Gerald T. Heydt  
2009 - Ronald G. Harley  
2008 – Hirofumi Akagi  
2007 – Md. Azizur Rahman  
2006 – George W. YOUNKIN  
2005 – A.P. Meliopoulos

2004 – Richard L. Nailen  
2003 – Edward LaVerne Owen  
2002 – H. Landis Floyd  
2001 – Louie J. Powell, Jr.  
2000 – Alton Dewitt Patton  
1999 – Baldwin Bridger, Jr.  
1998 – James A. Oliver  
1997 – Thomas E. Sparling  
1996 – Marcus O. Durham  
1995 – M. Shan Griffith  
1994 – Daniel J. Love  
1993 – George W. Walsh  
1992 – Kao Chen  
1991 – John R. Dunki-Jacobs  
1990 – Renee Castenschiold  
1989 – Bernard W. Whittington  
1988 – Walter C. Huening, Jr.

## IEEE Fellow (Deadline: March 1)

- Any person, including non-IEEE members, is eligible to serve as a nominator. The following are exceptions: Members of the IEEE Board of Directors, members of the IEEE Fellow Committee, IEEE Society/Technical Council Fellow Evaluating Committee Chairs, members of IEEE Society/Technical Council Fellow Evaluating Committee reviewing the nomination, or IEEE Staff.
- The nominator is responsible for preparing the IEEE Fellow Grade Nomination Form.
- The nominator is responsible for soliciting five references capable of assessing the nominee's contributions. References must be IEEE Fellows.
- There is the option of soliciting no more than three endorsements capable of supporting the nomination. Any person, including non-IEEE members, may submit an endorsement. The following individuals are ineligible to serve as endorsements: members of the IEEE Board of Directors, members of the Fellow Committee, members of the IEEE Society/Technical Council Fellow Evaluating Committee reviewing the nomination or IEEE Staff. In addition, a nominator may not serve as an endorser for a nomination he/she is submitting.
- Complete list of IAS Fellows at webpage:  
<https://ias.ieee.org/awards/ieee-fellow-program/ias-fellows.html>

# Agenda

- ☐ Report on IAS editorial meeting - 5 min. (Ayman El-Refaie, IAS Publications Chair)



# IEEE IAS 2021 Publications Update - IPCSD Meeting

*Ayman EL-Refaie*

# Overview of IAS Publications

## *IAS Owned*

- ▶ Transactions on Industry Applications
- ▶ Industry Applications Magazine
- ▶ Open Journal of Industry Applications

# Overview of IAS Publications

## *IAS Co-Sponsored*

- ▶ Journal of Emerging and Selected Topics on Power Electronics (50%, PEELS Admin)
- ▶ Transactions on Transportation Electrification (IAS 30%, PEELS Admin)
- ▶ Transactions on Sustainable Energy (IAS 10%, PES Admin)
- ▶ Electrification Magazine (IAS 15%, PES Admin)
- ▶ Journal of Emerging and Selected Topics on Industrial Electronics (IAS 1/7<sup>th</sup>, IES Admin)
- ▶ Transactions on Smart Grid (Technical Sponsor Only, PES Admin)

# Co-sponsored Journals

- ▶ JESPTTE currently led by IAS - Ojo is EIC through end of 2021
  - Important for IAS to continue to actively contribute
  - New EIC will be from PELS
  - New IAS deputy EIC appointed (Fernando Briz)
- ▶ Electrification Magazine – part of IAS member benefits. Looking to raise advertising revenue to improve financial situation

# Prize Paper Process

- ▶ Transactions: 664 published papers, 16 nominations, 11 committees and 1 special issue, 3 awards
- ▶ Magazine: 49 published papers, 10 nominations, 4 committees, 2 awards
- ▶ Open Journal: No awards yet
- ▶ Nominations reviewed and ranked by ad hoc committee of past and present publications chairs, magazine EIC and S1M administrator

# 2021 Prize Paper Award Recipients

## *Transaction on Industry Applications*

### **First**

On the Use of Artificial Intelligence for High Impedance Fault Detection and Electrical Safety

Shiyuan Wang and Payman Dehghanian

<https://ieeexplore.ieee.org/document/9170882>

### **Second**

Winding Thermal Modeling and Parameters Identification for Multi Three Phase Machines Based on Short-Time Transient Tests

Paolo Pescetto, Simone Ferrari, Gianmario Pellegrino, Enrico Carpaneto, and Aldo Boglietti

<https://ieeexplore.ieee.org/document/8970537>

### **Third**

Wind Farm Dynamic Equivalent Modeling Method for Power System Probabilistic Stability Assessment

Peng Wang, Zhenyuan Zhang, Qi Huang; and Wei-Jen Lee

<https://ieeexplore.ieee.org/document/8976266>

# 2021 Prize Paper Award Recipients

## *Industry Applications Magazine*

### **First**

Introduction to IEEE Standard. 1584 IEEE Guide for Performing Arc-Flash Hazard Calculations- 2018 Edition

Daleep Mohla, Wei-Jen Lee; Jim Phillips, and Albert Marroquin

<https://ieeexplore.ieee.org/document/9127778>

### **Second**

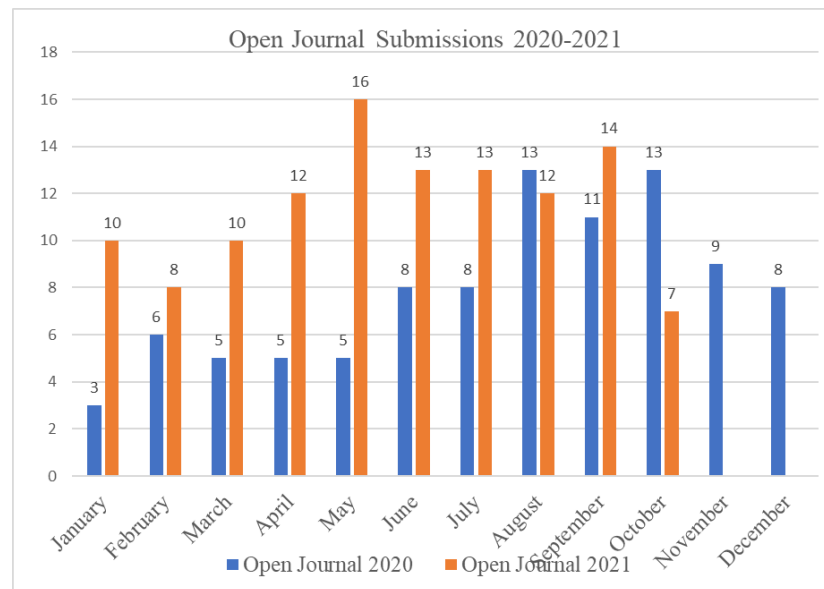
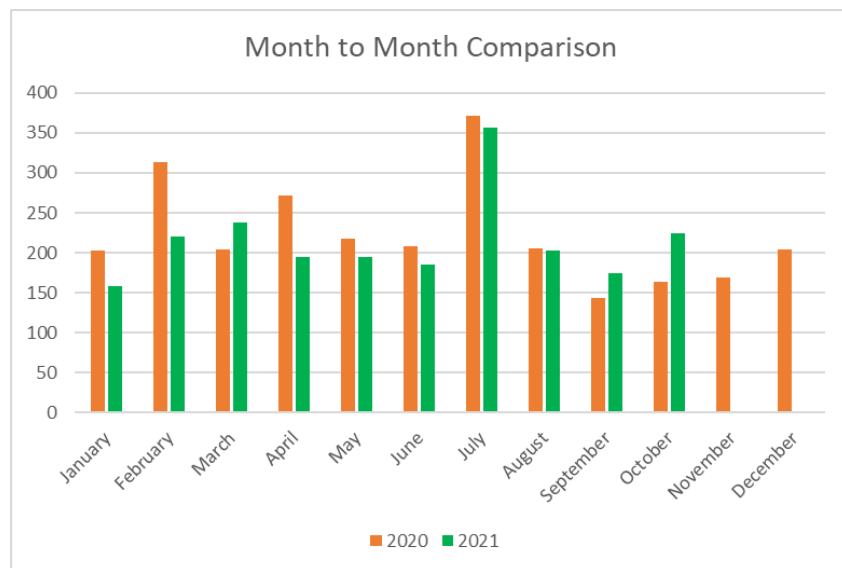
Replacing Induction Motors With Caged-Rotor Permanent Magnet Motors: Application Considerations and Cost Analysis

Robert McElveen, William Martin, and Richard Holub

<https://ieeexplore.ieee.org/document/9179735>

# Transactions, Magazine and Open Journal

2020 vs 2021



~7% decrease in submissions 2021 (2150) over 2020 (2302) for TIA and IAM through October

~50% increase in submissions 2021 (115) over 2020 (77) for Open Journal through October

# Manuscript Central and Editorial Issues

*PRAC is coming*

- ▶ Need to look at AE activity
  - ▶ Are your AE's responsive?
- ▶ Need to have gender and geographical diversity
- ▶ IPCSD publishes, edits, reviews, submits, the majority of TIA papers

# Deputy EIC of Transactions of Industry Applications

- ▶ There is an opening that was advertised in the latest IAS newsletter
- ▶ This is a very critical position for the future of transactions
- ▶ We need the help of everybody especially IPCSD committee chairs to encourage strong candidates to apply
- ▶ Applications need to be submitted to me as well as any questions

# Detailed Pubs Material

- ▶ Slides from the full IAS Publications Meeting are available for download
- ▶ <https://drive.google.com/file/d/1sLdyXoyNN9IwXi9HMNw0j8X1H0kqmbBe/view?usp=sharing>

# Agenda

- Report on IPCSD standards committee - 5 min. (Emmanuel Agamloh, IPCSD Standards committee Chair)

# IPCSD Standards Development Committee

Emmanuel Agamloh  
IPCSD Standards Chair

11/20/2021

# IPCSD Stds Development Committee

- Chair: Emmanuel Agamloh
- IPCSD Std Committee Comprises Chairs of Standards Subcommittees of the six IPCSD Technical Committees
- Other ex-officio members include the IPCSD Leadership, IAS Leadership, IAS Standards Chair
- Technical Committee Standards Chairs:
  - Haran Karmaker EMC –
  - Kevin Lee – IDC
  - Lee Empiringham – IPCC
  - Adel Nasiri – RSEC
  - Tanya Gachovskaya – PEDCC
  - Bruno Lequesne – TSC

# IPCSD Standards Scope

*The scope of the Industrial Power Conversion Systems Department (IPCSD) includes all matters within the scope of the industry Applications Society related to the electrical power conversion components and systems, in particular, electrical machines, drives, power converters and power electronic devices, components, and systems in industrial and commercial applications including transportation systems and renewable energy systems. The IPCSD Standards Committee shall create voluntary consensus engineering standards, recommended practices and guidelines for development, design, manufacture, application of electrical power conversion components and systems. The committee shall seek to establish industry leadership for the promotion of safe, reliable and energy efficient power conversion components and systems.*

# Activities

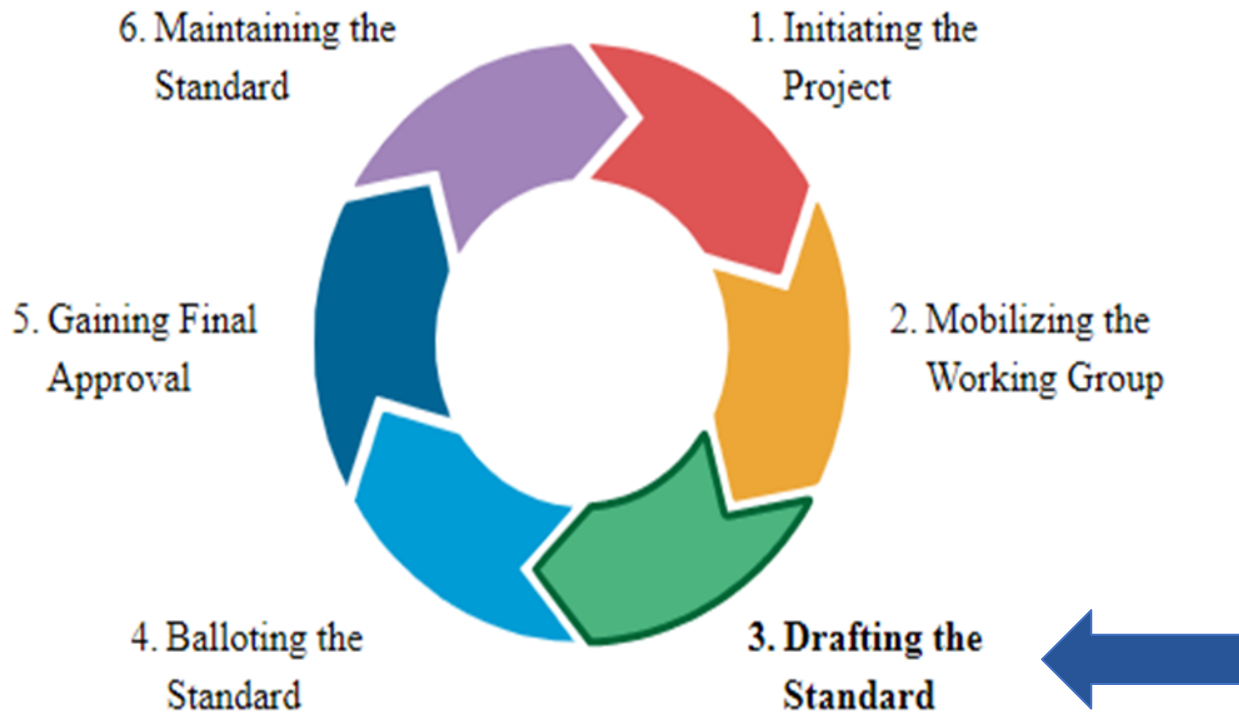
## Timeline

- Chair appointed - January 2020
- Process initiated with IEEE SA for formal recognition - January 2020
- IPCSD SDC Policies and Procedures (P&P) submitted Feb/March 2020
  - **Approved**
- IPCSD Standards Committee has developed Generic Policies and Procedures for Standards Subcommittees of IPCSD

## ***Policies and Procedures for: All Individual Method Working Groups of the Industrial Power Conversion Systems Department Standards Development Committee***

- Submitted to SA for approval – May/June 2020,
  - Revised September/October 2020,
  - Scheduled for AudCom Meeting Date: December, 1 2020
  - Revised– Jan 22, 2021
  - **Approved**

# IEEE Standards Development Cycle



# New Projects

- IDC – Motor-drive standard
- PEDCC - Gate drive characterization
- PEDCC – UV LED standard
- EMC – single-phase IM standard
- *New PARs submitted and Approved*
  - P2943: Energy Efficiency Test Methods for Three-Phase Variable Frequency Drive Systems
    - *WG Chair : Kevin Lee*
  - P2964: Standard for Datasheet Parameters and Tests for Integrated Gate Drivers
    - *Chair: Tanya Gachovskaya, Vice Chair: Zheyu Zhang*
  - P114: IEEE Standard test procedure for single-phase induction motors
    - *WG Chair : Maher Al-Badri*
  - P3114: IEEE Standard for Datasheet Parameters and Testing Protocols for Ultraviolet (UV) Light-emitting Diodes (LEDs)
    - *Chair: Tanya Gachovskaya, Vice Chair: Zheyu Zhang*

# New Projects

IDC

Chair: Kevin Lee

Secretary: Jiangbiao He

## Timeline of P2943 Working Group Project

- **Project Title:** P2943-Energy Efficiency Test Methods for Three-Phase Variable Frequency Drive Systems.
- **Scope Statement:** This standard defines a common test protocol for determination of energy efficiency for motor drive systems, for an AC motor and a combination of a Variable Frequency Drive (VFD), AC motor, and ancillary equipment. Performance classifications for the said motor drive systems are also defined.
- **Project Status:** On September 24, 2020, the IEEE SA Standards Board approved the project.
- **Project Timing:** Until December 31, 2024.



# New Projects

IDC

Chair: Kevin Lee  
Secretary: Jiangbiao He

## Topics and Active Members in Progress

Document Section	Task Leader(s)	Status
General	Luis Rodriguez , Hassan Eldeeb	On-going
System Settings	Joseba Arza, Mahesh Swamy	On-going
Test Measurements	Fernando Briz, Di Pan	On-going
Testing Procedures with regards to thermal equilibrium of system	Mahesh Swamy, Hassan Eldeeb	TBD
Testing Procedures of Multi Drive System	Mahesh Swamy, Fernando Briz	On-going
Load Test Schedule	Kevin Lee, Jiangang Hu	TBD
Torque Offset Measurement	Eric Armando, Jiangang Hu	On-going
System Sub-System Efficiency Calculations	Lei Hao, Zheyu Zhang, JiangBiao He	TBD

# New Projects

PEDCC

Chair: Tanya Gachovskaya

Vice Chair: Zheyu Zhang

Secretary: Inki Park

## P2964 IEEE Standard for Datasheet Tests for Integrated Gate

**Scope:** The standard provides datasheet parameters and tests for integrated gate drivers, which include non-isolated gate drive, level-shifted gate drive, and isolated gate drive. The standard scope includes terminology, mnemonic, and pins' description; parameters and definitions; and test methods and conditions to obtain the parameters.

**Purpose:** Currently, different gate drive manufacturers provide datasheets with their own templates. As a result, it is difficult to compare the gate drivers using datasheet parameters since gate drivers' parameters have different names, test methods, and conditions.

**Stakeholders:** Gate driver manufacturers, gate driver users (e.g. power electronics converter manufacturers), academia and research institutes, and everyone who is using gate drivers in their applications.

### Status:

- The standard development was kicked off on January 22, 2020, with six members
- The PAR has been approved by IEEE SA Standards Board on September 24, 2020
- Currently WG has 17 members from 10 companies and three universities

# New Projects

PEDCC

Chair: Tanya Gachovskaya

Vice Chair: Zheyu Zhang

Secretary: Inki Park

## P2964 IEEE Standard working groups members:

Wolfgang Frank, Srivatsa Raghunath, Ziqing Zheng, Infineon Technologies, Germany, USA and China

Mitch Van Ochten, ROHM Semiconductor, USA

Inki Park, ON Semiconductor, USA

Ryan Schnell, Analog Devices Inc, USA

Michele Lauria, ST, USA

Tanya Gachovska, Mahmoud Nouri, Solantro Semiconductors, Canada

Xiaoqing Song, ABB, USA

Cong Li, General Electric, USA;

Yujia Cui, Rockwell Automation, USA;

Zheyu Zhang, Clemson University, USA

Danyang Zhu, Inventchip Tech, China

Liang Lin, Huazhong University of Sci& Tech, China

Jean-Luc Schanen, Grenoble Institute of Technology, France



# New Projects

PEDCC

Chair: Tanya Gachovskaya

Vice Chair: Pratib Sharma

Secretary: Zheyu Zhang

## **P3114 Standard for Datasheet Parameters and Testing Protocols for Ultraviolet (UV) Light-emitting Diodes (LEDs)**

**Scope:** The standard provides datasheet parameters pertaining to the optical, thermal, and electrical characteristics of UV LEDs, including UVA, UVB and UVC LEDs. Also, the standard defines standard testing protocols considering variation in technologies and products. Measurement protocols may pertain to electrical characterization, optical measurements, thermal measurements, and lifetime measurement and calculations.

**Purpose:** UV LEDs have gained tremendous popularity in applications ranging from curing (UVA) to disinfection (UVC). However, the lack of standards around UV LEDs, particularly in terms of consistency in listing and measuring datasheet parameters makes it difficult for product developers as well as end-product users to compare similar products. The purpose of this standard is to create an industry-wide parametric list and testing protocol to standardize the evaluation of UV LEDs.

# New Projects

PEDCC

Chair: Tanya Gachovskaya

Vice Chair: Pratib Sharma

Secretary: Zheyu Zhang

## Status:

-The standard development was kicked off on September 2, 2020 with seven members

The PAR has been approved by IEEE SA Standards Board on September 23, 2021

Now, there are 20 members with a diverse backgrounds of electrical engineering, physics, biology, and other disciplines

Randive, Rajul, Richard Mariita, Crystal IS, USA

Lincoln Xue, Oak Ridge National Laboratory, USA

Malek Amiali, Houari Boumediene University of Science and Technology, Algeria

Ali Zineddine Boumehira, Sciences of Algiers 1 University, Algeria

Fang Luo, Ramez Kaupak, Miguel Rivas, Stony Brook University, USA

Pascal Dupuis, Georges Zissi, Toulouse III Paul Sabatier University, France

Pao Chen, Violumas, Canada

Karl G. Linden, University of Colorado Boulder

Cameron Miller, National Institute of Standards and Technology, USA

Richard Simons, Jennifer Pagan, Aquisense Technologies, USA

# Ongoing Projects

## IEEE-IAS Industrial Power Conversion Systems Department



Home	About Us	Conferences	Pubs	Standards	Awards	Tutorials	Students
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### Contact us

IPCSD Chair: Pericle Zanchetta  
(Pericle.Zanchetta@nottingham.ac.uk)

Webmaster: Anant Kumar Singh  
(anant\_singh@ieee.org)

IAS Administrator: Lynda  
Bernstein  
(l.m.bernstein@ieee.org)



Follow: | Share:

### Standards

The IPCSD is actively involved in the development of standards. Various standards projects are currently on-going and new projects are planned for the near future.

Standard Number	Topic	IAS committee	Status	Contact
IEEE P11	Electric machines for rail and road	EMC	Update under way	<a href="mailto:buresssta@ornl.gov">buresssta@ornl.gov</a>
IEEE Std. 112	Testing for polyphase induction machines	PE Society	Published 2018	
IEEE Std. 114	Single-phase induction machines	EMC	Published 2010	
IEEE Std. 1662	Power electronics in electrical power systems	IPCC, PCIC	Published 2017	<a href="mailto:ykhersonsky@ieee.org">ykhersonsky@ieee.org</a>
IEEE Std. 1709	Medium-voltage DC power systems on ships	IPCC, PCIC	Published 2010	<a href="mailto:ykhersonsky@ieee.org">ykhersonsky@ieee.org</a>
IEEE Std. 1812	PM machine testing	EMC	Under revision	<a href="mailto:eagamloh@ieee.org">eagamloh@ieee.org</a>
IEEE P252	Induction machines with liquid in gap	EMC	PAR approved Dec. 2018	<a href="mailto:eagamloh@ieee.org">eagamloh@ieee.org</a>
IEEE P620	Thermal limit curves for induction machines	EMC	PAR approved Dec. 2018	<a href="mailto:eagamloh@ieee.org">eagamloh@ieee.org</a>
IEEE P2004	Hardware-in-the-loop testing of electric power apparatus and controls	ESC	PAR approved March 2017	<a href="mailto:steuerer@caps.fsu.edu">steuerer@caps.fsu.edu</a>
IEEE SCC21	Fuel cells, photovoltaics, dispersed generation, and energy storage	Various		<a href="mailto:nasiri@uwm.edu">nasiri@uwm.edu</a>
N.A.	Industrial drive systems	IDC	New activity	<a href="mailto:Kevin_Lee@ieee.org">Kevin_Lee@ieee.org</a>
IEEE P2943	Energy efficiency test methods for three-phase variable frequency drive systems	IPCSD/IDCWG	New activity	<a href="mailto:Kevin_Lee@ieee.org">Kevin_Lee@ieee.org</a>
IEEE P2964	Standard for datasheet parameters and tests for integrated oate drivers	IPCSD/DPTIGD	New activity	<a href="mailto:tgachovska@yahoo.com">tgachovska@yahoo.com</a>

# Selected Ongoing Projects

EMC

Chair: Haran Karmaker

## Project #1: IEEE P-11

*"IEEE Std. 11: IEEE Standard for Rotating Electric Machinery for Rail and Road Vehicles"*

- WG Chair: Tim Burress
- Current Version: 2006
- PAR Approved: March 2015
- On-going revision since June 2015

## Project #2: IEEE P-1812

*"IEEE Std. 1812: IEEE Guide for Testing Permanent Magnet Machines"*

- WG Chair: Yao Duan
- Trial-use guide published: 2014
- On-going revision since August 2016
- PAR extended until 2023

## Project #3: IEEE P-1415

*"IEEE Std. 1415: Induction Machinery Maintenance Testing and Failure Analysis"*

- WG Chair: Pinjia Zhang
- Current Version: 2006
- PAR Approved: 2019
- On-going revision since Oct. 2019

## Project #4: IEEE P-620

*"IEEE Std. 1812: Guide for the Presentation of Thermal Limit Curves for Squirrel Cage Induction Machines"*

- WG Chair: Yao Duan
- Current revision: 1996 (reconfirmed 2008)
- PAR submitted August, 2019
- 3<sup>rd</sup> Ballot completed in Oct. 2021, 1 comment resolved

## Project #3: IEEE P-1415

*"IEEE Std. 1415: Induction Machinery Maintenance Testing and Failure Analysis"*

- WG Chair: Pinjia Zhang
- Current Version: 2006
- PAR Approved: 2019
- On-going revision since Oct. 2019

## Project #4: IEEE P-620

*"IEEE Std. 1812: Guide for the Presentation of Thermal Limit Curves for Squirrel Cage Induction Machines"*

- WG Chair: Yao Duan
- Current revision: 1996 (reconfirmed 2008)
- PAR submitted August, 2019
- 3<sup>rd</sup> Ballot completed in Oct. 2021, 1 comment resolved

Most of these are in collaboration with PES Society

# State of Standards Subcommittees in 2021

- Several IPCSD Technical Committees are active in standards
- IDC, PEDCC, EMC have active ongoing projects and new projects within the year 2021
- IPCC, RSEC, TSC have no new activity within 2021. Several members of these committees are engaged with standard elsewhere., e.g. TSC is involve with standards within TEC, RSEC is involved with SCC
- IPCC standards chair resigned within the year and new chair (Prof. Lee Empringham) has been appointed.
- We are encouraging other TCs to increase their activities.

# Agenda

- ❑ IPCSD involvement in APEC update – 5 min (Fernando Briz, IPCSD Vice-Chair)

Since IAS is a co-sponsor of the conference, IPCSD is interested in getting more involved in its organization

First contact established in 2018 by Ayman (IPCSD Chair). Together with IPCSD Committee Chairs, Ayman provided a list of potential track chairs to serve at APEC 2019, some of these candidates were selected

Due to Covid'19 among other reasons, not much happened in 2019 and early 2020

IPCSD TC Chairs were contacted in October 2020, and asked to provide members of their TCs qualified to serve as a Topic Chair for APEC'22

The attached list was sent to Pradeep Shenoy, APEC'22 Program Chair, on July 2021. Pradeep already contacted the names in red

First Name Last Name	email	Related APEC tracks
Cong Li	<a href="mailto:cong.li@ieee.org">cong.li@ieee.org</a>	5) Devices and Components
Zheyu Zhang	<a href="mailto:zheyu.zhang@ieee.org">zheyu.zhang@ieee.org</a>	2) DC-DC Converters
Michele Mengoni	<a href="mailto:michele.mengoni@unibo.it">michele.mengoni@unibo.it</a>	5) Devices and Components
Radu Bojoi	<a href="mailto:radu.bojoi@polito.it">radu.bojoi@polito.it</a>	4) Motor drives
Dong Cao	<a href="mailto:dcao02@utdallas.edu">dcao02@utdallas.edu</a>	11) Transportation Power Electronics
Tiefu Zhao	<a href="mailto:tiefu.zhao@uncc.edu">tiefu.zhao@uncc.edu</a>	3) Power Electronics for Utility Interface
Xiaonan Lu	<a href="mailto:xiaonan.lu@ieee.org">xiaonan.lu@ieee.org</a>	4) Motor drives
Manuel Arias Perez de Azpeitia	<a href="mailto:ariasmanuel@uniovi.es">ariasmanuel@uniovi.es</a>	1) AC-DC Converters
Grat Pitel	<a href="mailto:gpitel@magna-power.com">gpitel@magna-power.com</a>	9) Wireless Power Transfer
Hengzhao Yang	<a href="mailto:hengzhao.yang@nmt.edu">hengzhao.yang@nmt.edu</a>	10) Renewable Energy Systems
Christina DiMarino	<a href="mailto:dimaricm@vt.edu">dimaricm@vt.edu</a>	7) Modeling and Simulation
Vito Monopoli	<a href="mailto:vitogiuseppe.monopoli@poliba.it">vitogiuseppe.monopoli@poliba.it</a>	8) Control
		1) AC-DC converters
		2) DC-DC converters
		12) Power Electronics Applications
		1) AC-DC Converters
		6) Power Electronics Integration and Manufacturing
		8) Control
		5) Devices and Components
		5) Devices and Components
		1) AC-DC Converters 7) Modeling and Simulation
		8) Control

After APEC'22, other forms of involvement could be discussed with APEC organizers

- Participation in Planning Committee/Steering Committee
- Industry / RAP sessions



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

- Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min
  - \* EMC (Akira Chiba, EMC Chair)

# IEEE IAS

## Electric Machines Committee

2021 Committee Meeting

Saturday, October 23 8:00-9:30 EST

Meeting number (access code): 2536 154 5472

Host key: 906518

Meeting password: UXeRdE7JY43

Meeting URL:

<https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=mfd180448627e8b063d04b8eb3b2fae1a>

Chair: Akira Chiba

# Agenda

2021  
Akira

1. Review and Approval of 2020 Committee Meeting Minutes, Rukmi
2. Chairman's Report, Akira
  - a. Transactions Papers Status Review, Akira
  - b. ECCE2020 Technical Program Vice-Chairs Report, Greg
3. Old Business
4. Subcommittee Reports, subcommittee chairs
  - a. Prize Paper Awards Presentation, Akira
  - b. Standards, Haran
5. ECCE Session Chair Reports (2020 ECCE sessions completed as of meeting time)
6. New Business:
  - a. 2021 Officers – EMC Past Chair Emmanuel
  - b. Publications Update and IAS Sponsored Conferences
7. Future Conference Organization:
  - a. ECCE 2021 – Preparation for ECCE 2021
  - ☐ Topic/Session Chairs Volunteers (internet collection)
  - b. Other Upcoming Conferences
18. Other Business
  - a. Nagamori award announcement
9. Adjournment

# Attendance

2021  
Rukmi

- Update of the roster
- Recruitment drive for new members
- Request for serving as a TC in ECCE 2021

Via Microsoft Form

**Microsoft Forms was used in 2020 with great success.  
We will use the same method in 2021.**

# New members

2021  
Rukmi

- If you are an IEEE – IAS member, and wish to be an EMC member, please send an email to [rukmidutta@ieee.org](mailto:rukmidutta@ieee.org) with your details.

Alternatively, you can go to <https://site.ieee.org/ias-emc/member-subscriptions/> and opt for subscription to EMC-IAS list.

[IEEE.org](#) | [IEEE Xplore Digital Library](#) | [IEEE Standards](#) | [IEEE Spectrum](#) | [More Sites](#)

IEEE IAS Electric Machines Committee



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Alternatively, you can go to [LISTSERVE EMC-IAS Subscription](#) and opt for subscription to EMC-IAS list.

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# Current Associate Editors

2021  
Akira

**Thank you to all  
EMC AEs as well  
as our TIA Paper  
Reviewers !**

Antonio J. Marques	Cardoso	Portugal
Giulio	De Donato	Italy
Yao	Duan	US
Greg	Heins	Australia
Gianmario	Pellegrino	Italy
Alberto	Tessarolo	Italy
Rajeev	Vyas	US
Katsumi	Yamazaki	Japan
Qu	Ronghai	China
Rukmi	Dutta	Australia
Zhang	Pinjia	China
Parsa	Leila	US
Vaschetto	Silvio	Italy
Min-Fu	Hsieh	China
Takashi	Kosaka	Japan
Eric	Severson	US
Sanjib K.	Panda	Singapore
Adam	Skorek	Canada
Mircea	Popescu	UK

2021 TCPRC policy:

- In split case, please return to authors.
- Under COVID situation, more than one year has been allowed for Transaction review.

# IEEE CALL FOR PAPERS

## IEEE Transactions on Industry Applications

### Special Issue on Design and Optimisation of Electric Motors for Transport Electrification

#### Guest Editors



Dr. Amin Mahmoudi  
College of Science and Engineering,  
Flinders University, Adelaide,



Assoc. Prof. Wen Soong  
School of Electrical and Electronic  
Engineering  
University of South Australia, Australia



Dr. Solmaz Kahourzade  
Science, Technology, Engineering and Math  
of South Australia, Adelaide, Australia



Prof. Akira Chiba  
Department of Electrical and Electronic  
Engineering  
Tokyo Institute of Technology, Japan



Dr. Mircea Popescu  
Motor Design Ltd  
Wrexham, UK



Assoc. Prof. Rukmi Dutta  
School of Electrical Engineering and Telecommunications  
University of New South Wales, Sydney, Australia



Prof. Min-Fu Hsieh  
Department of Electrical Engineering  
National Cheng Kung University, Taiwan



Dr. Rajeev Vyas  
Vehicle Engineering Center  
General Motors Corporation, USA

# Motion to Approve Slate of Officers

2022

## 2022 Committee Officers

- **Chair:** Dr. Greg Heins ([gregheins@ieee.org](mailto:gregheins@ieee.org))
- **Vice Chair:** Prof. Rukmi Dutta ([rukmidutta@ieee.org](mailto:rukmidutta@ieee.org))
- **Secretary:** Dr. Giulio De Donato ([giulio.dedonato@uniroma1.it](mailto:giulio.dedonato@uniroma1.it))
- **Past Chair:** Prof. Akira Chiba ([chiba@ee.e.titech.ac.jp](mailto:chiba@ee.e.titech.ac.jp))

**It is hereby moved that the house accepts the above slate of Candidates as officers of the EMC for the Year 2022**



# Proposed Candidate for Secretary

## Giulio De Donato

- PhD 2007, Univ of Rome, Italy.
- 2007 – present: University of Rome, “La Sapienza,” Associate Professor.
- Associate Editor, IEEE Trans IA (2017 to present)
- Associate Editor for IEEE Transactions on Power Electronics (2020- present)
- Guest Associate Editor for IEEE Journal on Emerging and Selected Topics in Power Electronics, special issue “Electric Machine Drives and Converters for Automotive Applications”, from March 2020 to March 2021
- ECCE Track G Topic Chair - various years 2014-
- ECCE Track G Session Chair – various years
- Publications highlights: at least 21 journals, several conference publications



Dr. Giulio De Donato



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

□ Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min

\* IDC (Mahesh Swamy, IDC Chair)



## **IAS INDUSTRIAL DRIVES COMMITTEE (IDC) MEETING**

Friday October 15 2021

10:00 AM to 11:30 AM (EST)

Virtual Meeting

# Agenda

## 1. Approvals of the Agenda and 2020 Meeting

**Minutes:** (<https://site.ieee.org/ias-idc/resources/>)

## 2. Old Business and Reports

- Vice-chair, Paper Review – Transactions Papers
- Vice-chair, Programs – Report on ECCE 2021
- Vice-chair, Standards Subcommittee
- Report on conferences held in 2021

## 3. Awards and Recognitions

- Awards Subcommittee 2021
- Conference Paper Awards
- Associate Editors
- Nagamori Awards

## 4. New Business

- Nomination of 2021 IDC Slate of Officers
- Submission of Papers to Transactions on Industry Applications
- Recruit Topic Chairs & Session Chairs for ECCE 2022
- Future Conferences (ECCE 2022 and other conferences)

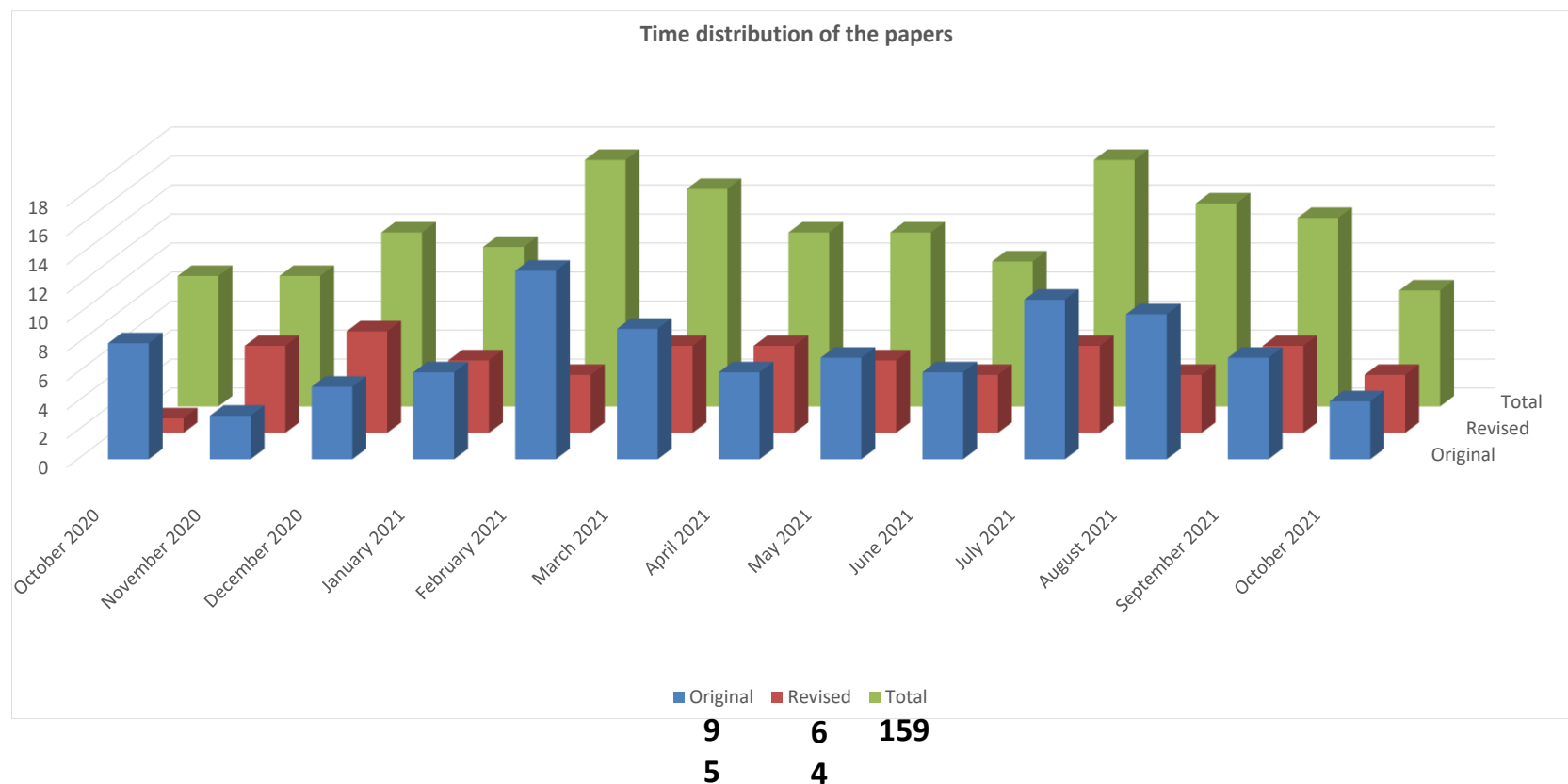
## 5. Closing Remarks & Motion to Adjourn

## Number of original submissions (new papers)

	Number of new submissions
October 9, 2020-October 9, 2021	95
Withdrawn papers	0
<b>TOTAL</b>	<b>95</b>
Papers invited and not submitted	20 (presumably, 12 papers won't come)
<b>TOTAL</b>	<b>95</b>

Previous years	Number of new submissions Papers (invited papers)
Oct. 2018-Oct.2019	98
Oct. 2019-Oct.2020	68 (89)
Oct. 2020-Oct. 2021	95 (111)

## Time distribution of the submissions



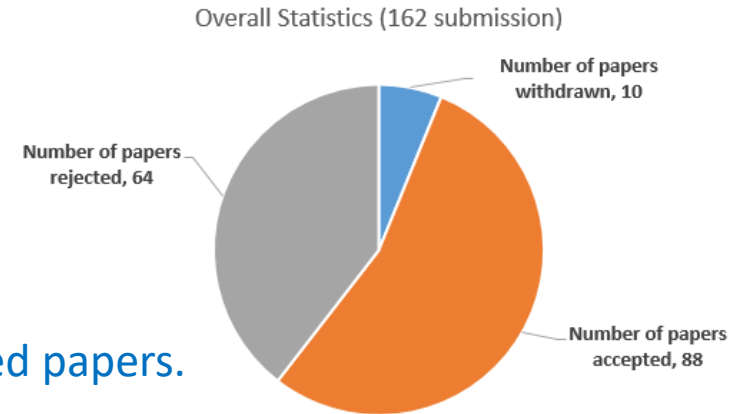
## Acceptance rate and days to final decision

Period: Oct. 9, 2020 – Oct. 9, 2021	Num. of papers with a final decision
Accepted papers	33
Rejected papers	33
<b>Total</b>	<b>66 (36 in 2020)</b>
Acceptance rate	%
Acceptance rate (2021)	50%
Acceptance rate (2020)	36%
Acceptance rate in 2019	45%
Acceptance rate in 2018	51%

	2021	2020	2019
Days to first decision	70	67	75
Days to final decision	105	96	117
Median	89	85	n.a.

## Overall Statistics (2021)

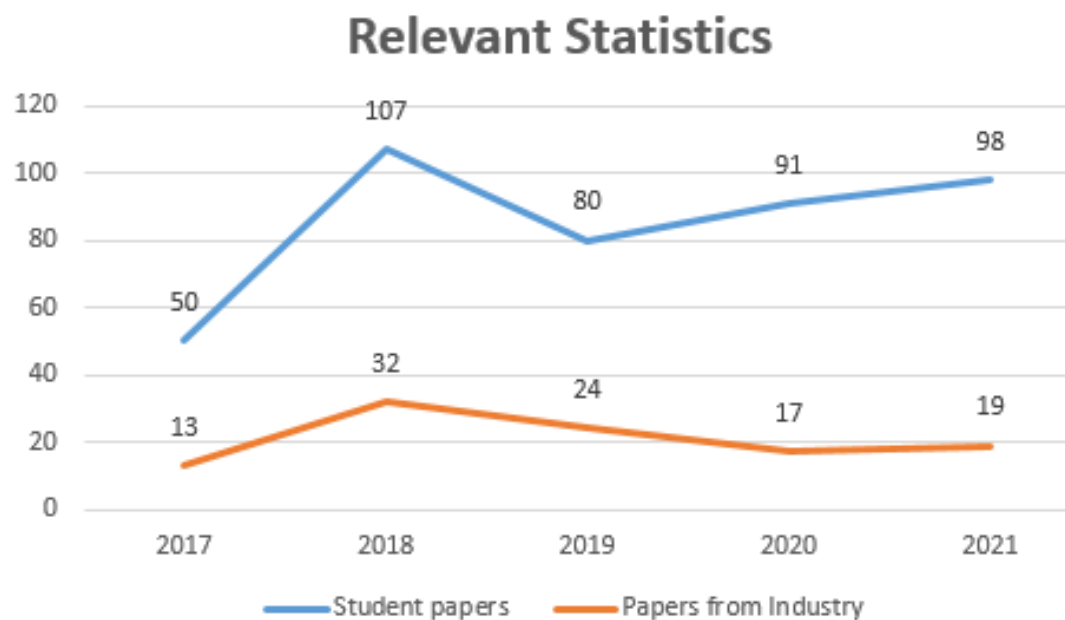
- Number of digests: 162
- Number of papers withdrawn: 10
- Number of papers accepted: 88
- Number of papers rejected: 64
- The acceptance ratio is 57.8% for 152 reviewed papers.
- 88 accepted papers were distributed into 16 technical sessions.



- Review Quality:
  - All papers with at least 4 reviews
  - The average number of reviews per paper was around 4.7(4.2 last year).

## Relevant Statistics

- Student papers: 98
- Papers from industry: 19



## 2. Old Business and Reports

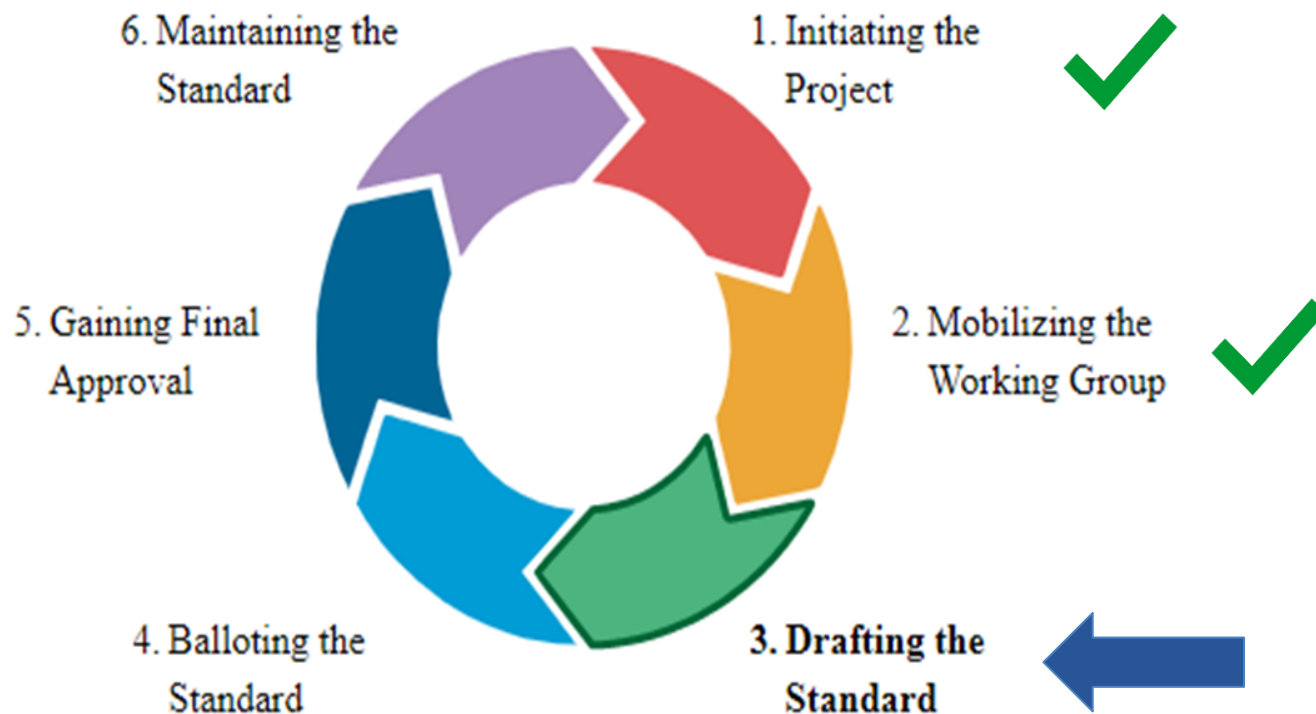
### Standards Subcommittee

Kevin Lee (Chair), Jiangbiao He (Secretary)

# Mission Statement of IDC Standards Subcommittee

- The goal of the Standards Subcommittee of the IEEE Industrial Drives group is to participate in the development of Standards and/or Practices pertaining to electric drive systems. Electric drive systems include but are not limited to all types of electrical motors and drives that are used for controlling torque and speed of said electrical motors.
- Participation is not limited to co-operating with other Standards groups or organizations within the IEEE and/or other technical bodies of the world but also includes taking a leading role in formulating new standards to facilitate meaningful applications of said standards in the industrial and commercial workplace.

# Status of IEEE Standard Development



# Timeline of P2943 Working Group Project

- Project Title: P2943-Energy Efficiency Test Methods for Three-Phase Variable Frequency Drive Systems.
- Scope Statement: This standard defines a common test protocol for determination of energy efficiency for motor drive systems, for an AC motor and a combination of a Variable Frequency Drive (VFD), AC motor, and ancillary equipment. Performance classifications for the said motor drive systems are also defined.
- Project Status: On September 24, 2020, the IEEE SA Standards Board approved the project.
- Project Timing: Until December 31, 2024.



## Topics Working in Progress

Document Section	Task Leader(s)	Presentation Date	Status
General	Luis Rodriguez , Hassan Eldeeb	10/18/2021	On-going
System Settings	Joseba Arza, Mahesh Swamy	10/18/2021	On-going
Test Measurements	Fernando Briz, Di Pan	09/13/2021	To get started
Testing Procedures with regards to thermal equilibrium of system	Mahesh Swamy, Hassan Eldeeb	11/15/2021	To get started
Testing Procedures of Multi Drive System	Mahesh Swamy, Fernando Briz	12/13/2021	On-going
Load Test Schedule	Kevin Lee, Jiangang Hu	01/17/2022	To get started
Torque Offset Measurement	Eric Armando, Jiangang Hu	02/14/2022	On-going
System Sub-System Efficiency Calculations	Lei Hao, Zheyu Zhang, JiangBiao He	03/14/2022	To get started

Thank you all for your contribution!

Volunteers are welcome to participate.

## 3. Awards and Recognitions

Prize Papers and Awards Subcommittee

Milijana Odavic

University of Sheffield, UK, (Chair)

# 2020 IEEE ECCE Conference Paper Awards

## First Prize Paper Award

**Title:** *A Novel Method for Measuring High Frequency DQ-axis and Cross-coupling Inductances in Interior Permanent Magnet Synchronous Machines*

**Authors:** B. Shuang and Z. Q. Zhu

## Second Prize Paper Award

**Title:** *Prediction of Transient Voltage Distribution in Inverter-fed Stator Winding, Considering Mutual Couplings in Time Domain*

**Authors:** S. Sundeep, J. Wang and A. Griffo

## Third Prize Paper Award

**Title:** *Four-module three-phase permanent-magnet synchronous motor based on a PWM modulation strategy for suppressing vibrations and common mode current*

**Authors:** K. Liu, Z. Liu, D. Jiang, Q. Wang and Z. He

## 4. New Business

Nomination of 2021 IDC Slate of Officers

Past Chair – Industrial Drives Committee

**Prof. Fernando Briz**

University of Oviedo, Spain

## 4. New Business

### New IDC secretary – Dr. Di Pan

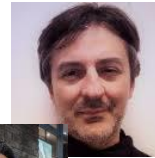


- Di Pan was born in Kunming, China. He received his B.S. degree from Zhejiang University, Hangzhou, China in 2007
- M.S. and Ph.D. degrees from the University of Wisconsin, Madison, all in electrical engineering
- Currently with Electric Power at GE Global Research, Niskayuna, NY, USA
- Research interests: machine drive systems and power electronics, especially for traction and hybrid electric propulsion applications
- Senior member of IEEE and a member of Industry Application Society
- Served in organizing committees, and as topic and session chairs for various international conferences
- He is a member of IEEE Standard Working Group for Energy Efficiency Test Methods for Three-Phase Variable Frequency Drive Systems

## 4. New Business

### Nomination of new IAS-IDC slate of officers

- Luca Zarri, Chair of the IAS Industrial Drives Committee



- Jul-Ki Seok, IDC Vice-chair Papers



- Kevin Lee, IDC Vice-chair Programs



- Di Pan, IDC Secretary



- Mahesh Swamy, Past Chair



Motion for approval

## 5. Closing Remarks & Motion to Adjourn



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

- Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min
  - \* IPCC (Luca Solero, IPCC Chair)

# **IPCSD**

**Industrial Power Converters Committee**

**Virtual Meeting**

**December 4<sup>th</sup>, 2021**

## Membership

- **Membership roster is at 432 (+6 people since last meeting)**
  - **Online registration on IPCC website**  
**(<http://sites.ieee.org/ipcc/>)**
  - **IPCC Secretary is currently working to update the invalid email addresses in the membership roster**
  - **Several non active members, at the bottom side of each sent out message from the Officers is asked a reply to be removed from the members' list**

# IAS Industrial Power Converters Committee



## Committee for 2021

### Committee Officers

Chairman	Luca Solero	luca.solero@uniroma3.it
Vice-Chairman	Xiaonan Lu	xiaonan.lu@ieee.org
Secretary	Yongsug Suh	ysuh@jbnu.ac.kr
Past Chairman	Grant Pitel	gpitel@magna-power.com

### Industrial Power Converter Subcommittees

Transactions Review Chair	Pericle Zanchetta	pericle.zanchetta@nottingham.ac.uk
Transactions Review Co-Chair	Stefano Bifaretti	stefano.bifaretti@uniroma2.it
Fellow and Award Nominating Chair	Po-tai Cheng	ptcheng@ieee.org
Standards Chair	Lixiang Wei	lixiangw@ieee.org
Special Activity Chair	Wenkang Huang	wkhuang@ieee.org
Asian Liaison Officer	Junichi Itoh	itoh@vos.nagaokaut.ac.jp
Asian Liaison Officer	Jecheon Jung	jhjung@unist.ac.kr
European Liaison Officer	Petar Grbovic	petar.grbovic@uibk.ac.at
European Liaison Officer	Shafiq Odhano	shafiq.odhano@newcastle.ac.uk

## Slate of Officers for 2022

### Committee Officers

Chairman	Xiaonan Lu	xiaonan.lu@ieee.org
Vice-Chairman	Yongsug Suh	ysuh@jbnu.ac.kr
Secretary	<a href="#">Wenkang Huang</a>	wkhuang@ieee.org
Past Chairman	Luca Solero	luca.solero@uniroma3.it

### Industrial Power Converters SubCommittees

Transactions Review Chair	<a href="#">Stefano Bifaretti</a>	stefano.bifaretti@uniroma2.it
Transactions Review Co-Chair	<a href="#">Shafiq Odhano</a>	shafiq.odhano@newcastle.ac.uk
Fellow and Award Nominating Chair	<a href="#">Robert N. Guenther</a>	rnguenther@gmail.com
Standards Chair	<a href="#">Lee Empringham</a>	lee.empringham@nottingham.ac.uk
Special Activity Chair	<a href="#">Elisabetta Tedeschi</a>	elisabetta.tedeschi@ntnu.no
★ Special Activity Co-Chair	<a href="#">Tianqi Hong</a>	thong@anl.gov
Asian Liaison Officer	Junichi Itoh	ito@vos.nagaokaut.ac.jp
Asian Liaison Officer	Jeehoon Jung	jhjung@unist.ac.kr
European Liaison Officer	Petar Grbovic	petar.grbovic@uibk.ac.at
European Liaison Officer	<a href="#">Petros Karamanakos</a>	p.karamanakos@ieee.org

## Power Converter Topologies

**Vice Chair:** Hanh-Phuc Le, *University of California, San Diego, USA*

**Vice Chair:** Khurram Afridi, *Cornell University, USA*

**Vice Chair:** Luca Solero, *University Roma Tre, Italy*

**Vice Chair:** Yongsug Suh, *Jeonbuk National University, South Korea*

**Vice Chair:** Olivier Trescases, *University of Toronto, Canada*

Santanu K. Mishra, *Indian Institute of Technology Kanpur, India*

Diego G. Lamar, *Universidad de Oviedo, Spain*

Fang Luo, *Stony Brook University, USA*

Gab-Su Seo, *National Renewable Energy Laboratory (NREL), USA*

Dong Cao, *University of Dayton, USA*

Hengzhao Yang, *ShanghaiTech University, China*

Hidemine Obara, *Yokohama National University, Japan*

Damian Oslebo, *Naval Sea Systems Command (NAVSEA), USA*

Samantha Gunter, *General Motors, USA*

Mark Dehong Xu, *Zhejiang University, China*

Bilal Akin, *University of Texas, Dallas, USA*

David Perreault, *Massachusetts Institute of Technology, USA*

Ali Khajehoddin, *University of Alberta, Canada*

## ECCE 2021 – Track E

- Submitted 234
- Accepted (final) 145
- Percentage 62.0%

Ashish Kumar, *Texas Instruments, USA*

Saad Pervaiz, *Texas Instruments, USA*

Jeehoon Jung, *Ulsan National Institute of Science and Technology, South Korea*

Manuel Arias, *University of Oviedo, Spain*

Xibo Yuan, *University of Bristol, England*

Mahshid Amirabadi, *Northeastern University, USA*

Jongwon Shin, *Chung-Ang University, South Korea*

Shafiq Odhano, *University of Newcastle, UK*

Gui-Jia Su, *Oak Ridge National Laboratory, USA*

Stefano Bifaretti, *Univ. of Rome Torvergata, Italy*

Marco di Benedetto, *University Roma Tre, Italy*

Mahima Gupta, *Portland State University, USA*

Jun-ichi Itoh, *Nagaoka University of Technology, Japan*

Gabriele Rizzoli, *University of Bologna, Italy*

Mattia Rossi, *Politecnico di Milano, Italy*

# IAS Industrial Power Converters Committee



## Control, Modelling, and Optimization of Power Converters

**Vice Chair:** Xiaonan Lu, *Temple University, USA*

**Vice Chair:** Petros Karamanakos, *Tampere University,  
Finland*

**Vice Chair:** Cong Li, *GE Research, USA*

**Vice Chair:** Daniel Costinett, *University of Tennessee,  
Knoxville, USA*

Ludovico Ortombina, *University of Padova, Italy*

Ralph Kennel, *Technical University of Munich, Germany*

**Dongbo Zhao, Argonne National Laboratory, USA**

**Ghanshyamsinh Gohil, Hitachi ABB Power Grids, USA**

Alessandro Lidozzi, *ROMA TRE University, Italy*

Vito Giuseppe Monopoli, *Politecnico di Bari, Italy*

Carl Ho, *University of Manitoba, Canada*

Fengxiang Wang, *Haixi Institutes, Chinese Academy  
of Sciences, China*

**Marcello Pucci, INM-CNR, Italy**

Helen Cui, *University of Tennessee Knoxville, USA*

Fei Lu, *Drexel University, USA*

Jun Wang, *University of Nebraska Lincoln, USA*

Arijit Banerjee, *University of Illinois Urbana-Champaign, USA*

Jungwon Choi, *University of Minnesota, USA*

Minjie Chen, *Princeton University, USA*

Alex Hanson, *University of Texas at Austin, USA*

**Emre Gurpinar, Oak Ridge National Laboratory, USA**

Abhilash Kamineni, *Utah State University, USA*

## ECCE 2021 – Track F

- Submitted 224
- Accepted (final) 139
- Percentage 62.1%

Shuo Wang, *University of Florida, USA*

**Hang Dai, GE Research, USA**

Hao Tu, *North Carolina State University, USA*

**Han Xiong, GE Research, USA**

**Omer Gundogmus, GE Research, USA**

Meng Huang, *Wuhan University, China*

**Ren Xie, GE Research, USA**

Yi Liu, *Wuhan University, China*

Zhen Tian, *Wuhan University, China*

Yuhua Du, *Temple University, USA*

**Wei Du, Pacific Northwest National Laboratory, USA**

**Tianqi Hong, Argonne National Laboratory, USA**

**Sheng Zheng, Oak Ridge National Laboratory, USA**

Li Zhang, *Nanyang Technologies University, Singapore*

**Wenkang Huang, Infineon Technologies, USA**

Shuang Xu, *North China University of Technology, China*

**Bo Zhang, Idaho National Laboratory, USA**

Wencong Su, *The University of Michigan-Dearborn, USA*

## **Special Activities – *Webinars and Special Issues***

- **IPCC Call for Webinars published on**  
<https://site.ieee.org/ipcc/news/>
- **Organized Webinar presentation on April 14th, 2021 - “Partial Power Processing Converters: A Way to go Beyond the Limits”, by Petar Grbovic, University of Innsbruck, Austria**
- **Organized Webinar presentation on November 4th, 2021 - “Unregulated Resonant Converter Families for 48-V Intermediate Bus”, by Roberto Rizzolatti and Christian Rainer, Infineon Technologies, Austria**
- **Organizing special session proposal to IEEE Journal of Emerging and Selected Topics in Power Electronics - “Emerging Power Electronics Technology for Carbon Neutral Applications”, Guest Editors: Jeehoon Jung and Petar Grbovic**

## Standards - Conferences

- During the 2021 meeting the IPCC members were invited to propose potential projects on standards
- IPCC Standards Chair (prof. Lee Empringham) attended to the IPCSD Standards Committee Annual Meeting (November 20<sup>th</sup>)

## APEC 2022 Track Chairs from IPCC

AC-DC Converters:    **Arijit Banerjee**, *University of Illinois at Urbana-Champaign* –  
                                 **Mehdi Narimani**, *McMaster University*

Motor Drives and Inverters:    **Dinesh Kumar**, *Danfoss Drive A/S*

Devices and Components:    **Zheyu Zhang**, *Clemson University*

Power Electronics Integration and Manufacturing:    **Liming Liu**, *ABB Inc.*

Control:                    **Grant Pitel**, *Magna-Power Electronics* - **Xiaonan Lu**, *Temple University*

Transportation Power Electronics:    **Dong Cao**, *University of Dayton*

Power Electronics Applications:    **Manuel Arias Perez de Azpeitia**, *University of Oviedo*

## Summary data for 2021 IAS IPCC Transactions Papers

- **185 Regular papers Submissions in Last 12 months completed – Decrease of 6.5% from 2020 (198). Increase of 19.3% from 2019 (155). For the second year, IPCC is the IPCSD technical committee with more transactions submissions in IAS.**
- **Average review time for initial submission 88 days. It was 75 days in 2019 and 79 in 2018. There is space for improvement as some of the other IPCSD technical committees have better performance.**
- **Acceptance rate of 53.93% in the past 12 months (IPCSD acceptance rate is 58.1%). It was 50.26% in 2020, 57.42% in 2019 and 53% in 2018. Considering there is the filter of conference presentation first, an acceptance rate slightly higher than 50% is reasonable.**



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

- Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min
  - \* RSECS (Adel Nasiri, RSECS Chair)



# IEEE Industry Applications Society Renewable and Sustainable Energy Conversion Systems Committee – **IEEE RSECS**

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IPCSD Annual Meeting

December 4, 2021

Chair – Adel Nasiri, USA

Vice Chair and TPC – Akshay Kumar Rathore, Canada

Vice Chair of Conferences – Ke Ma, China

Secretary – Eduard Muljadi, USA

Past Chair – Yilmaz Sozer, USA

# New Officers for 2022-2024

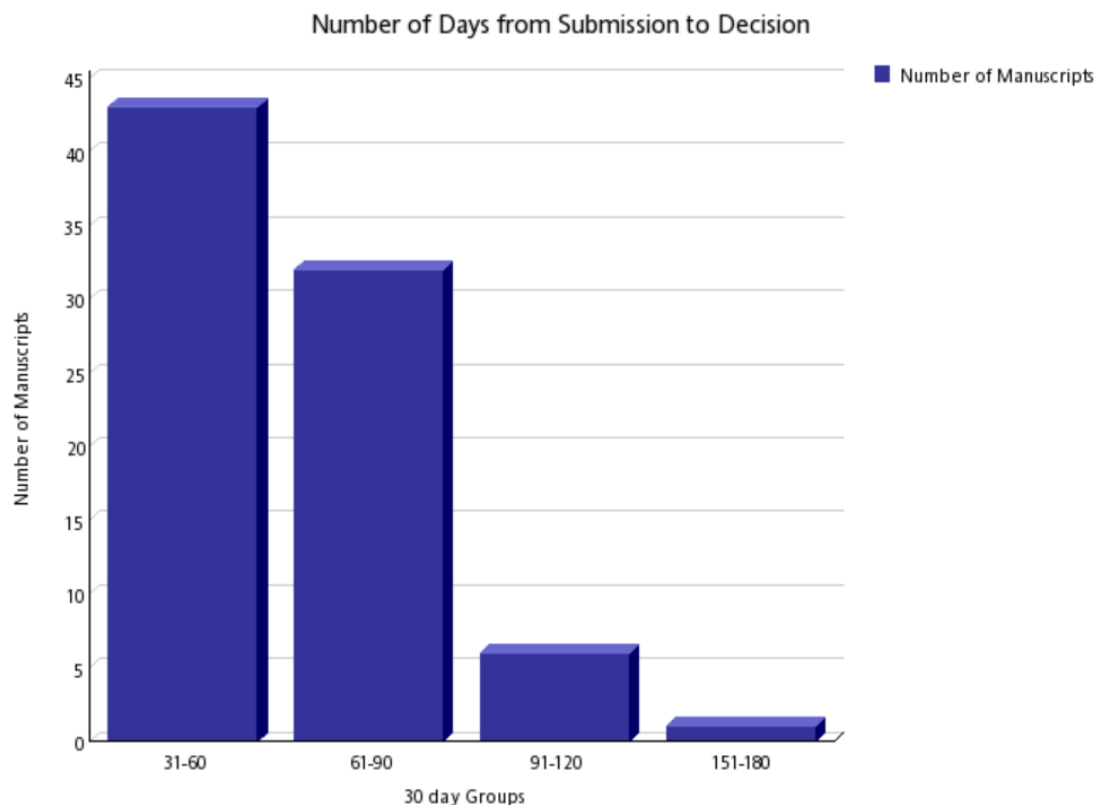
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- Chair – Akshay Kumar Rathore , Canada
- Vice Chair & TPC –Ke Ma, China
- Vice Chair – Eduard Muljadi USA
- Secretary – Behrooz Mirafzal USA
- Past Chair – Adel Nasiri, USA

Behrooz Mirafzal is a professor in power electronics and energy conversion systems at Kansas State University. He has many publications and patents in power engineering. Prior to joining academia, he was a research engineer in the R&D group of Rockwell Automation/Allen-Bradly in Wisconsin.

# Publications Chair Report

- New Manuscripts submission to Renewable and Sustainable Energy Conversion Systems Committee:
  - **Total 82 (Nov 2020 to Oct 2021);**
- **Average Submission to First Decision Time: 63 days**



# IAS Transactions and Magazine Decision Ratio

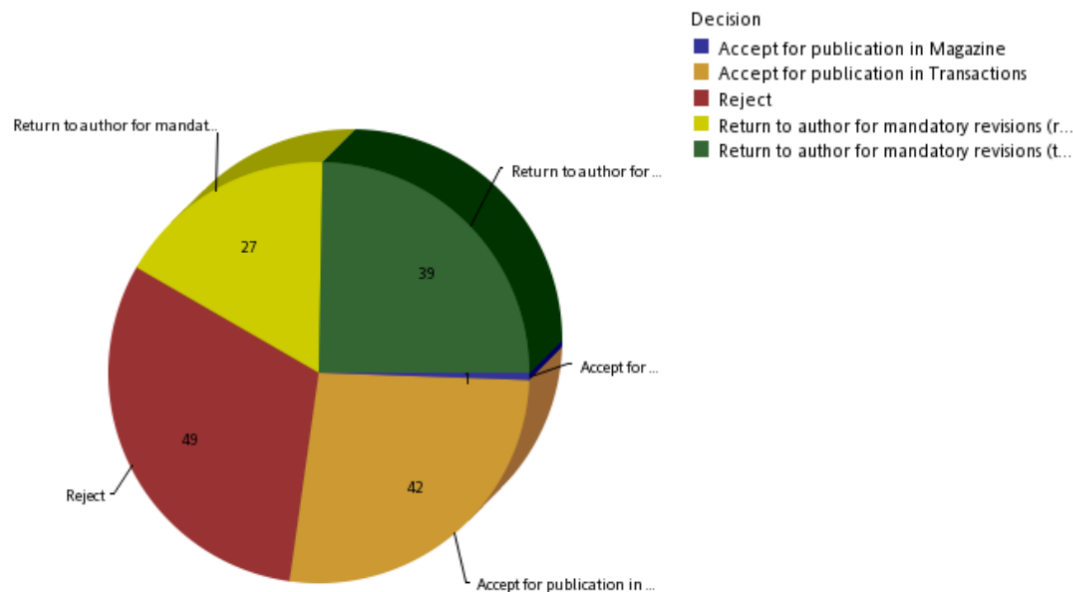
## Submission to Renewable and Sustainable Energy Conversion Systems Committee

Nov 2020-Oct 2021

Renewable and Sustainable Energy Conversion Systems Committee

Number of Manuscripts: **158**  
**99.37%** of all Manuscripts

Decision Ratio By Manuscript Type



Decision	# Manuscripts	Percentage
<a href="#">Accept for publication in Magazine</a>	1	0.63%
<a href="#">Accept for publication in Transactions</a>	42	26.58%
<a href="#">Reject</a>	49	31.01%
<a href="#">Return to author for mandatory revisions (rto address reviewer comments)</a>	27	17.09%
<a href="#">Return to author for mandatory revisions (to address reviewer comments)</a>	39	24.68%
<b>Total:</b>	<b>158</b>	<b>100.00%</b>

# ECCE 2021 Contributions –Track A

- Track A - Renewable and Sustainable Energy Technologies (IAS RESC contributions)
- IAS-RESC provided 1 Vice Chair [Ke Ma](#) to work with 16 Topic Chairs:

Subtrack	Topic	Papers submitted	Topic Chairs
<b>A1</b>	Wind	23	<b>Paul Barendse Xiaofeng Yang</b>
<b>A2</b>	Solar	28	<b>Yongheng Yang Meiqing Mao Georgios Konstantinou</b>
<b>A3</b>	Power Converter Topologies for Renewables	73	<b>Kaushik Basu, Necmi Altin Yue Zhao, Alireza Safaee Akanksha Singh, Ngoc Ha Pham Gab-Su Seo, Yigeng Huangfu</b>
<b>A4</b>	Energy Storage	18	<b>Hengzhao Yang Satarupa Bal</b>
<b>A5</b>	Hybrid Renewable Sources	3	<b>Xiaofeng Yang</b>
<b>A99</b>	Other topics in renewable and sustainable energy	13	<b>Jae-Do Park</b>

156 papers in 6 sub-tracks received in Track A

# ECCE 2021 Contributions – Track B

- Track B - Smart Grid & Utility Applications (IAS RESC contributions)
- 200 papers in 10 sub-tracks were managed by Vice Chairs Adel Nasiri (IAS-RSECS), Yaosuo Xue and 16 Topic Chairs.
- 112 accepted, 16 withdrawn, and 72 rejected, acceptance rate 56 %.

Sub-track	Title	Submitted Papers	Topic Chairs
B01	Renewable Energy Grid Integration	50	Jianwu Zeng, Taesik Kim, David Wenzhong Gao
B02	Distributed Resources and Microgrids	42	Rafael Pena Alzola, Huaiguang Jiang, Giacomo Sala
B03	HVDC and FACTS	18	Gregory Kish, Nathan Weise
B04	DC Distribution and DC Microgrids	19	Kumaraguru Prabakar, Zach Smith

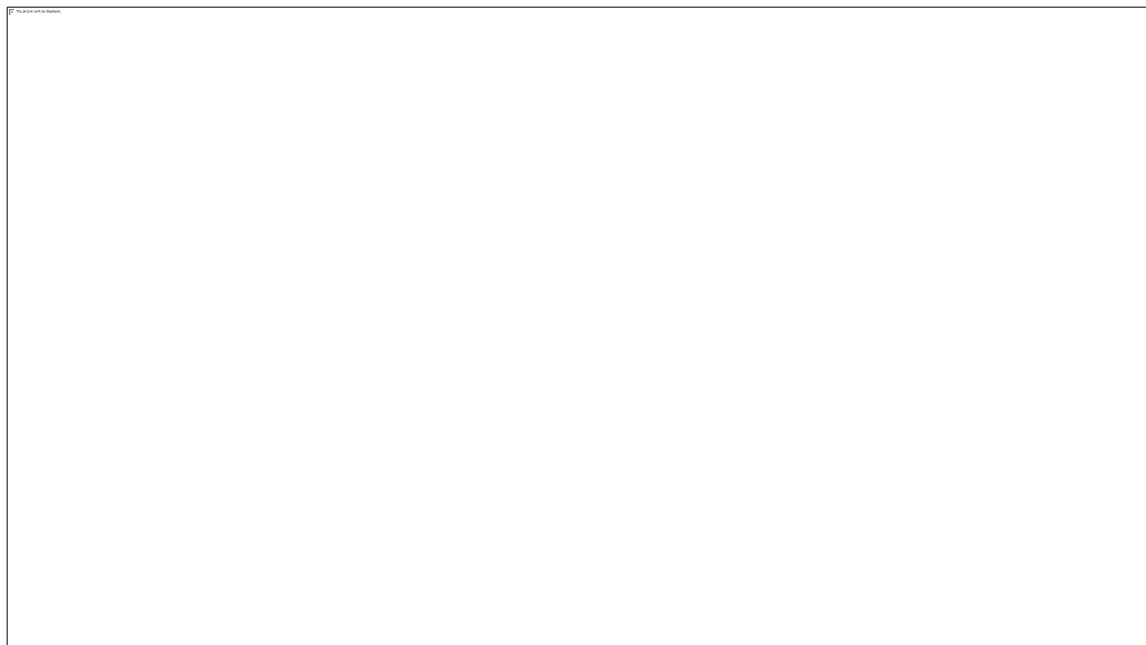
# ECCE 2021 Contributions – Track B

Sub Track	Title	No. of Submitted Papers	Topic Chairs
B05	AC Distribution and AC Microgrids	11	Hashim Al Hassan, Hamed Nademi
B06	Electronic transformer and other grid devices	21	Xu She, Tiefu Zhao
B07	V2G and G2V	8	Ryan Brody, Zhe Zhang
B08	Stability and power quality	17	Heng Wu
B09	Smart buildings and appliances	4	Liang Du
B99	Other topics	10	Josue Campos do Prado

# ICRERA (Istanbul) 2021 Contributions

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- IAS and PELS sponsored annual conference.
- 109 papers from 34 countries.
- Co-sponsored by the committee. Selected papers can be submitted to IAS Transactions.
- Adel Nasiri delivered a tutorial on “High Power Dual Active Bridges Design, Modeling, and Implementation”.



# RSECS Committee Paper Awards-Conferences

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## First Prize

Kevin Frankforter , M. Isabel Tejedor-Tejedor, Marc Anderson, and Thomas Jahns

“Investigation of Hybrid Battery/Ultracapacitor Electrode Customization for Energy Storage”

UW-Madison

## Second Prize

Neelesh Yadav and Narsa Reddy Tummuru

“A Real-Time Resistance Based Fault Detection Technique For Zonal Type Low-Voltage DC Microgrid Applications”

Indian Institute of Technology, Mandi, India

## Third Prize

Selmane Dakir, Ioannis Boukas,

Vincent Lemort, and Bertrand Cornélusse

“Sizing and Operation of an Isolated Microgrid With Building Thermal Dynamics and Cold Storage”

Montefiore Institute and University of Liège

Liège, Belgium

## First Prize

Sanjay Rajendran , Soumik Sen , Liqi Zhang, Zhicheng Guo , Qingyun Huang and Alex Q. Huang

“500kVA Hybrid Solid State Transformer (HSST): Design and Implementation of the SST”

UT Austin

## Second Prize

Pasan Gunawardena, Nie Hou, Dulika Nayanasingi, Yunwei Li

“A Dual-Input Single-Output DC-DC Converter Topology for Renewable Energy Applications”

Alberta University

## Third Prize

Linda Shelembe and Paul Barendse

“An amplitude-modulated pseudo-random binary sequence approach to broadband impedance spectroscopy for photovoltaic module system identification”, University of Cape Town



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

□ Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min

\* TSC (Bulent Sarlioglu, TSC Chair)

# Transportation Systems Committee (TSC) Meeting

Dr. Bulent Sarlioglu  
University of Wisconsin-Madison  
*Chair*

# Committee Officers – 2020-2021

## Chair

Dr. Bulent Sarlioglu  
University of Wisconsin-Madison

## Vice Chair (Papers)

Dr. Mohammad Anwar  
General Motors

## Vice Chair (Conferences)

Dr. Mithat Kisacikoglu  
The University of Alabama

## Secretary

Dr. Rakib Islam  
Nexteer Automotive

## Past Chair

Dr. Mohammad Islam  
Halla Mechatronics

# Committee Updates

- IEEE IAS TSC has an active website at - <http://sites.ieee.org/ias-tcs/>
- Total members as of 2021 is > 226.
  - Some members e-mails need to be updated as a result of the changes in their affiliation.
  - Please send your updated information's to [rakibulislam2000@gmail.com](mailto:rakibulislam2000@gmail.com)
    - Include First & Last Name, Affiliation and e-mail address when sending updated details
- If you want to be a member, please send your contact information to Dr. Rakib Islam at [rakibulislam2000@gmail.com](mailto:rakibulislam2000@gmail.com)
- We seek volunteer to be the webmaster of the TSC website.

# Where are our Members from?

```
*
* Country                Subscribers
* -----
* Australia                3
* Austria                  1
* Canada                   12
* China                     5
* France                    9
* Hong Kong                 1
* Italy                     6
* Japan                     4
* Malaysia                  1
* Netherlands               2
* Republic of Korea         8
* Singapore                 1
* Spain                     1
* United Arab Emirates      1
* United Kingdom            5
* United States             166
*
* Total number of users subscribed to the list: 226
* Total number of countries represented: 16
* Total number of local host users on the list: 0
*
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- Most members from USA
  - Need to encourage members from other Regions / Countries

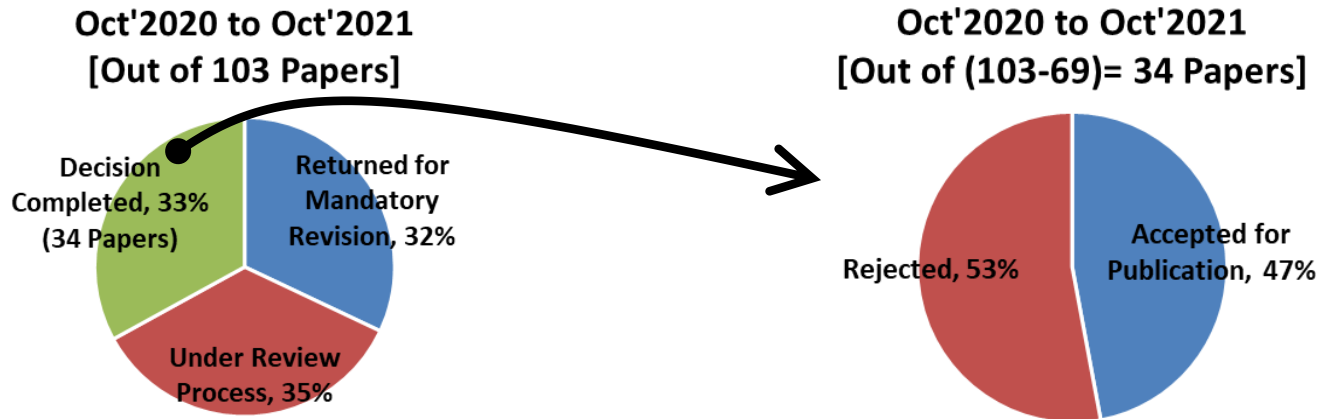
# Transaction Paper Review

- TSC started reviewing papers for IA transactions/magazines since 2012
- **TCPRC:** Dr. Mohammad Anwar– Vice Chair (Papers)
- **Associate Editors**
  1. Dr. Yingjie Li, Hyperloop One, CA
  2. Dr. Veda Galigekere, Oak Ridge National Lab, TN
  3. Dr. Subrata Saha, Aisin Corporation, Japan
  4. Dr. Raja Ramakrishnan, Halla Mechatronics, Bay City, MI
  5. Dr. Rakib Islam, Nexteer Automotive, Auburn Hills, MI
  6. Dr. Mithat Kisacikoglu, University of Alabama, Tuscaloosa, AL
  7. Dr. Mohamed Badawy, San José State University, San Jose, CA
  8. Dr. Jiangbiao He, University of Kentucky, US
  9. Dr. Jason Pries, Apple, CA
  10. Dr. Bilal Akin, University of Texas, Dallas, TX
- Reviewers/members database is evolving
- Term is two years, but it can be extended

***We appreciate our Associate Editors for their kind voluntary work***

# Transaction Paper Review: Manuscript Status

Manuscript Status	Jan' 2019 to Jan' 2020	Jan' 2020 to Oct' 2020	Oct' 2020 to Oct' 2021
Manuscripts Submitted	48	95	103

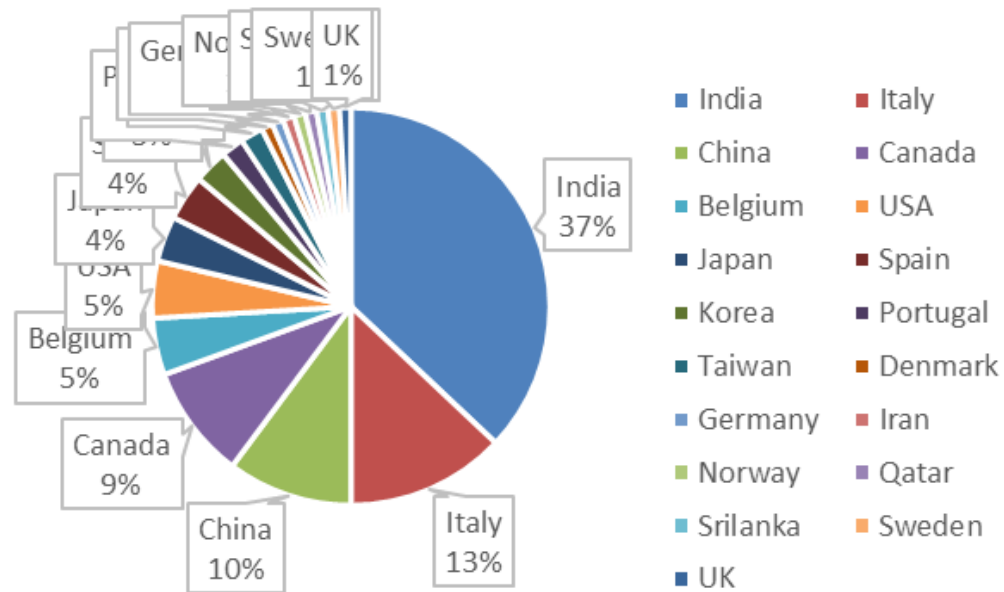


**Note: Number of manuscripts submitted increased**

**Note: AEs and Reviewers are maintaining a quick turnaround**

# Transaction Paper Review: Manuscript Status

## Country Wise Distribution:



Oct'2020 to Oct'2021

# ECCE 2021 – Transportation Electrification Applications

IAS TSC Vice chair Mithat Kisacikoglu served as a vice-chair for this track.

Topic Chairs selected from our members based on their voluntary interest:

- **Hassan Eldeeb**, BorgWarner Inc.
- **Md Sariful Islam**, Halla Mechatronics
- **Gabriele Rizzoli**, University of Bologna
- **Subrata Saha**, Aisin AW Co. Ltd. Japan
- **Zhe Zhang**, Eaton Research Lab



	Oral	Poster	Withdrawn	Rejected	Total	Acceptance Rate
ECCE 2018	25	48	26		99	73.7%
ECCE 2019	25	32	7	23	87	65.5%
ECCE 2020	34	33	10	37	114	58.8%
ECCE 2021	44		3	21	68	64.7%

# ECCE 2021 – Transportation Electrification Applications

## Session topics:

- Electric drivetrains
- Batteries management systems for transportation
- Charging techniques for transportation
- Transportation electrification 1-3
- Electric vehicle charging
- EV battery management 1-2



# ITEC Global Series

- **ITEC North America (60% PELS, 20% IAS, 20% PES)**
  - ITEC'12: June 18-20, 2012, Dearborn, MI
  - ITEC'13: June 16-19, 2013, Dearborn, MI
  - ITEC'14: June 15-18, 2014, Dearborn, MI
  - ITEC'15: June 14-17, 2015, Dearborn, MI
  - ITEC'16: June 27-29, 2016, Dearborn, MI
  - ITEC'17: June 22-24, 2017, Navy Pier, Chicago, IL
  - ITEC'18: June 13-15, 2018, Long Beach, CA
  - ITEC'19: June 19-21, 2019, Metro Detroit, MI
  - ITEC'20: June 19-21, 2020, Virtual
  - ITEC'21: June 23-25, 2021, Virtual
  - **ITEC+'22: June 15-17, Anaheim, CA, USA**
- **ITEC Asia & Pacific (36% IAS, 12% PELS, 12% PES, 40% Others) – Led by IAS**
  - Aug. 31-Sept. 3, 2014, Beijing, China
  - June 1-4, 2016, Busan, Korea
  - August 2-5, 2017, Harbin, China
  - June 6-9, 2018, BITEC, Bangkok, Thailand
  - May 8-11, 2019, Seogwipo-si, Jeju, Korea
  - 2020: Cancelled.
  - 2021: Cancelled
  - **2022: Zhejiang University, China**
- **ITEC India & Middle East – Led by IAS in Partnership with SAEINDIA**
  - August 27 – 29, 2015, Chennai, India
  - December 13-15, 2017, Pune, India
  - December 17-19, 2019, Bangalore, India
  - **December 16-18, 2021: Gurugram, India**
- **ESARS-ITEC Europe**
  - November 2-4, 2016, Toulouse, France
  - November 7-9, 2018, Nottingham, UK
  - 2020 conference is cancelled

# Other Future Conferences

TSC will be involved in various conferences in 2022 at various capacities.

- **APEC 2022**, March 20-24, Houston, TX [<http://apec-conf.org/>]
- **ECCE 2022**, October 9-13, Detroit, MI [<https://www.ieee-ecce.org/2022/>]
- **ECCE Asia 2022**, May 15-19, Himeji, Japan [<https://www.ipec2022.org/>]
- **ICEM 2022**, September 5-8, Valencia, Spain [<https://icem.cc/>]

# New Secretary starting from 2022

IAS TSC nominates

**Dr. JiangBiao He (University of Kentucky)** as our new Secretary

## **Appointments**

Jan 2019 – Present: Assistant Professor, University of Kentucky

Oct 2015 – Dec 2018: Lead Engineer(2018) / Research Engineer (2015-2018), GE Global Research, New York

Dec 2014 – Sept 2015: Hardware Development Engineer, Rockwell Automation, Wisconsin

Jun 2013 – Dec 2013: Research Intern, Eaton Global Research & Technology, Wisconsin

Sept 2010 – Aug 2015: Research Assistant, Marquette University, Wisconsin

## **Education**

Ph.D., Marquette University, Electrical Engineering, 2015

## **Research Interests**

Power Electronics and Electric Motor Drives

Health Monitoring and Fault-Tolerant Power Conversion Systems

Transportation Electrifications (Electric Vehicles, Aircraft, etc.)

Renewable Energy Integration and Smart Grid

**Dr. He has been serving as an Associate Editor for IAS TSC for the past years.**

# New Committee Officers for 2021-2022

**Chair** Dr. Mohammad Anwar  
General Motors

**Vice Chair (Papers)**  
Dr. Mithat Kisacikoglu  
The University of Alabama

**Vice Chair (Conferences)**  
Dr. Rakib Islam  
Nexteer Automotive

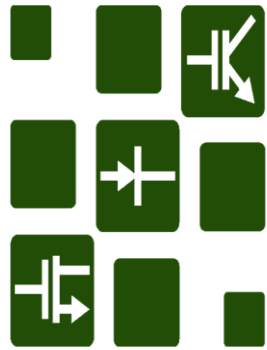
**Secretary**  
Dr. JiangBiao He (University of Kentucky)

**Past Chair**  
Dr. Bulent Sarlioglu  
University of Wisconsin-Madison

# Agenda

□ Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min

\* PEDCC (Tanya Gachovska , PEDCC Chair)



# IEEE-IAS

POWER ELECTRONICS  
DEVICES AND COMPONENTS  
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## PEDCC Committee Meeting – Annual Report

Dec, 2021





IEEE-EDS

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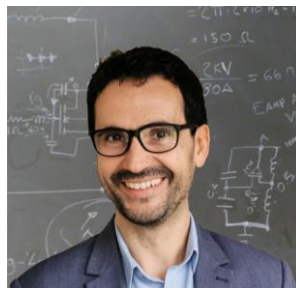


IEEE ENERGY CONVERSION CONGRESS & EXPO Vancouver, Canada Oct. 10-14

## PEDCC Officers for the 2020-2021 term (1/2)



Dr. Tanya Gachovska  
PEDCC Chair



Dr. Francesco Iannuzzo  
PEDCC Vice-Chair



Dr. Cong Li  
PEDCC Secretary



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## PEDCC Officers for the 2020-2021 term (2/2)



Dr. Enrico Santi  
PEDCC Transaction Co-Chair



Dr. Zhiqiang (Jack) Wang  
PPEDCC Transaction Co-Chair

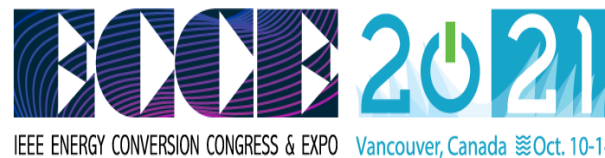


Dr. Ruxi Wang  
Paper Awards Chair



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## PEDCC Awards

**IAS PEDCC awards sub-committee** nominated candidates for IAS Awards:

**IAS Distinguished Service Award**

Dr. Adam W. Skorek

**IAS Andrew W. Smith Outstanding Young Member Achievement Award**

Dr. Zheyu Zhang

**Outstanding Young Member Service Award**

Dr. Cong Li

**IEEE Fellow**

Dr. Jean-Luc Schanen



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## 2021 IEEE IAS Distinguished Service Award Recipient



# Adam Skorek

*To recognize your dedication and distinguished service to  
the IEEE Industry Applications Society.*



IEEE ENERGY CONVERSION CONGRESS & EXPO Virtual Conference Oct. 10-14



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## 2021 IAS Andrew W. Smith Outstanding Young Member Achievement Award Recipient



# Zheyu Zhang

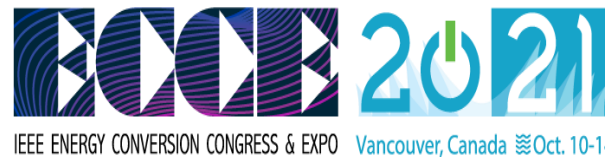
*The purpose of this award is to recognize outstanding achievement  
and contributions to the profession by an IAS member  
under the age of 35.*





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## Will Portnoy Award (best PEDCC papers award)

### Procedure

- Selection of the best 16 papers based on digest evaluation score
- Evaluation during the conference (Technical quality and Oral/Poster presentation ) by a jury composed of PEDCC Members (chairman, volunteers)
- Final ranking after the conference.



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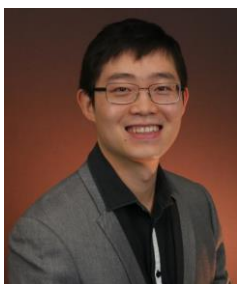


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# IEEE IAS PEDCC Standards

Standard Chair, Dr. Tanya Gachovska

Standard Vice Chair, Dr. Zheyu Zhang



Vice Chair Driver standard  
Dr. Zheyu Zhang



Vice Chair UVC standard  
Dr. Pratibha Sharma



## P2964 IEEE Standard for Datasheet Parameters and Tests for Integrated Gate Drivers

**Scope:** The standard provides datasheet parameters and tests for integrated gate drivers, which include non-isolated gate drive, level-shifted gate drive, and isolated gate drive. The standard scope includes terminology, mnemonic, and pins' description; parameters and definitions; and test methods and conditions to obtain the parameters.

**Purpose:** Currently, different gate drive manufacturers provide datasheets with their own templates. As a result, it is difficult to compare the gate drivers using datasheet parameters since gate drivers' parameters have different names, test methods, and conditions.

**Stakeholders:** Gate driver manufacturers, gate driver users (e.g. power electronics converter manufacturers), academia and research institutes, and everyone who is using gate drivers in their applications.

# P2964 IEEE Standard for Datasheet Parameters and Tests for Integrated Gate Drivers (Cont'd)

## Status:

- The standard development was kicked off on January 22, 2020 with six members
- The PAR has been approved by IEEE SA Standards Board on September 24, 2020
- Currently we have 17 members from 10 companies and three universities

**Chair:** Tanya Kirilova Gachovska, Solantro Semiconductors, Canada

**Vice-Chair:** Zheyu Zhang, Clemson University, USA

**Secretary:** Inki Park, ON Semiconductor, USA

## Meetings for 2021

Group 1- eight meetings

Group 2 - three meetings

Group 3 - four meetings.

**P2964 IEEE Standard working groups members:**

Wolfgang Frank, Srivatsa Raghunath, Ziqing Zheng, Infineon Technologies, Germany, USA and China

Mitch Van Ochten, ROHM Semiconductor, USA

Inki Park, ON Semiconductor, USA

Ryan Schnell, Analog Devices Inc, USA

Michele Lauria, ST, USA

Tanya Gachovska, Mahmoud Nouri, Solantro Semiconductors, Canada

Xiaoqing Song, ABB, USA

Cong Li, General Electric, USA;

Yujia Cui, Rockwell Automation, USA;

Zheyu Zhang, Clemson University, USA

Danyang Zhu, Inventchip Tech, China

Liang Lin, Huazhong University of Sci& Tech, China

Jean-Luc Schanen, Grenoble Institute of Technology, France





## P3114 Standard for Datasheet Parameters and Testing Protocols for Ultraviolet (UV) Light-emitting Diodes (LEDs)

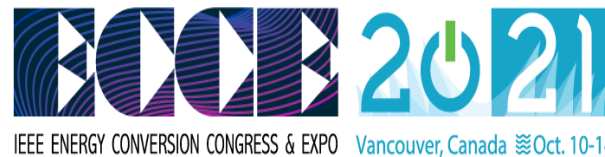
**Scope:** The standard provides datasheet parameters pertaining to the optical, thermal, and electrical characteristics of UV LEDs, including UVA, UVB and UVC LEDs. Also, the standard defines standard testing protocols considering variation in technologies and products. Measurement protocols may pertain to electrical characterization, optical measurements, thermal measurements, and lifetime measurement and calculations.

**Purpose:** UV LEDs have gained tremendous popularity in applications ranging from curing (UVA) to disinfection (UVC). However, the lack of standards around UV LEDs, particularly in terms of consistency in listing and measuring datasheet parameters makes it difficult for product developers as well as end-product users to compare similar products. The purpose of this standard is to create an industry-wide parametric list and testing protocol to standardize the evaluation of UV LEDs.



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## **Status:**

-The standard development was kicked off on September 2, 2020 with seven members

The PAR has been approved by IEEE SA Standards Board on September 23, 2021

Now, we have 20 members with a diverse backgrounds of electrical engineering, physics, biology, and treatments

**Chair:** Tanya Kirilova Gachovska, MDA, Canada

**Vice-Chair:** Pratibha Sharma, Violumas, Canada

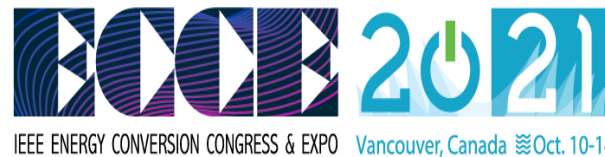
**Secretary:** Zheyu Zhang, Clemson University, USA

## **8 - Meetings for 2021**



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2021

Vancouver, Canada Oct. 10-14

Randive, Rajul, Richard Mariita, Crystal IS, USA

Lincoln Xue, Oak Ridge National Laboratory, USA

Malek Amiali, Houari Boumediene University of Science and Technology, Algeria

Ali Zineddine Boumehira, Sciences of Algiers 1 University, Algeria

Fang Luo, Ramez Kaupak, Miguel Rivas, Stony Brook University, USA

Pascal Dupuis, Georges Zissi, Toulouse III Paul Sabatier University, France

Pao Chen, Violumas, Canada

Karl G. Linden, University of Colorado Boulder

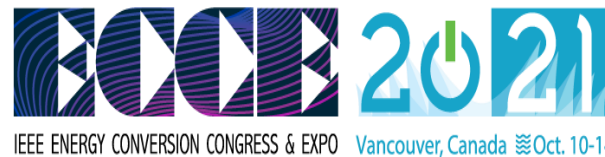
Cameron Miller, National Institute of Standards and Technology, USA

Richard Simons, Jennifer Pagan, Aquisense Technologies, USA



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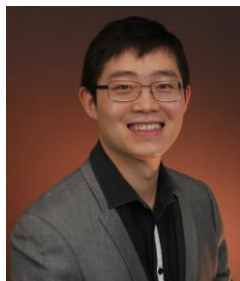


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# IAS Seminar

## Cryogenic power electronics for electrified aircraft propulsion

Dr. Fred Yue Fu



**Warren H. Owen - Duke Energy Assistant Professor  
of Electrical and Computer Engineering**

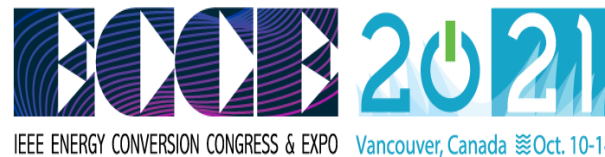
Wednesday, March 17, 2021 11:00 am

Chear: Dr. T Gachovska



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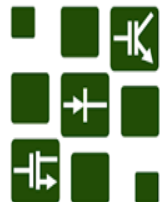
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# ECCE 2021 Special sessions

## P2964 IEEE Standard for Datasheet Parameters and Tests for Integrated Gate Drivers

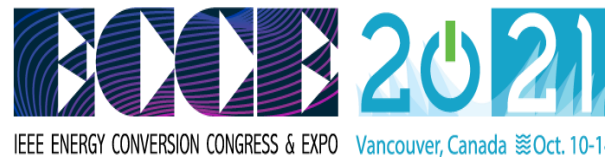
Chair - Dr. Tanya Gachovska

- 1) Cong Li, Ph.D., , GE Research, Niskayuna, NY, USA
- 2) Srivatsa Raghunath, Infineon Technologies Americas Corp., El Segundo, California
- 3) Zheyu Zhang, Ph.D., Clemson University, Charleston, South Carolina
- 4) Wolfgang Frank, Ph.D., Infineon Technologies AG, Germany
- 5) Inki Park, ON Semiconductor, Seoul, Korea
- 6) Ryan Schnell, Ph.D., Longmont, CO USA



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# ECCE 2021 Special sessions

## Future of Wide-bandgap Devices SiC, GaN and Diamont and Their Emerging Applications in Power Electronics

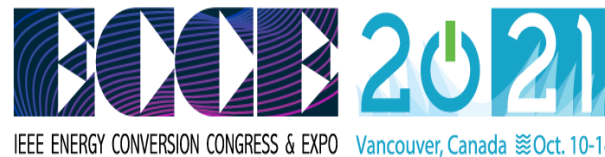
Chair - Dr. Tanya Gachovska

- 1) Anuj Narain, Wolfspeed
- 2) Julian Styles, GaN Systems, US
- 3) Filippo Di Giovanni, STMicroelectronics
- 4) Manpuneet K. Benipal, PhD., Advent Diamond, Inc.



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## PEDCC Media



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[Power electronics devices and components ... - IEEE Xplore](#)

Power electronics devices and components committee (**PEDCC**) announces William Portnoy prize paper awards. Published in: **IEEE** Industry Applications ...

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[Committee Officers - IEEE Power Electronic Devices and ...](#)

Chair, Tanya Gachovska, [tgachovska@yahoo.com](mailto:tgachovska@yahoo.com). Vice Chair, Francesco Iannuzzo, [fia@et.aau.dk](mailto:fia@et.aau.dk). Secretary, Cong Li, [cong.li@ieee.org](mailto:cong.li@ieee.org). Transaction Chair ...



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**Committee Officers**

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[Annual Meetings](#)

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## Committee Officers

Chair	Tanya Gachovska	tgachovska@yahoo.com
Vice Chair	Francesco Iannuzzo	fia@et.aau.dk
Secretary	Cong Li	cong.li@ieee.org
Transaction Chair	Enrico Santi	santi@cec.sc.edu
Award Chair	Ruxi Wang, Tanya Gachovska	ruxi.wang@gmail.com, tgachovska@yahoo.com
Past Chair	Ruxi Wang	ruxi.wang@gmail.com



# IEEE-IAS

POWER ELECTRONICS  
DEVICES AND COMPONENTS



IEEE ENERGY CONVERSION CONFERENCE & EXPOSITION

Facebook interface showing the IEEE-IAS Power Electronics Devices and Components Committee group page. The page header includes the IEEE-IAS logo and the text "POWER ELECTRONICS DEVICES AND COMPONENTS COMMITTEE". The group is identified as "Group by IEEE Industry Applications Society". The page shows 1,349 members, with a red circle highlighting the "Members - 1,349" link. The "Members" tab is selected, displaying a list of members, including Tanya Gachovska, an Admin from the University of Nebraska-Lincoln. The right sidebar shows "New members this week" (4) and "Blocked" (9) members.

Manage group

IEEE-IAS Power Electronics Devices and Components Committee

Home

Admin tools

Member requests

Badge Requests

Automatic member approvals

Membership questions

Pending posts

Scheduled Posts

Activity log

Group rules

Member-reported content

Moderation alerts

Group Quality

Settings

Group settings

Add features

IEEE-IAS

POWER ELECTRONICS DEVICES AND COMPONENTS COMMITTEE

Group by IEEE Industry Applications Society

IEEE-IAS Power Electronics Devices and Components Committee

Public group · 1.3K members

About Discussion Rooms Topics **Members** Events Media

Members · 1,349

New people and Pages who join this group will appear here. [Learn More](#)

Find a member

Tanya Gachovska

Admin

University of Nebraska-Lincoln

Admins & moderators · 3

New members this week

You have 4 new members this week. Write a post to welcome them.

Write welcome post

Blocked · 9

Blocked members can't find the group in search, see any of its content, or receive any invitations from other members.




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**Tanya Gachovska** Manager  
Joined group: Sep 2013

Pending posts 0

Requests to join 0

Manage group

Recent







## IEEE-IAS Power Electronics Devices and Components Committee

Unlisted group

42 members

Including John Palmour and 17 other connections

+14

[Invite connections](#)

[See all](#)

About this group

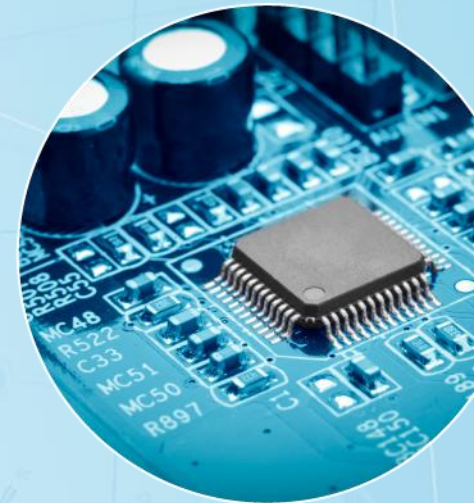


**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

□ IAS Meetings Dept. -5 min (Chiara Boccaletti, IAS Meetings Dept. Chair)



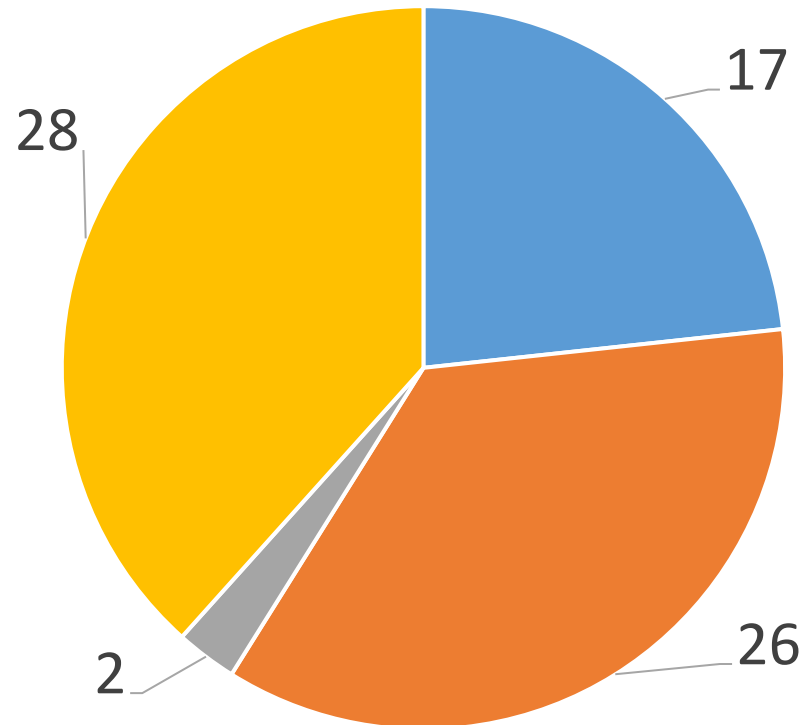
# Meetings Department Report IPCSD Meeting

*Chiara Boccaletti*  
*2021-2022 MD Chair*

December 4th. 2021

# IAS sponsored conferences by Region in 2021

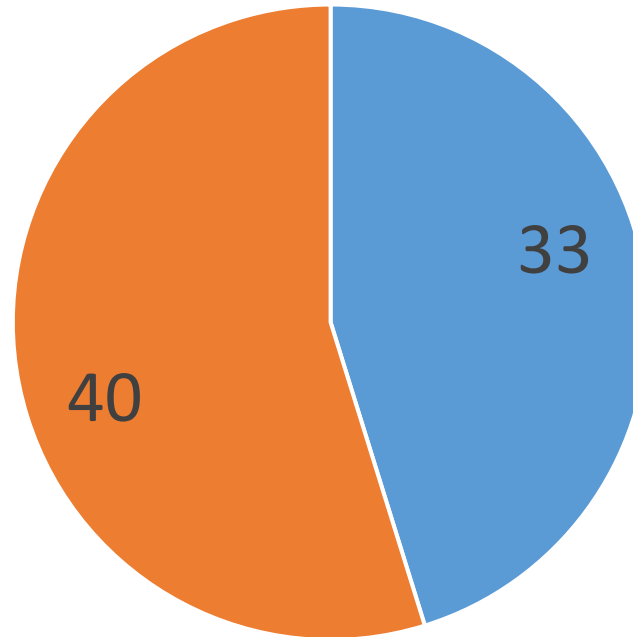
Total: 73



■ Regions 1-7 ■ Region 8 ■ Region 9 ■ Region 10

# IAS sponsored conferences by type of sponsorship in 2021

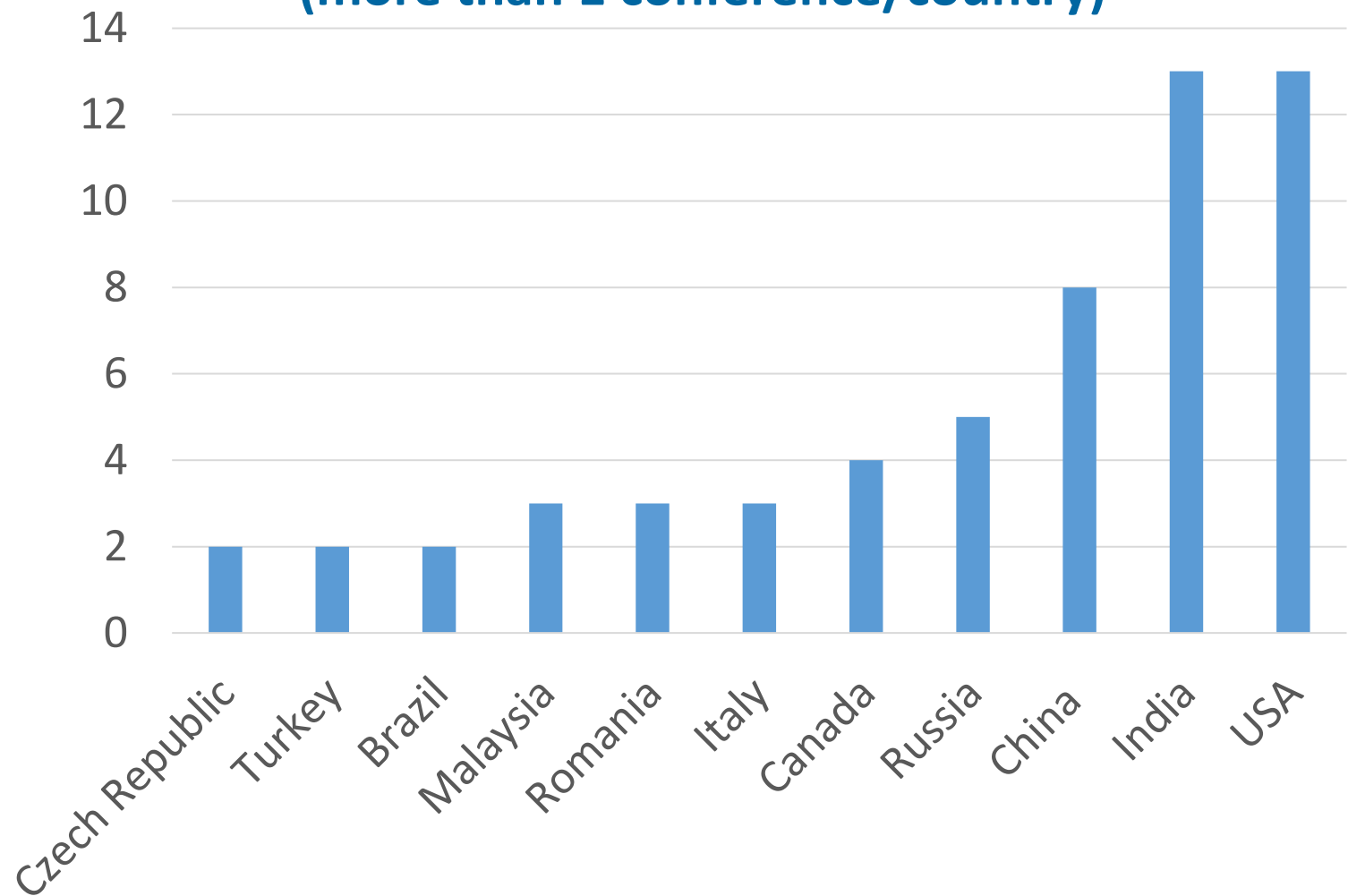
Total: 73



■ Financial ■ Technical

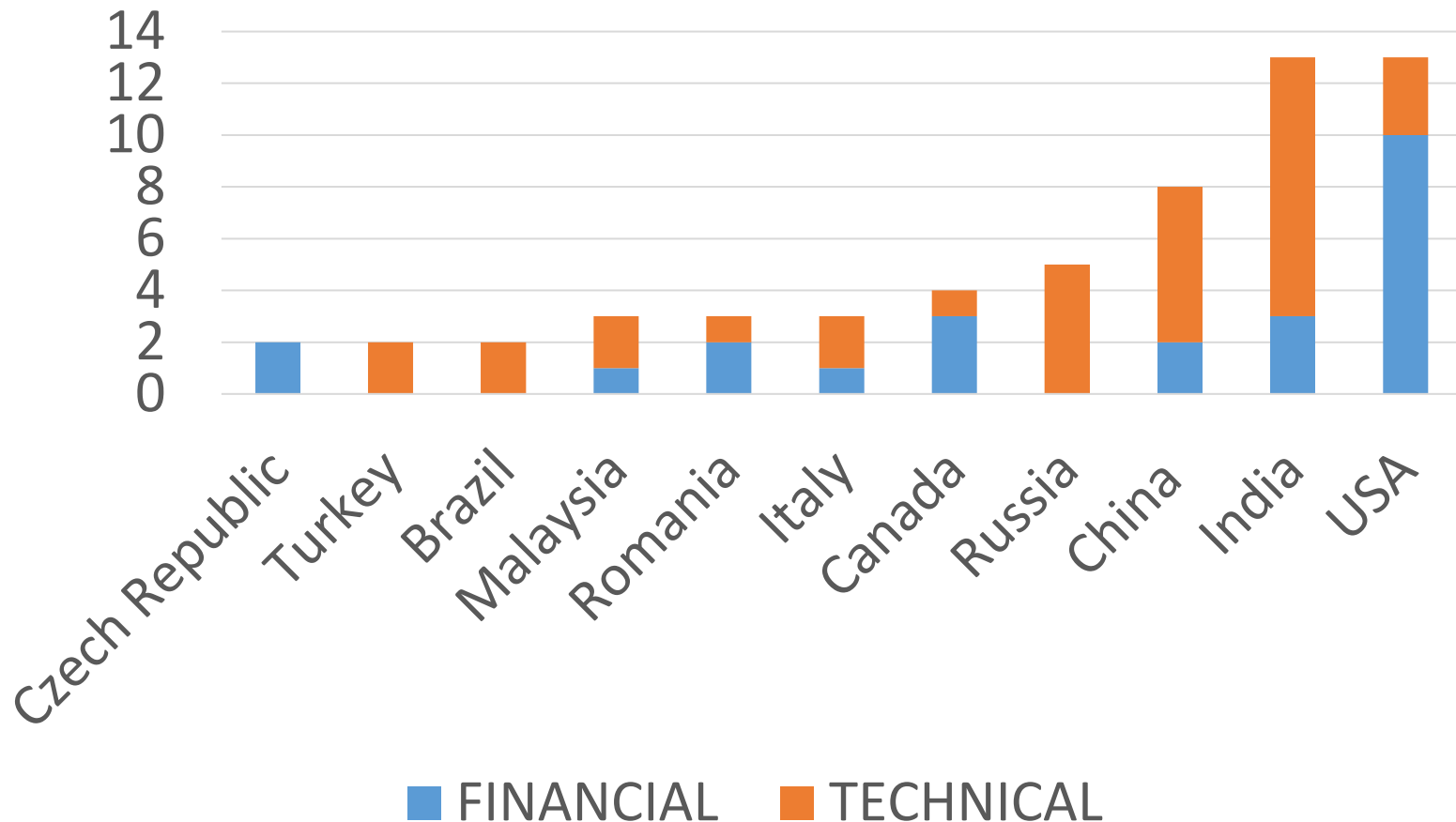
# IAS sponsored conferences by country 2021

(more than 1 conference/country)

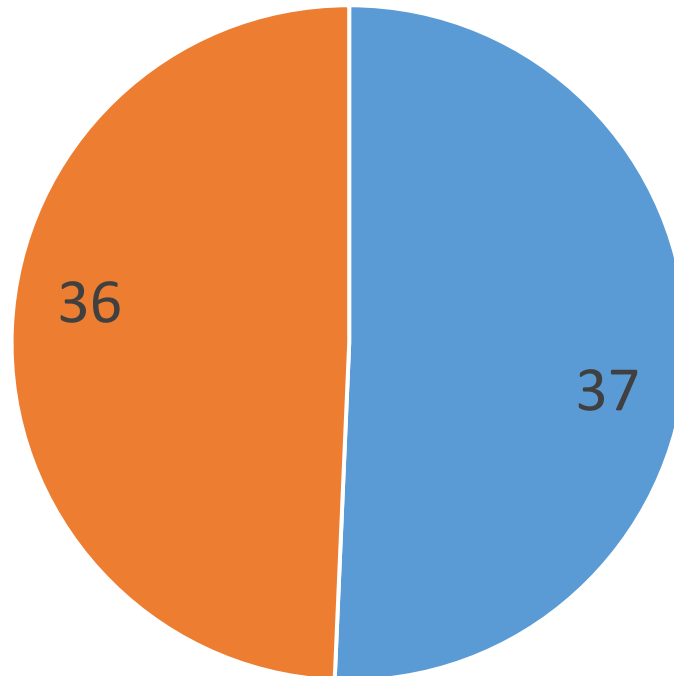


# IAS sponsored conferences by country 2021

(more than 1 conference/country)



## Conference paper review followed up by IPCSD



■ IPCSD ■ Others



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

□ ECCE 2021 Update -10 min (Giovanna Oriti, ECCE 2021 Chair)

# Conference Update

Giovanna Oriti – 1 December 2021



IEEE ENERGY CONVERSION CONGRESS & EXPO

Virtual Conference ≈ Oct. 10-14

**36 members**

- General Chair: Giovanna Oriti
- Finance Chair: Shanelle Foster
- **Associate Finance Chair: Xiu Yao (as of October 2021)**
- TPCs: Jean-Luc Schanen, Luca Zarri, Mark Scott, Gianmario Pellegrino, Michael Harke, Elisabetta Tedeschi
- Publication Chairs: Brian Welchko, Norma Anglani
- Virtual Platform Chair: Anant Singh
- Exhibit Chairs: David Morrison, Grant Pitel
- Tutorial Chairs: Yue Cao, Katherine Kim
- Special Session Chairs: Xiaonan Lu , Fei Ding
- Publicity Chairs: Jiangbiao He, Zheyu Zhang
- Plenary Session Chair: Sara Roggia, Tom Kirk
- Student Activities Chair: Xiu Yao
- Electronic Media Chairs: Sumit Chhabria, Jyothis Joseph
- Webmaster: Dong Cao, Yuan Li
- Awards Chair: Christina DiMarino
- Women in Engineering Chair: Lijun He, Mengqi Wang
- Industry Liaison: Brian Zahnstecher
- Local Chairs: Jennifer Vining, Jonathan Bird
  - Vancouver IEEE Chapter: Francisco Paz, Hamed Valipour, Franco Degioanni
  - Vancouver IEEE IAS/IES Chapter: Subhadeep Bhattacharya

**13 from industry**

**1 US gov. lab**

**13 women**

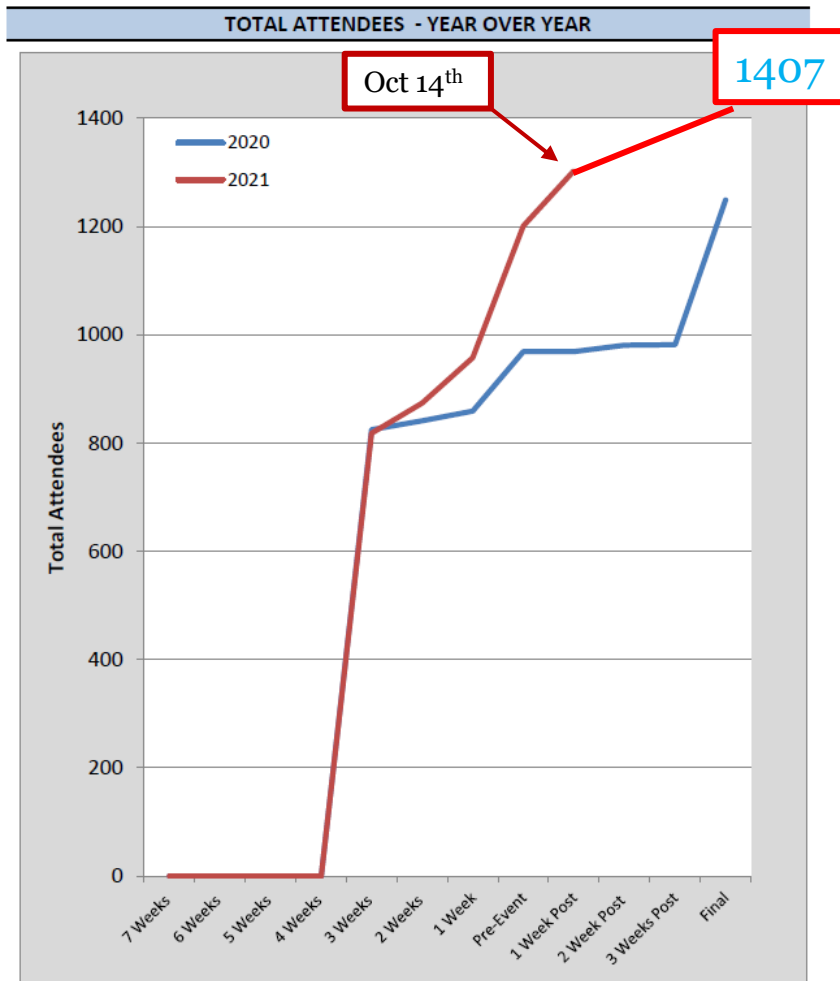
# Virtual Platform open Oct 9<sup>th</sup> – Nov 14<sup>th</sup>

- 1511 Digest Received – more than 4 reviews per digest
- 893 Technical Papers – on demand + chat to ask questions
  - All oral presentations, organized by technical tracks
  - Session chairs assigned to ensure all papers have questions
- 4 Industry Plenary Speakers – 2 women, 2 men
  - Tesla, MagniX, GE Aviation, Intel
- 17 Tutorials - peer reviewed
  - Live Zoom “meet the instructor” events on Sunday, Oct 10<sup>th</sup>
  - 4 hours pre-recorded videos available starting Oct 5<sup>th</sup>
- 24 Special sessions – peer reviewed
  - Significant industry participation
  - Live on Zoom

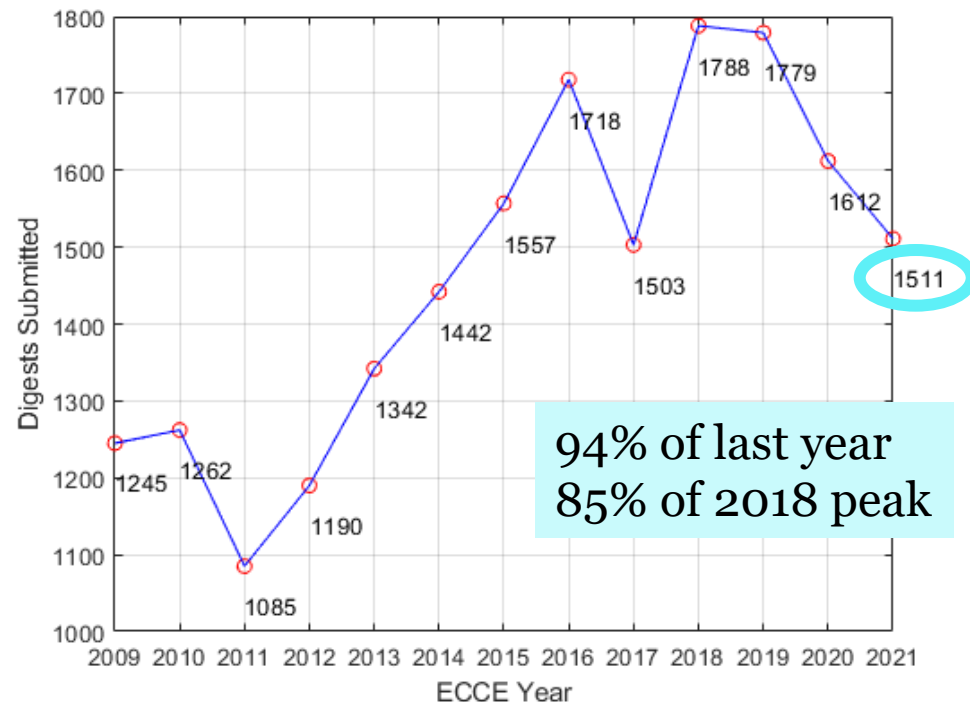
- Virtual platform at [ecce2021.vfairs.com](https://ecce2021.vfairs.com)
  - 5 live day Oct. 10<sup>th</sup> -14<sup>th</sup> + on-demand until Nov 14<sup>th</sup>
- Free Events: Plenary Session, Exhibit, Awards, Students Demos, Product Sessions and Special Sessions
- Industry: 1 Gold Sponsor, 1 Silver Sponsor, 30+ Exhibitors



- Final Registration 1407



- 893 papers in proceedings
- Proceedings on IEEE Xplore 11/16/2021
- Overall acceptance 64% - 971 papers (68% ECCE2018, 64%, ECCE 2019)
- Average review per digest 4.63
- Decisions emailed on May 1<sup>st</sup>
- 28 VCs, 155 TCs
- 5-15 papers per TC



Revenue	Type	Financials as of 11/24/21
	ECCE Registration	\$ 241,890.00
	ECCE / IAS Registration	\$ 97,890.00
	Cancellation Penalty	\$ 200.00
	Paper Fees	\$ 248,610.00
	Tutorials	\$ 50,700.00
	Exhibits	\$ 4,900.00
	Sponsorships	\$ 6,750.00
	IAS Reimbursements	\$ 2,950.00
	<b>Total Revenue</b>	<b>\$ 653,890.00</b>
<b>Expenses</b>		
	Event Management	\$ 156,947.92
	Registration and paper portal	\$ 28,754.00
	Proceedings/Program	\$ 10,259.40
	Tutorial Honoraria	\$ 17,000.00
	Virtual platform	\$ 40,135.00
	Local Arrangements	\$ 0
	Committee	\$ 4,900.00
	Promotions and website	\$ 10,341.95
	Attendance Grants (Student and WiE)	\$8,990.00
	Audit Fees	\$ 0
	IAS Reimbursements	\$ 0
	Credit Card/Bank Fees	\$29,631.31
	Other (future site selection)	\$ 0
	<b>Total Expense</b>	<b>\$ 306,959.58</b>
	<b>Surplus</b>	<b>\$ 346,930.42</b>
	<b>Surplus in %</b>	<b>113 %</b>

- **Xiu Yao appointed Associate Finance Chair on October 19<sup>th</sup>**
- AF Chair is helping review grant and honoraria paperwork before payments are issued
- Highlighted transactions being processed
- Fees transfer between ECCE and IAS annual meeting joint registration to be finalized



**IEEE INDUSTRY APPLICATIONS SOCIETY**  
**Industrial Power Conversion Systems Department**



# Agenda

□ ECCE 2022 Update -10 min (Emmanuel Agamloh, ECCE 2022 Chair)

# ECCE 2022 Update



IEEE ENERGY CONVERSION CONGRESS & EXPO

 **Detroit, Michigan, USA**  **Oct. 9-13**

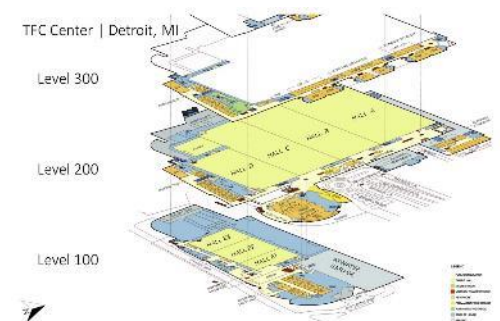
# Motor City - Detroit

- Venue : Detroit, Michigan (TCF Center)
- Dates : October 9-13, 2022



# TCF Convention Center:

- Award winning TCF Center
- Waterfront and outdoor river view terraces
- Excellent facilities

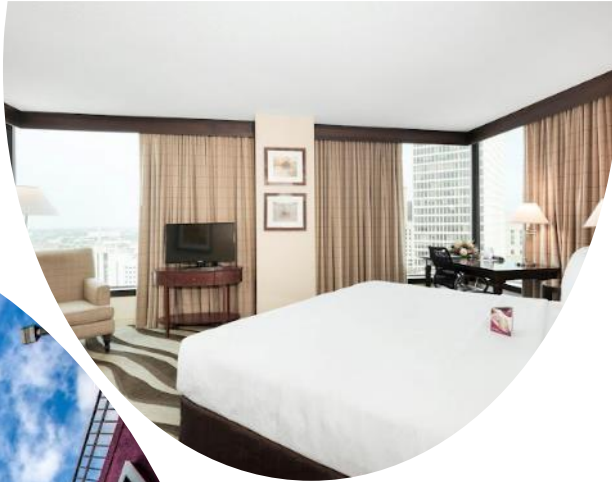


# Hotel #1:

## ■ Detroit Marriott at the Renaissance Center



## Hotel #2:



# Crowne Plaza Detroit Downtown Riverfront



EEE ENERGY CONVERSION CONGRESS & EXPO Detroit, Michigan, USA Oct. 9-13

# Attractions:

- Henry Ford Museum of American Innovation
  - Iconic Museum
  - ECCE 2021 Industry Networking Event !!



<https://www.thehenryford.org/visit/henry-ford-museum/exhibits/>

# Attractions:

<https://www.youtube.com/watch?v=CnXh9EPujA>

- Ford Museum
- Motown Museum
- GM Renaissance Center
- Downtown Riverfront, River Tours
- Eastern Market
- Ford Piquette Avenue Plant
- Detroit Institute of Arts
- Detroit Jazz Festival
- Fox Theatre



# Calendar:

## Important dates

- Jan. 15<sup>th</sup>, 2022 – Deadline for digest submissions
- May 1<sup>st</sup>, 2022 – Decision notification for Digests
- Feb 11<sup>th</sup>, 2022 – Deadline for Tutorials
- April 8<sup>th</sup>, 2022 – Decision Notification for Tutorials
- April 1<sup>st</sup>, 2022 – Deadline for Special Sessions
- May 20<sup>th</sup>, 2022 – Decision Notification for Special Sessions
- July 1, 2022:
  - Final papers with copyright forms
  - Full tutorial Materials Due
  - Special Session Plans Due

# ECCE 2022 Team (interim)

- General Chair: Emmanuel Agamloh
- Finance Chair: Shanelle Foster
- TPC Co-Chairs: Navid Zargari, Annette Muetze, Mohammad Islam, Gerry Moschopoulos, Brandon Grainger, Andrea Cavagnino,
- Publication Chairs: Jiangbiao He, Xiaonan Lu, Silvio Vaschetto
- Local Chairs: Abraham Gebregergis, Al-Thaddeus Avestruz
- Exhibit Chairs: David Morrison, Grant Pitel
- Industry Partnership Chairs: Avoki Omekanda, Maz Chowdhury, Joseph Song-Manguelle
- Tutorial Chairs: Pete Wung, Xu She, Xiaonan Lu
- Special Session Chair: Yue Cao, Sara Roggia
- Publicity Chairs: Zheyu Zhang, Zhi (George) Gao
- Plenary Session Chair: Yunwei (Ryan) Li, John Shen
- Student Activities Chair: Xiu Yao, Sandun Kuruppu
- Electronic Media Chair: Anant Singh
- Webmaster: Dong Cao, Yuan Li
- Women in Engineering Chairs: Norma Anglani, Lijun, He; Jin Ye,
- Awards Chair: Akshay Rathore, Chiara Boccaletti

# ECCE 2022 Tasks

## Key Milestones:

- Election of General Chair by Steering Committee: [October 1, 2019](#)
- Conference MOU Submitted by General Chair: [March 10, 2020](#)
  - IEEE Conference Reference#: [50734](#)
  - MOU status: [Approved](#)
- Conference Budget Completed: [April 1, 2020](#)
- Organizing committee recruitment: [on-going](#)
- Sponsor Loan Requested: [April 15, 2020](#)
- LO Acquisition: [May 2020](#)
- Bank Account Opened: [June 2020](#)
  - IAS Loan : [Approved and Submitted for Payment, June 2020](#)
  - PELS Loan: [Approved and submitted for payment, July 22, 2020](#)

# ECCE 2022 Tasks

## Preliminary Activities:

- First TPC meeting 6/7/2021
  - Discussing Logistics
  - Discussing/Drafting CfP - (completed)
- Tutorial and Special Sessions meeting 6/30/2021
  - Focus on how to increase industry participation
  - Drafting Cf SS and CfT (completed)
- RNA Kick-off mtg 6/30/2021
  - Focus on marketing plan
  - Marketing Plan (completed)
- Exhibition Committee meeting 7/27/2021
  - Marketing plans
  - Focus on how to leverage return to normality

## Contracting Activities:

- Contracting
  - TCF (complete)
  - Marriott (complete)
  - Crowne Plaza (complete)
  - Ford Museum (complete)
  - RNA (complete)
  - Web design and maintenance (complete)
  - Paper portal (complete)
  - Program design (complete)
  - BadgeGuys (in process)
  - A/V (not started)
  - Virtual Platform (not started, evaluations/discussions)

# ECCE 2022 Tasks

## Marketing Activities:

- Marketing
  - Call for Papers/Tutorials/SS Design (complete)
  - ECCE Virtual Booth (complete)
  - Publicity Video for ECCE 2022 (complete)
  - Two Landing Pages: for Exhibition and attendee signup (in process)
  - Extensive ECCE marketing through Social Media/ LinkedIn team highlights (in process)
  - Social Media Campaigns : LinkedIn, Facebook, Twitter
- Plan
  - Publicity Plan Developed
  - Publicity on track with deadlines
  - 1<sup>st</sup> Email blast conducted

## Publicity Activities:

1. IAS magazine (March, June, September, December):
  - Dave Durocher, [eic-iam@ieee.org](mailto:eic-iam@ieee.org)
2. IAS newsletter:
  - Lynda Bernstein, [ias-administrator@ieee.org](mailto:ias-administrator@ieee.org), [l.m.bernstein@ieee.org](mailto:l.m.bernstein@ieee.org)
3. PELS magazine (March, June, September, December):
  - Ashok Bindra, [bindra1@verizon.net](mailto:bindra1@verizon.net)
4. PELS newsletter:
  - Becky Boresen, [b.boresen@ieee.org](mailto:b.boresen@ieee.org)
5. IEEE Electrification Magazine, quarterly (March, June, September, December):
  - Lingling Fan, [linglingfan@usf.edu](mailto:linglingfan@usf.edu)
6. E-Grid:
  - Sandra Winkler, [s.l.winkler@ieee.org](mailto:s.l.winkler@ieee.org)
7. IEEE eNote:  
<https://www.ieee.org/conferences/conference-email-marketing.html>
8. PES Bulletin:
  - Juan Carlos Montero, [jmontero@ieee.org](mailto:jmontero@ieee.org)
9. IES Newsletter:
  - Fei Gao, [fei.gao@utbm.fr](mailto:fei.gao@utbm.fr)
10. How2Power (monthly newsletters):
  - David Morrison, [david@how2power.com](mailto:david@how2power.com)
11. Bodo's Power Systems (monthly newsletters)
12. IEEE Detroit local chapter:

# ECCE 2022 Tasks

## Exhibition Activities:

- ECCE 2021 Data
  - Data for 2021 being reviewed by Exhibition Chairs
  - Database of past exhibitors
  - Social Media Campaigns
- Prospectus for ECCE 2022
  - In process

## Student Activities/ WIE:

- Award level
- Plan of Activities/Local Org Committee

## Virtual Platform

- Evaluation of Lessons Learned
- Meeting with platform provider to address issues from ECCE2021
- Coordination with IAS for common platform

# ECCE 2022 Tasks

## Recently Completed Activities (During ECCE 2021):

- ECCE 2022 virtual booth
- Promotion at IAS IPCSD Technical Committee Meetings:
  - Industrial Drives - Navid Zargari
  - Electric Machines - Emmanuel Agamloh
  - Renewable Energy Systems – Andrea Cavagnino
  - Transportation System – Mohammad Islam
  - Industrial Power Converters – Andrea Cavagnino
  - Power Electronics Devices and Components – Zheyu Zhang

## Lessons Learned from ECCE 2021

- Transfer of knowledge between teams
  - GC2GC
  - TPCs held a meeting
  - Exhibition team is same as last year
  - Tutorial/Special Session Teams interacted
  - More knowledge transfer in future

# ECCE 2022 Tasks

## TPC Activities:

- Tom Cholewo has opened TPC portal for testing
- Sub Track list has been reviewed and finalized
- TPCs have received VC nominations from Societies
- VCs and Reviewers have been invited
- Papers have started coming in

- A. Renewable and Sustainable Energy Applications
- B. Smart Grid & utility Applications
- C. Big Data, Machine Learning, Cyber Security and Design Automation
- D. Transportation Electrification Applications
- E. Power Converter Topologies
- F. Control, Modelling and Optimization of PCs
- G. Electrical Machines
- H. Electric Drives
- I. Power Semiconductor Devices, Passive Components, Packaging, Integration, and Materials
- J. Energy Efficient Systems Applications and Lighting Technologies
- K. Emerging Technologies and Applications
- L. Conflict of interest
- SP. Special Session Proposal
- TP. Tutorial Proposals

# Agenda

- New IPCSD officers for 2022-23 - 10 min (Ayman El-Refaie and Pericle Zanchetta)

# New IPCSD officers for 2022-2023

IPCSD chair: Prof. Fernando Briz  
University of Oviedo, Spain  
(IPCSD secretary 2020-2021)  
Already approved by the IAS board



Proposed IPCSD Secretary:  
Prof. Luca Solero  
University of Roma Tre, Italy



## Prof. Luca Solero



2016 - now *Full Professor* – Department of Engineering, ROMA TRE University, Italy

2016 - now *Director* – Center for Power Electronics and Drives (C-PED), ROMA TRE University

2006 - 2015 *Associate Professor* – Dept. of Mechanical and Industrial Eng. ROMA TRE University

01/2002 – 10/2002 *Visiting Researcher* – Center for Power Electronics Systems (CPES), Virginia Tech,  
Blacksburg VA (USA)

1996 – 2005 *Assistant Professor* – Dept. of Mechanical and Industrial Eng. ROMA TRE University

### Teaching

Regular courses      Electrical Industrial Applications(72h)  
                                 Design of Power Electronic Converters (63h)  
                                 Marine Electric Drives (48h)

### Research Interests

Design and control of unconventional power electronic converter topologies and electric drives for renewable energy integration, automotive power systems, hybrid and electric propulsion

### Research Projects

> 15 research projects as Principal Investigator, funded by either public boards or private companies (both national and international), mainly in the field of renewable energy and electric and hybrid propulsion

### Publications and Awards

> 190 papers published in international journals and conference proceedings worldwide

2020      2019 IEEE IAS IPCC First Prize Paper Award

2014      First Prize at the international contest Solar Decathlon Europe 2014, as leader for the Electrical Balancing task of the Team “RhOME for denCity”

## Prof. Luca Solero

### Service to the Community

#### Editorial Boards

- 2019 – now Associate Editor – IEEE Journal of Emerging and Selected Topics in Industrial Electronics
- 2019 – now Associate Editor and Deputy Director – IEEE Open Journal of Industry Applications
- 2014 – now Associate Editor – IEEE Transactions on Industry Applications
- 2018 – 2019 Guest Editor – Special Issue on High Performance Power Electronic Converters: Topologies, Control, and Devices, IEEE Transactions on Industry Applications

#### Technical Committee

- 2020 – 2021 Chair – IEEE IAS Industrial Power Converters Committee
- 2018 – 2019 Vice Chair – IEEE IAS Industrial Power Converters Committee
- 2016 – 2017 Secretary - IEEE IAS Industrial Power Converters Committee
- 2014 – 2015 European Liaison Officer - IEEE IAS Industrial Power Converters Committee

#### Conferences

- Vice-Chair, Technical Program Committee member – IEEE ECCE years 2014, 2016, 2018, 2019, 2020, 2021
- Technical Program Committee member – IEEE IECON 2016, IEEE SLED 2016, IEEE ENERGYCON 2012
- Scientific Committee member – IEEE SPEEDAM, since year 2018
- Local Committee member – International Conference of Electrical Machines ICEM 2010, European Symposium on Supercapacitors and Applications ESSCAP 2008, IEEE Industry Applications Society Annual Meeting IAS 2000

#### National Committees

- 2019 – 2021 National Scientific Qualification Committee member – Electrical Energy Engineering area
- 2019 – now Delegate of the Head of the Engineering Department for the Copl Committee – Copl Committee is formed by all the Directors of the engineering departments of Italian universities
- 2017 – 2020 member of Board of Directors of CMAEL - Power Electronics, Electric Machines and Electric Drives association

# Agenda

- Closing remarks & Motion to adjourn – 1 min. (Pericle Zanchetta, IPCSD Chair)

Thank you very much for joining this online meeting and for actively contributing to the activities of the department.

See you all (hopefully) in person in **Detroit**  
**for ECCE 2022!**

Stay safe and take care