IPCSD Department Meeting

Pericle Zanchetta

IPCSD Chair

Saturday, December 4, 2021
IEEE INDUSTRY APPLICATIONS SOCIETY
Industrial Power Conversion Systems Department

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)
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%)
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

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

Source: fellow-stats-summary-years

Overall Success Rate: 30.1% (282/936)
## Fellows Nominated/Elevated By Societies – Class of 2022

<table>
<thead>
<tr>
<th>Society/Council</th>
<th>PE</th>
<th>IA</th>
<th>IE</th>
<th>PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominees Elevated</td>
<td>18</td>
<td>10</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: fellow-stats-summary-years
## Financial Situation

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td>5 187,7</td>
<td>5 639,9</td>
<td>6 531,3</td>
<td>3 732,3</td>
<td>4 443,7</td>
<td>4 609,6</td>
<td>2 587,5</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td>5 663,5</td>
<td>5 219,7</td>
<td>5 540,4</td>
<td>2 514,0</td>
<td>4 319,8</td>
<td>3 751,9</td>
<td>1 797,0</td>
</tr>
<tr>
<td><strong>Operating Net</strong></td>
<td>-475,8</td>
<td>420,2</td>
<td>990,9</td>
<td>1 218,3</td>
<td>123,9</td>
<td>857,7</td>
<td>790,5</td>
</tr>
<tr>
<td>Initiative Expense (3% and 50%)</td>
<td>0,0</td>
<td>0,0</td>
<td>27,6</td>
<td>75,0</td>
<td>144,9</td>
<td>61,4</td>
<td>1,2</td>
</tr>
<tr>
<td>Invest. Returns Expense</td>
<td>-1 238,1</td>
<td>259,8</td>
<td>-1 286,0</td>
<td>-1 206,6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Net</strong></td>
<td><strong>762,3</strong></td>
<td><strong>160,4</strong></td>
<td><strong>2 249,3</strong></td>
<td><strong>2 349,9</strong></td>
<td><strong>-21,0</strong></td>
<td><strong>796,3</strong></td>
<td><strong>789,3</strong></td>
</tr>
<tr>
<td>Society reserves</td>
<td>8 169,0</td>
<td>8 329,3</td>
<td>10 143,7</td>
<td>12 275,0</td>
<td></td>
<td></td>
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</tbody>
</table>
Our Publications

TIAS and Magazine

Decided Papers by Year of Original Submission

Impact factor on IEEE Transactions on Industry Applications

Impact Factor

<table>
<thead>
<tr>
<th>Year</th>
<th>Impact Factor</th>
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<tbody>
<tr>
<td>2015</td>
<td>1.901</td>
</tr>
<tr>
<td>2016</td>
<td>2.937</td>
</tr>
<tr>
<td>2017</td>
<td>2.743</td>
</tr>
<tr>
<td>2018</td>
<td>3.347</td>
</tr>
<tr>
<td>2019</td>
<td>3.488</td>
</tr>
<tr>
<td>2020</td>
<td>3.654</td>
</tr>
</tbody>
</table>

Original Submissions | Papers Decided | Decisions Made
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 drivees.

New Fellows (elevated through IAS)
- Mohammad Nazmul Anwar
- Hua Geng
- Amit Gupta
- Chandra Namuduri
- Mahesh Swamy
- Mohammad Uddin
- Firuz Zare

Prasad Enjeti
Adam Skorek

Sri Niwas Singh
Zenyu Zhang
Muhammad Hamza Ihtisham
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)
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 Bhattacharyya (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)
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”
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

- 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)

- 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

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Name(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Fang Zheng Peng</td>
</tr>
<tr>
<td>2019</td>
<td>Zi-Qiang Zhu</td>
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<tr>
<td>2018</td>
<td>Dianguo Xu</td>
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<tr>
<td>2017</td>
<td>Braham Ferreira</td>
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<td>2016</td>
<td>Seung-Ki Sul</td>
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<tr>
<td>2015</td>
<td>Pragasen Pillay</td>
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<tr>
<td>2014</td>
<td>Thomas A. Nondahl, Longya Xu</td>
</tr>
<tr>
<td>2013</td>
<td>Muhammad H. Rashid</td>
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<tr>
<td>2011</td>
<td>Thomas Jahns</td>
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<tr>
<td>2010</td>
<td>Tomy Sebastian</td>
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<tr>
<td>2009</td>
<td>Kaushik Rajashekkara</td>
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<tr>
<td>2008</td>
<td>Paresh C. Sen</td>
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<tr>
<td>2007</td>
<td>Caio Ferreira</td>
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<tr>
<td>2006</td>
<td>J. D. van Wyk</td>
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<tr>
<td>2005</td>
<td>Nobuyuki Matsui</td>
</tr>
<tr>
<td>2004</td>
<td>Hirofumi Akagi</td>
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<tr>
<td>2003</td>
<td>Bob Lorenz</td>
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<tr>
<td>2002</td>
<td>Rik DeDoncker</td>
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<tr>
<td>2001</td>
<td>L. Bruce McClun</td>
</tr>
<tr>
<td>2000</td>
<td>Kouki Matsuse</td>
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<tr>
<td>1999</td>
<td>Akira Nabae</td>
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<tr>
<td>1998</td>
<td>Don Novotny</td>
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<tr>
<td>1997</td>
<td>Joachim Holtz</td>
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<td>1996</td>
<td>Austin H. Bonnett</td>
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<td>1995</td>
<td>James Erickson</td>
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<td>1994</td>
<td>Ray Stratford</td>
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<td>1993</td>
<td>B.K. Bose</td>
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<tr>
<td>1992</td>
<td>Azizur Rahman</td>
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<tr>
<td>1991</td>
<td>Thomas E. Sparling</td>
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<tr>
<td>1990</td>
<td>George W. Walsh</td>
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<tr>
<td>1989</td>
<td>Donald Ross</td>
</tr>
<tr>
<td>1988</td>
<td>Curtis Herskind</td>
</tr>
<tr>
<td>1986</td>
<td>Thomas A. Lipo</td>
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<tr>
<td>1984</td>
<td>Russell W. Mills</td>
</tr>
</tbody>
</table>
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
<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Year</th>
<th>Name</th>
</tr>
</thead>
<tbody>
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<td>2020</td>
<td>Bruno Lequesne</td>
<td>2008</td>
<td>Clayton H. Reid</td>
</tr>
<tr>
<td>2019</td>
<td>Mark Nelms</td>
<td>2006</td>
<td>Peter Magyar</td>
</tr>
<tr>
<td>2018</td>
<td>John Nelson</td>
<td>2005</td>
<td>Satish Chaparala</td>
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<tr>
<td>2017</td>
<td>Jerry Hudgins</td>
<td>2004</td>
<td>Dayne Aldridge</td>
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<tr>
<td>2016</td>
<td>Barry Brusso</td>
<td>2003</td>
<td>Andrew W. Smith</td>
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<tr>
<td>2015</td>
<td>Carlton Speck</td>
<td>2002</td>
<td>Frederick C. Trutt</td>
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<td>2014</td>
<td>Louie J. Powell</td>
<td>2001</td>
<td>Michael J. Foley</td>
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<td>2013</td>
<td>H. Landis (Lanny) Floyd</td>
<td>2000</td>
<td>Donald S. Brereton</td>
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<td>2011</td>
<td>Robert Lorenz</td>
<td>1998</td>
<td>F. A. Furfari</td>
</tr>
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<td>2010</td>
<td>Mark Harris</td>
<td>1997</td>
<td>Edward A. E. Rich</td>
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</table>
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.
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. Meliopolous
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
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

*IAA 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%, PELS Admin)
- Transactions on Transportation Electrification (IAS 30%, PELS 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 1/7th, IES Admin)
- Transactions on Smart Grid (Technical Sponsor Only, PES Admin)
Co-sponsored Journals

- JESPTE 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

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

Third
Wind Farm Dynamic Equivalent Modeling Method for Power System Probabilistic Stability Assessment
Peng Wang, Zhenyuan Zhang, Qi Huang; and Wei-Jen Lee
2021 Prize Paper Award Recipients

*Industry Applications Magazine*

**First**
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

~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
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/1sLdyXoyNN9lwXi9HMNw0j8X1H0kqmbBe/view?usp=sharing
Agenda

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

1. Initiating the Project
2. Mobilizing the Working Group
3. Drafting the Standard
4. Balloting the Standard
5. Gaining Final Approval
6. Maintaining the Standard
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
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

## Topics and Active Members in Progress

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

**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

**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.
New Projects

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

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.

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

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
• 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
• 3rd 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

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

<table>
<thead>
<tr>
<th>First Name Last Name</th>
<th>email</th>
<th>Related APEC tracks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong Li</td>
<td><a href="mailto:cong.li@ieee.org">cong.li@ieee.org</a></td>
<td>5) Devices and Components</td>
</tr>
<tr>
<td>Zheyu Zhang</td>
<td><a href="mailto:zheyu.zhang@ieee.org">zheyu.zhang@ieee.org</a></td>
<td>2) DC-DC Converters</td>
</tr>
<tr>
<td>Michele Mengoni</td>
<td><a href="mailto:michele.mengoni@unibo.it">michele.mengoni@unibo.it</a></td>
<td>5) Devices and Components</td>
</tr>
<tr>
<td>Radu Bojoi</td>
<td><a href="mailto:radu.bojoi@polito.it">radu.bojoi@polito.it</a></td>
<td>4) Motor drives</td>
</tr>
<tr>
<td>Dong Cao</td>
<td><a href="mailto:dcao02@udayton.edu">dcao02@udayton.edu</a></td>
<td>1) AC-DC Converters</td>
</tr>
<tr>
<td>Tiefu Zhao</td>
<td><a href="mailto:tiefu.zhao@uncc.edu">tiefu.zhao@uncc.edu</a></td>
<td>9) Wireless Power Transfer</td>
</tr>
<tr>
<td>Xiaonan Lu</td>
<td><a href="mailto:xiaonan.lu@ieee.org">xiaonan.lu@ieee.org</a></td>
<td>7) Modeling and Simulation</td>
</tr>
<tr>
<td>Manuel Arias Perez de Azpeitia</td>
<td><a href="mailto:ariasmanuel@uniovi.es">ariasmanuel@uniovi.es</a></td>
<td>1) AC-DC converters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) DC-DC converters</td>
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<tr>
<td></td>
<td></td>
<td>12) Power Electronics Applications</td>
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<tr>
<td>Grat Pitel</td>
<td><a href="mailto:gpetel@magna-power.com">gpetel@magna-power.com</a></td>
<td>1) AC-DC Converters</td>
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<tr>
<td></td>
<td></td>
<td>6) Power Electronics Integration and Manufacturing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8) Control</td>
</tr>
<tr>
<td>Hengzhao Yang</td>
<td><a href="mailto:hengzhao.yang@nmt.edu">hengzhao.yang@nmt.edu</a></td>
<td>5) Devices and Components</td>
</tr>
<tr>
<td>Christina DiMarino</td>
<td><a href="mailto:dimaricm@vt.edu">dimaricm@vt.edu</a></td>
<td>5) Devices and Components</td>
</tr>
<tr>
<td>Vito Monopoli</td>
<td><a href="mailto:vitogiuseppe.monopoli@poliba.it">vitogiuseppe.monopoli@poliba.it</a></td>
<td>1) AC-DC Converters 7) Modeling and Simulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8) Control</td>
</tr>
</tbody>
</table>
After APEC’22, other forms of involvement could be discussed with APEC organizers

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

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
   .flip
   Topic/Session Chairs Volunteers (internet collection)
   b. Other Upcoming Conferences
8. Other Business
   a. Nagamori award announcement
9. Adjournment
Attendance

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

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

- If you are an IEEE – IAS member, and wish to be an EMC member, please send an email to 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.
Current Associate Editors

<table>
<thead>
<tr>
<th>Current Associate Editors</th>
<th>Cardoso</th>
<th>Portugal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antonio J. Marques</td>
<td>Cardoso</td>
<td>Portugal</td>
</tr>
<tr>
<td>Giulio</td>
<td>De Donato</td>
<td>Italy</td>
</tr>
<tr>
<td>Yao</td>
<td>Duan</td>
<td>US</td>
</tr>
<tr>
<td>Greg</td>
<td>Heins</td>
<td>Australia</td>
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<td>Gianmario</td>
<td>Pellegrino</td>
<td>Italy</td>
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<td>Alberto</td>
<td>Tessarolo</td>
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<tr>
<td>Rajeev</td>
<td>Vyas</td>
<td>US</td>
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<tr>
<td>Katsumi</td>
<td>Yamazaki</td>
<td>Japan</td>
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<tr>
<td>Qu</td>
<td>Ronghai</td>
<td>China</td>
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<tr>
<td>Rukmi</td>
<td>Dutta</td>
<td>Australia</td>
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<tr>
<td>Zhang</td>
<td>Pinjia</td>
<td>China</td>
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<tr>
<td>Parsa</td>
<td>Leila</td>
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<tr>
<td>Vascchetto</td>
<td>Silvio</td>
<td>Italy</td>
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<tr>
<td>Min-Fu</td>
<td>Hsieh</td>
<td>China</td>
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<tr>
<td>Takashi</td>
<td>Kosaka</td>
<td>Japan</td>
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<tr>
<td>Eric</td>
<td>Severson</td>
<td>US</td>
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<tr>
<td>Sanjib K.</td>
<td>Panda</td>
<td>Singapore</td>
</tr>
<tr>
<td>Adam</td>
<td>Skorek</td>
<td>Canada</td>
</tr>
<tr>
<td>Mircea</td>
<td>Popescu</td>
<td>UK</td>
</tr>
</tbody>
</table>

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

2021 TCPRC policy:
- In split case, please return to authors.
- Under COVID situation, more than one year has been allowed for Transaction review.
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,
Australia

Dr. Mircea Popescu
Motor Design Ltd
Wrexham, UK

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

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

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

Dr Rajeev Vyas
Vehicle Engineering Center
General Motors Corporation, USA

2021 Akira and Amin
Motion to Approve Slate of Officers

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
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
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)

<table>
<thead>
<tr>
<th></th>
<th>Number of new submissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 9, 2020-October 9, 2021</td>
<td>95</td>
</tr>
<tr>
<td>Withdrawn papers</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>95</strong></td>
</tr>
<tr>
<td>Papers invited and not submitted</td>
<td>20 (presumably, 12 papers won’t come)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>95</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Previous years</th>
<th>Number of new submissions Papers (invited papers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 2020-Oct. 2021</td>
<td>95 (111)</td>
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</table>
Time distribution of the submissions

Time distribution of the papers

<table>
<thead>
<tr>
<th>Month</th>
<th>Original</th>
<th>Revised</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>October 2020</td>
<td>9</td>
<td>6</td>
<td>159</td>
</tr>
<tr>
<td>November 2020</td>
<td>5</td>
<td>4</td>
<td></td>
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</table>
## Acceptance rate and days to final decision

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

<table>
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<tr>
<th></th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
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<tbody>
<tr>
<td>Days to first decision</td>
<td>70</td>
<td>67</td>
<td>75</td>
</tr>
<tr>
<td>Days to final decision</td>
<td>105</td>
<td>96</td>
<td>117</td>
</tr>
<tr>
<td>Median</td>
<td>89</td>
<td>85</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
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

1. Initiating the Project
2. Mobilizing the Working Group
3. Drafting the Standard
4. Balloting the Standard
5. Gaining Final Approval
6. Maintaining the Standard

☑️
☑️
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

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

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)
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
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 4th, 2021
• 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

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Luca Solero</td>
<td><a href="mailto:luca.solero@uniroma3.it">luca.solero@uniroma3.it</a></td>
</tr>
<tr>
<td>Vice-Chairman</td>
<td>Xiaonan Lu</td>
<td><a href="mailto:xiaonan.lu@ieee.org">xiaonan.lu@ieee.org</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Yongsug Suh</td>
<td><a href="mailto:ysu@jbnu.ac.kr">ysu@jbnu.ac.kr</a></td>
</tr>
<tr>
<td>Past Chairman</td>
<td>Grant Pitel</td>
<td><a href="mailto:gpitel@magna-power.com">gpitel@magna-power.com</a></td>
</tr>
</tbody>
</table>

Industrial Power Converter Subcommittees

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transactions Review Chair</td>
<td>Pericle Zanchetta</td>
<td><a href="mailto:pericle.zanchetta@nottingham.ac.uk">pericle.zanchetta@nottingham.ac.uk</a></td>
</tr>
<tr>
<td>Transactions Review Co-Chair</td>
<td>Stefano Bifaretti</td>
<td><a href="mailto:stefano.bifaretti@uniroma2.it">stefano.bifaretti@uniroma2.it</a></td>
</tr>
<tr>
<td>Fellow and Award Nominating Chair</td>
<td>Po-tai Cheng</td>
<td><a href="mailto:ptccheng@ieee.org">ptccheng@ieee.org</a></td>
</tr>
<tr>
<td>Standards Chair</td>
<td>Lixiang Wei</td>
<td><a href="mailto:lixiangw@ieee.org">lixiangw@ieee.org</a></td>
</tr>
<tr>
<td>Special Activity Chair</td>
<td>Wenkang Huang</td>
<td><a href="mailto:wkhuang@ieee.org">wkhuang@ieee.org</a></td>
</tr>
<tr>
<td>Asian Liaison Officer</td>
<td>Junichi Itoh</td>
<td><a href="mailto:itoh@vos.nagaokaust.ac.jp">itoh@vos.nagaokaust.ac.jp</a></td>
</tr>
<tr>
<td>Asian Liaison Officer</td>
<td>Jeehoon Jung</td>
<td><a href="mailto:jhjung@unist.ac.kr">jhjung@unist.ac.kr</a></td>
</tr>
<tr>
<td>European Liaison Officer</td>
<td>Petar Grbovic</td>
<td><a href="mailto:petar.grbovic@uibk.ac.at">petar.grbovic@uibk.ac.at</a></td>
</tr>
<tr>
<td>European Liaison Officer</td>
<td>Shafiq Odhano</td>
<td><a href="mailto:shafiq.odhano@newcastle.ac.uk">shafiq.odhano@newcastle.ac.uk</a></td>
</tr>
</tbody>
</table>
Slate of Officers for 2022

Committee Officers

Chairman ................................................. Xiaonan Lu ........................................... xiaonan.lu@ieee.org
Vice-Chairman ............................................ Yongsug Suh ........................................... ysuh@jbnu.ac.kr
Secretary ................................................. Wenkang Huang ........................................ wkhuang@ieee.org
Past Chairman ........................................... Luca Solero ........................................... luca.solero@uniroma3.it

Industrial Power Converters Subcommittees

Transactions Review Chair ................................ Stefano Bifaretti ........................................ stefano.bifaretti@uniroma2.it
Transactions Review Co-Chair .............................. Shafiq Odhano ........................................... shafiq.odhano@newcastle.ac.uk
Fellow and Award Nominating Chair ..................... Robert N. Guenther ....................................... rnguenther@gmail.com
Standards Chair ........................................... Lee Empringham ......................................... lee.empringham@nottingham.ac.uk
Special Activity Chair ..................................... Elisabeta Tedeschi ....................................... elisabetta.tedeschi@ntnu.no
Special Activity Co-Chair ................................ Tianqi Hong .................................................. thong@anl.gov
Asian Liaison Officer ...................................... Junichi Itoh .............................................. itoh@vos.nagaokaut.ac.jp
Asian Liaison Officer ...................................... Jeehoon Jung ............................................. jhiung@unist.ac.kr
European Liaison Officer ................................ Petar Grbovic ............................................. petar.grbovic@uibk.ac.at
European Liaison Officer ................................ Petros Karamanakos ................................... p.karamanakos@ieee.org
IAS Industrial Power Converters Committee

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. Llamar, 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 Pervez, 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
Control, Modelling, and Optimization of Power Converters

Vice Chair: Xiaonian 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 Ortolina, 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 Lidoozzi, ROMA TRE University, Italy
Vito Giuseppe Monopoli, Politecnico di Bari, Italy
Carl Ho, University of Manitoba, Canada
Fengxian 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

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
Tianci 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

ECCE 2021 – Track F

- Submitted 224
- Accepted (final) 139
- Percentage 62.1%
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
- 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
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 20th)

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

- 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**
Submission to Renewable and Sustainable Energy Conversion Systems Committee

Nov 2020-Oct 2021

Decision Ratio By Manuscript Type

- Accept for publication in Magazine: 1 (0.62%)
- Accept for publication in Transactions: 42 (26.58%)
- Reject: 49 (31.01%)
- Return to author for mandatory revisions (to address reviewer comments): 27 (17.09%)
- Return to author for mandatory revisions (to address reviewer comments): 39 (24.68%)
- Total: 158 (100.00%)

Number of Manuscripts: 158
99.37% of all Manuscripts
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:

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

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%.

<table>
<thead>
<tr>
<th>Sub-track</th>
<th>Title</th>
<th>Submitted Papers</th>
<th>Topic Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>B01</td>
<td>Renewable Energy Grid Integration</td>
<td>50</td>
<td>Jianwu Zeng, Taesik Kim, David Wenzhong Gao</td>
</tr>
<tr>
<td>B02</td>
<td>Distributed Resources and Microgrids</td>
<td>42</td>
<td>Rafael Pena Alzola, Huaiguang Jiang, Giacomo Sala</td>
</tr>
<tr>
<td>B03</td>
<td>HVDC and FACTS</td>
<td>18</td>
<td>Gregory Kish, Nathan Weise</td>
</tr>
<tr>
<td>B04</td>
<td>DC Distribution and DC Microgrids</td>
<td>19</td>
<td>Kumaraguru Prabakar, Zach Smith</td>
</tr>
</tbody>
</table>
## ECCE 2021 Contributions – Track B

<table>
<thead>
<tr>
<th>Sub Track</th>
<th>Title</th>
<th>No. of Submitted Papers</th>
<th>Topic Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>B05</td>
<td>AC Distribution and AC Microgrids</td>
<td>11</td>
<td>Hashim Al Hassan, Hamed Nademi</td>
</tr>
<tr>
<td>B06</td>
<td>Electronic transformer and other grid devices</td>
<td>21</td>
<td>Xu She, Tiefu Zhao</td>
</tr>
<tr>
<td>B07</td>
<td>V2G and G2V</td>
<td>8</td>
<td>Ryan Brody, Zhe Zhang</td>
</tr>
<tr>
<td>B08</td>
<td>Stability and power quality</td>
<td>17</td>
<td>Heng Wu</td>
</tr>
<tr>
<td>B09</td>
<td>Smart buildings and appliances</td>
<td>4</td>
<td>Liang Du</td>
</tr>
<tr>
<td>B99</td>
<td>Other topics</td>
<td>10</td>
<td>Josue Campos do Prado</td>
</tr>
</tbody>
</table>
ICRERA (Istanbul) 2021 Contributions

- 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

First Prize
Kevin Frankforter, M. Isabel 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 Nayanasiri, 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
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
    ➢ 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
• We seek volunteer to be the webmaster of the TSC website.
Where are our Members from?

- Most members from USA
  - Need to encourage members from other Regions / Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Subscribers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>3</td>
</tr>
<tr>
<td>Austria</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>12</td>
</tr>
<tr>
<td>China</td>
<td>5</td>
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<tr>
<td>France</td>
<td>9</td>
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<td>Hong Kong</td>
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<td>Japan</td>
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<tr>
<td>Republic of Korea</td>
<td>8</td>
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<td>Singapore</td>
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</tr>
<tr>
<td>Spain</td>
<td>1</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5</td>
</tr>
<tr>
<td>United States</td>
<td>166</td>
</tr>
</tbody>
</table>

* 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
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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manuscripts Submitted</td>
<td>48</td>
<td>95</td>
<td>103</td>
</tr>
</tbody>
</table>

Oct'2020 to Oct'2021
[Out of 103 Papers]
- Decision Completed, 33% (34 Papers)
- Returned for Mandatory Revision, 32%
- Under Review Process, 35%

Oct'2020 to Oct'2021
[Out of (103-69)= 34 Papers]
- Rejected, 53%
- Accepted for Publication, 47%

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

- India: 37%
- China: 10%
- Italy: 13%
- Belgium: 5%
- Japan: 4%
- Canada: 4%
- Korea: 5%
- USA: 11%
- Spain: 1%
- Portugal: 1%
- Denmark: 1%
- Iran: 1%
- Qatar: 1%
- Srilanka: 1%
- Norway: 1%
- Sweden: 1%
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

<table>
<thead>
<tr>
<th></th>
<th>Oral</th>
<th>Poster</th>
<th>Withdrawn</th>
<th>Rejected</th>
<th>Total</th>
<th>Acceptance Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECCE 2018</td>
<td>25</td>
<td>48</td>
<td>26</td>
<td></td>
<td>99</td>
<td>73.7%</td>
</tr>
<tr>
<td>ECCE 2019</td>
<td>25</td>
<td>32</td>
<td>7</td>
<td>23</td>
<td>87</td>
<td>65.5%</td>
</tr>
<tr>
<td>ECCE 2020</td>
<td>34</td>
<td>33</td>
<td>10</td>
<td>37</td>
<td>114</td>
<td>58.8%</td>
</tr>
<tr>
<td>ECCE 2021</td>
<td>44</td>
<td>3</td>
<td>3</td>
<td>21</td>
<td>68</td>
<td>64.7%</td>
</tr>
</tbody>
</table>
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
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/]
IAS TSC nominates

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

**Appointments**
Jan 2019 – Present: Assistant Professor, University of Kentucky
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)
PEDCC Committee Meeting – Annual Report

Dec, 2021
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
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
**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
2021 IEEE IAS Distinguished Service Award Recipient

Adam Skorek

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

Google

About 693 results (0.44 seconds)

Did you mean: ieee pedes

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 ...
You visited this page on 10/24/20.

Picture - IEEE Power Electronic Devices and Components ...
A not-for-profit organization, IEEE is the world's largest professional association for the advancement of technology. IEEE.
You've visited this page 2 times. Last visit: 10/24/20

Committee Officers - IEEE Power Electronic Devices and ...
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: 17
- Region 8: 26
- Region 9: 2
- Region 10: 28

Legend:
- Blue: Regions 1-7
- Orange: Region 8
- Grey: Region 9
- Yellow: Region 10
IAS sponsored conferences by type of sponsorship in 2021

Total: 73

- Financial: 40
- Technical: 33
IAS sponsored conferences by country 2021
(more than 1 conference/country)
IAS sponsored conferences by country 2021
(more than 1 conference/country)

FINANCIAL

TECHNICAL

Czech Republic
Turkey
Brazil
Malaysia
Romania
Italy
Canada
Russia
China
India
USA
Conference paper review followed up by IPCSD

- IPCSD: 36
- Others: 37
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
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
Virtual Platform open Oct 9th - Nov 14th

- 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 10th
  - 4 hours pre-recorded videos available starting Oct 5th
- 24 Special sessions – peer reviewed
  - Significant industry participation
  - Live on Zoom
• Virtual platform at ecce2021.vfairs.com
  ▫ 5 live day Oct. 10th - 14th + on-demand until Nov 14th
• 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 1st
- 28 VCs, 155 TCs
- 5-15 papers per TC

94% of last year 85% of 2018 peak
Xiu Yao appointed Associate Finance Chair on October 19th

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

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Type</th>
<th>Financials as of 11/24/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECCE Registration</td>
<td></td>
<td>$ 241,890.00</td>
</tr>
<tr>
<td>ECCE / IAS Registration</td>
<td></td>
<td>$ 97,890.00</td>
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<tr>
<td>Cancellation Penalty</td>
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<td>$ 200.00</td>
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<td>Paper Fees</td>
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<td>$ 248,610.00</td>
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<tr>
<td>Tutorials</td>
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<td>$ 50,700.00</td>
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<tr>
<td>Exhibits</td>
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<td>$ 4,900.00</td>
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<tr>
<td>Sponsorships</td>
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<td>$ 6,750.00</td>
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<tr>
<td>IAS Reimbursements</td>
<td></td>
<td>$ 2,950.00</td>
</tr>
<tr>
<td>Total Revenue</td>
<td></td>
<td>$ 653,890.00</td>
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</table>

<table>
<thead>
<tr>
<th>Expenses</th>
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</thead>
<tbody>
<tr>
<td>Event Management</td>
<td></td>
<td>$ 156,947.92</td>
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<tr>
<td>Registration and paper portal</td>
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<td>$ 28,754.00</td>
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<tr>
<td>Proceedings/Program</td>
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<tr>
<td>Tutorial Honoraria</td>
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<td>$ 17,000.00</td>
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<td>Virtual platform</td>
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<td>Local Arrangements</td>
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<tr>
<td>Committee</td>
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<td>$ 4,900.00</td>
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<tr>
<td>Promotions and website</td>
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<td>$ 10,341.95</td>
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<tr>
<td>Attendance Grants (Student and WiE)</td>
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<td>$ 8,990.00</td>
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<tr>
<td>Audit Fees</td>
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<tr>
<td>IAS Reimbursements</td>
<td></td>
<td>$ 0</td>
</tr>
<tr>
<td>Credit Card/Bank Fees</td>
<td></td>
<td>$ 29,631.31</td>
</tr>
<tr>
<td>Other (future site selection)</td>
<td></td>
<td>$ 0</td>
</tr>
<tr>
<td>Total Expense</td>
<td></td>
<td>$ 306,959.58</td>
</tr>
</tbody>
</table>

| Surplus                   |                                      | $ 346,930.42              |
| Surplus in %              |                                      | 113 %                     |
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
Attractions:

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

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

- 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 Theartre

https://www.youtube.com/watch?v=_CnXh9EPujA
Calendar:

Important dates

- **Jan. 15th, 2022** – Deadline for digest submissions
- **May 1st, 2022** – Decision notification for Digests
- **Feb 11th, 2022** – Deadline for Tutorials
- **April 8th, 2022** – Decision Notification for Tutorials
- **April 1st, 2022** – Deadline for Special Sessions
- **May 20th, 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
  - 1st Email blast conducted

Publicity Activities:

1. IAS magazine (March, June, September, December):
   - Dave Durocher, eic-iam@ieee.org
2. IAS newsletter:
   - Lynda Bernstein, ias-administrator@ieee.org, l.m.bernstein@ieee.org
3. PELS magazine (March, June, September, December):
   - Ashok Bindra, bindra1@verizon.net
4. PELS newsletter:
   - Becky Boresen, b.boresen@ieee.org
5. IEEE Electrification Magazine, quarterly (March, June, September, December):
   - Lingling Fan, linglingfan@usf.edu
6. E-Grid:
   - Sandra Winkler, s.l.winkler@ieee.org
7. IEEE eNote: https://www.ieee.org/conferences/conference-email-marketing.html
8. PES Bulletin:
   - Juan Carlos Montero, jcmontero@ieee.org
9. IES Newsletter:
   - Fei Gao, fei.gao@utbm.fr
    - David Morrison, 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


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”
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
Scientific Committee member – IEEE SPEEDAM, since year 2018

*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 CopI Committee – CopI 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