IPCSD Department Meeting

Fernando Briz, IPCSD Chair
Luca Solero, IPCSD Vice-Chair

Sunday, October 29, 2023
(16:00 – 18:00)
IPCSD Staff Committees

Awards
Chair: Robert Guenther

Standards
Chair: Emmanuel Agamloh

Conference Development
Chair: Xiaonan Lu

Diversity, Equity and Inclusion
Chair: Giovanna Oriti
Welcome and Meeting Opening – 1 min. (Fernando Briz, IPCSD Chair)

* Welcome from the IAS President – 10 min. (Andy Knight, IAS President)
* Report on the IPCSD Awards Committee – 10 min. (Bob Guenther, IPCSD Awards Chair)
* Report on IAS Editorial meeting -5 min. (Leon Tolbert, IAS Publications Chair)
* Report IPCSD Standards Committee -5 min. (Emmanuel Agamloh, IPCSD Standards committee Chair)
* Report IPCSD - DEIC (Giovanna, IPCSD-DEIC Chair)
* Report Conference Development (Xiaonan, IPCSD-Conference Development Chair)
* AS Educations Dept. -5 min (Pericle, IAS Education Dept. Chair)
* Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min
  - EMC (Greg Heins, EMC Chair)
  - DC (Luca Zarri, EMC Chair)
  - IPCC (XiaonanLu, IPCC Chair)
  - RSECS (AkshayKumar Rathore, RSECS Chair)
  - TSC (Mohammad Anwar, TSC Chair)
  - PEDCC (Francesco Iannuzzo, PEDCC Chair)
* ECCE 2023 Update -10 min (Brad Lehman, ECCE 2023 Chair)
* ECCE 2024 Update -5 min (Rolando Burgos, ECCE 2022 Chair)
* Nomination new IPCSD Vice-Chair – 10 min (Pericle)
* Closing remarks & Motion to adjourn – 1 min. (Fernando Briz, IPCSD Chair).
Welcome and Meeting Opening – 1 min. (Fernando Briz, IPCSD Chair)
Welcome from the IAS President – (Andy Knight, IAS President)
Report on the IPCSD Awards Committee – 10 min. (Bob Guenther, IPCSD Awards Chair)
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Report on IPCSD standards committee - 5 min. (Emmanuel Agamloh, IPCSD Standards committee Chair)
Key updates of technical committees (standards, websites, papers & conferences, other) - 30 min
  • EMC (Greg Heins, EMC Chair)
  • IDC (Luca Zarri, EMC Chair)
  • IPCC (Xiaonan Lu, IPCC Chair)
  • RSECS (Akshay Kumar Rathore, RSECS Chair)
  • TSC (Mohammad Anwar, TSC Chair)
  • PEDCC (Francesco Iannuzzo, PEDCC Chair)
ECCE 2023 Update -10 min (Brad Lehman, ECCE 2023 Chair)
ECCE 2024 Update -10 min (Rolando Burgos, ECCE 2024 Chair)
ECCE 2026 Chair - 2 min (Fernando Briz, IPCSD Chair)
Other business & Motion to adjourn – 1 min. (Fernando Briz, IPCSD Chair).
Welcome from IAS President

Andy Knight

IAS President
IPCSD Award Committee Report

Robert N Guenther, Jr

IPCSD Awards Chair

October 20, 2023
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.

2023 Awardee: Noriko Kawakami
(Toshiba-Mitsubishi-Electric Industrial Systems Corporation (TMEIC))
<table>
<thead>
<tr>
<th>Year</th>
<th>Recipient</th>
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<tbody>
<tr>
<td>2023</td>
<td>Noriko Kawakami</td>
</tr>
<tr>
<td>2022</td>
<td>Ayman EL-Refaie</td>
</tr>
<tr>
<td>2021</td>
<td>Robert Guenther</td>
</tr>
<tr>
<td>2020</td>
<td>Vlado Blasko</td>
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<tr>
<td>2019</td>
<td>Alex Huang</td>
</tr>
<tr>
<td>2018</td>
<td>Fred Wang</td>
</tr>
<tr>
<td>2017</td>
<td>Richard Lukaszewski</td>
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<tr>
<td>2016</td>
<td>Jason Lai</td>
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<tr>
<td>2015</td>
<td>Manoj Shah</td>
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<tr>
<td>2014</td>
<td>Jan Abraham Ferreira</td>
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<td>2013</td>
<td>Fang Zheng Peng</td>
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<td>2012</td>
<td>Thomas Habetler</td>
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<td>2011</td>
<td>Leo Lorenz</td>
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<td>2010</td>
<td>William Peterson</td>
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<tr>
<td>2009</td>
<td>John Miller</td>
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<td>2008</td>
<td>Ira J. Pitel</td>
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<tr>
<td>2007</td>
<td>Bruno Lequesne</td>
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<tr>
<td>2006</td>
<td>Kaushik Rajashekara</td>
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<tr>
<td>2005</td>
<td>Russel J. Kerkman</td>
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### IAS members in IEEE Fellow Class 2023
*(nominated through other societies)*

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Class</th>
<th>Citation</th>
<th>Sponsoring Society</th>
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<tbody>
<tr>
<td>Munaf Rahimo</td>
<td>R8 - Europe, MEast, Africa</td>
<td>2023</td>
<td>For contributions to high-voltage insulated gate bipolar transistors for grid applications&lt;br&gt;For contributions to control of renewable energy systems</td>
<td>ED</td>
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<tr>
<td>Chenghui Zhang</td>
<td>R10 - Asia and Pacific</td>
<td>2023</td>
<td>For contributions to control of renewable energy systems&lt;br&gt;For contributions to real-time simulation and control techniques for fuel cells and power converters</td>
<td>IE</td>
</tr>
<tr>
<td>Fei Gao</td>
<td>R8 - Europe, MEast, Africa</td>
<td>2023</td>
<td>For contributions to real-time simulation and control techniques for fuel cells and power converters</td>
<td>IE</td>
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<tr>
<td>Zhigang Liu</td>
<td>R10 - Asia and Pacific</td>
<td>2023</td>
<td>For contributions to fault detection and protection in high-speed railway power systems</td>
<td>IM</td>
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<tr>
<td>Ali Davoudi</td>
<td>R5 - Southwestern USA</td>
<td>2023</td>
<td>For contributions to power-electronic dominant micro-grid control</td>
<td>PEL</td>
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<tr>
<td>Xiongfei Wang</td>
<td>R8 - Europe, MEast, Africa</td>
<td>2023</td>
<td>For contributions to power-electronic-based power systems</td>
<td>PEL</td>
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8 IAS members in IEEE Fellow Class 2023 (nominated through IAS)

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Class</th>
<th>Citation</th>
<th>Sponsoring Society</th>
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<tbody>
<tr>
<td>Bilal Akin</td>
<td>R5 - Southwestern USA</td>
<td>2023</td>
<td>For contributions to control, diagnosis and condition monitoring of AC drives</td>
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<tr>
<td>Chengxiong Mao</td>
<td>R10 - Asia and Pacific</td>
<td>2023</td>
<td>For leadership in active control of power systems and its industrial applications</td>
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<td>Jean-luc Schanen</td>
<td>R8 - Europe, MEast, Africa</td>
<td>2023</td>
<td>For contribution to Electromagnetic Compatibility in Power Electronics</td>
<td>IA</td>
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<td>Kashem Muttaqi</td>
<td>R10 - Asia and Pacific</td>
<td>2023</td>
<td>For contribution to modeling and control of renewable and distributed energy resources</td>
<td>IA</td>
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<tr>
<td>Marko Hinkkanen</td>
<td>R8 - Europe, MEast, Africa</td>
<td>2023</td>
<td>For contributions to sensor-less control of industrial motor drives</td>
<td>IA</td>
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<tr>
<td>Masaaki Okubo</td>
<td>R10 - Asia and Pacific</td>
<td>2023</td>
<td>For contributions to non-thermal plasma applications for pollution control</td>
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<tr>
<td>Mingzhuo Xu</td>
<td>R6 - Western USA</td>
<td>2023</td>
<td>For contributions to power systems of all-electric aircraft</td>
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<td>Yilmaz Sozer</td>
<td>R2 - Eastern USA</td>
<td>2023</td>
<td>For contributions to the design and control of electric machine drives</td>
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IEEE Fellow (Deadline to Submit Nominations for Fellow Class of 2025: !! February 7, 2024 !!)

Note: Fellow Class of 2024 will be announced near the end of 2023

- 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
2022 IAS Awardees

• Outstanding Achievement: Iqbal Husain
• Mentor/Educator Award: Paresh C. Sen
• Andrew W. Smith Outstanding Young Member Achievement Award: Zhao Hao Ding
• Outstanding Young Member Service Award: Payman Dehghanian
IAS awards

- IAS IPCSD Gerald Kliman Innovator Award (Deadline: June 1, 2024 for the 2024 Kliman Award)
- 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)
- IEEE AS Outstanding Educator/Mentor (Deadline: March 15)
- IEEE Fellow (Deadline: March 1, 2024 for Fellow class of 2025)
- Richard Harold Kaufmann Award (Deadline: Jan 15)
- IAS Distinguished Lecturers (Deadline: April 30 (?))
Report on IAS Editorial Meeting

Leon Tolbert
IAS Publications Chair
IAS Publications Meeting at ECCE

Tom Nondahl, EiC, IEEE Transactions on Industry Applications
Leon Tolbert, IAS Publications Department Chair
Oct. 2023
State of Transactions
2023 Transactions Highlights

• Number of Published Papers Increased
  • Final three regular issues in 2023 had 115 papers versus 105 in 2022

• Conference Paper Similarity Check
  • 8 papers returned to authors in 2023, total of 96 since 2018
    • Only 1 of the 96 was from IPCSD

• Deputy Editor-in-Chief’s Completed First Full Year in 2023
  • Dr. Xiaodong Liang for Special Issues
  • Dr. Kashem Muttaqi for Conference Paper Invitations

• 2022 Impact Factor Increased to 4.40
  • Reported in June 2023
TIA Impact Factor by Year
Avg. Number of Papers in Regular Issues of TIA

Last 3 Regular Issues of 2023 had 115 pages
### Number of TIA Papers and Pages

<table>
<thead>
<tr>
<th>Year</th>
<th># of Papers Printed or *Planned</th>
<th># of Pages Printed or *Planned</th>
<th>Average # Pages/Paper</th>
<th>Included</th>
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<tr>
<td>2015</td>
<td>552</td>
<td>5456</td>
<td>9.88</td>
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<tr>
<td>2016</td>
<td>525</td>
<td>5380</td>
<td>10.25</td>
<td>6 Reg., Index, Recog. of Reviewers</td>
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<td>2017</td>
<td>619</td>
<td>6084</td>
<td>9.83</td>
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<tr>
<td>2018</td>
<td>626</td>
<td>6632</td>
<td>10.60</td>
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<tr>
<td>2019</td>
<td>719</td>
<td>7596</td>
<td>10.56</td>
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<tr>
<td>2020</td>
<td>665</td>
<td>7294</td>
<td>10.97</td>
<td>6 Reg., 2 SI, Recog. of Reviewers</td>
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<tr>
<td>2021</td>
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<td>7095</td>
<td>11.21</td>
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<td>8076</td>
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<tr>
<td>2023</td>
<td>*705</td>
<td>*8000</td>
<td>11.5</td>
<td>6 Reg., 3 SI, Recog. of Reviewers</td>
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Reg. = Regular Issue, SI = Special Issue

Editorial Meeting
Special Issues of IEEE Transactions on Industry Applications – 2023

• Jan/Feb 2023 – 9 papers, Smart Buildings for Smart Cities
• Mar/Apr 2023 – 19 papers, Design and Optimisation of Electric Motors for Traction Applications
• Nov/Dec 2023 – 18 papers in Special Section from 2022 ICEM
Special Issues of IEEE Transactions on Industry Applications - Future

- Jan/Feb 2024 – 30 papers, Advances in Energy Conversion, Control, Operation and Planning Towards Self-Sustained Highway Transportation Energy System
- Mar/Apr 2024 – 30 papers, Towards Resilient Power Grids Integrated with High-Penetrated Renewable Energy Sources: Challenges, Opportunities, Implementation Strategies, and Future Perspectives
- Mar/Apr 2024 – 20 papers, Smart and small power conversion with integration technology
- Jan/Feb 2025 – 30 papers, Knowledge-and Data-Driven Smart Energy Management in Distribution Networks
- Mar/Apr 2025 – 30 papers, Convergence of Data-driven and Physics-based Approaches in Power System Analysis, Optimization, and Control
- May/Jun 2025 – 30 papers, Advanced and innovative control technologies for grid-resilience-enhancing energy storage systems
- Jan/Feb 2026 – 30 papers, Advanced Topologies, Control Techniques and Modeling Methodologies for Bidirectional DC/DC Converters
More Detail about Special Issues on Tab of Transactions page at https://ias.ieee.org

Information About Special Issues

The IEEE Transactions on Industry Applications publishes up to three Special Issues each year.

Questions or proposals for Special Issues should be directed to the Transactions Editor-in-Chief (email EIC).

The first available publication date for a Special Issue is January 2026.

New Special Issues

- Advanced and innovative control technologies for grid-resilience-enhancing energy storage systems
  May/Jun 2025. Abstracts due 01-May-2024. ACT Call for Papers
- Convergence of Data-driven and Physics-based Approaches in Power System Analysis, Optimization, and Control
  Mar/Apr 2025. Abstracts due 01-Mar-2024. CDPA Call for Papers.
- Knowledge-and Data-Driven Smart Energy Management in Distribution Networks
- Open Journal Special Issue on Matrix Converters
  Abstracts due 30-June-2023.
Number of IAS Original Submissions and Revisions per Year
Includes Conf. and Spec. Issue Papers
(Some conferences moved to dedicated sites in recent years)
# 2022 Paper Submissions By Committee

<table>
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<tr>
<th>Technical Committee</th>
<th>Original Submissions</th>
<th>Revised Submissions</th>
<th>Total Submissions</th>
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<tbody>
<tr>
<td>Power Systems Engineering Committee</td>
<td>218</td>
<td>157</td>
<td>375</td>
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<tr>
<td>Industrial Automation and Control Committee</td>
<td>215</td>
<td>179</td>
<td>394</td>
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<tr>
<td><strong>Industrial Power Converter Committee</strong></td>
<td><strong>192</strong></td>
<td><strong>151</strong></td>
<td><strong>343</strong></td>
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<tr>
<td>Electric Machines Committee</td>
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<td>207</td>
<td>378</td>
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<td>Renewable and Sustainable Energy Conversion Sys.</td>
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<td>66</td>
<td>163</td>
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<td>Energy Systems Committee</td>
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<td>Petroleum and Chemical Industry Committee</td>
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<td>29</td>
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<td>Industrial Drives Committee</td>
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<td>73</td>
<td>145</td>
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<td>Transportation Systems Committee</td>
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<td>63</td>
<td>135</td>
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<td>Electrostatic Processes Committee</td>
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<td>26</td>
<td>54</td>
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<td><strong>Power Electronic Devices and Components Comm.</strong></td>
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<td><strong>15</strong></td>
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## 2022 Paper Submissions By Special Issue or Committee, Continued

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<th>Revised Submissions</th>
<th>Total Submissions</th>
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<td>Design and Optimisation of Electric Motors for Traction Applications</td>
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<td>Power Systems Protection Committee</td>
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<td>Cement Industry Committee</td>
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<td>Industrial Lighting and Display Committee</td>
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<td>Smart Buildings for Smart Cities</td>
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<td>Pulp and Paper Industry Committee</td>
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<td>Advances in Energy Conversion, Control, Operation and Planning Towards Self-Sustained Highway Transportation Energy System</td>
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<td>Smart and Small Power Conversion with Integration Technology</td>
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<td>Special Feature, Discussion, or Response</td>
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<td>Advanced Technology and Application for Hydrogen-Integrated Transportation and Power Systems</td>
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<td>Codes and Standards Committee</td>
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<td>Intelligent and Smart Charging Solutions for Electric Vehicles</td>
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<td>Mining Industry Committee</td>
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IPCSD Submission to Decision Time (Days) Past 12 Months ending 28-Sep-2023

Decision Times (Days) for IPCSD Technical Committees

- EMC
- IDC
- IPCC
- PEDCC
- RSECSC
- TSC
- IAS Average

Initial Decision
Final Decision

Editorial Meeting
Days from Original Submission to Decision – past 12 months ending 28-Sep-2023

Decision Times (Days) for all IAS Technical Committees

- Initial Decision
- Final Decision

Editorial Meeting
Number of Technical Conferences Sponsored by IAS each Year – The Sources of TIA Papers
Transactions Changes During the Last Year

• Most Conference Paper Invitation Requests handled by Dr. Kashem Muttaqi, Deputy EiC

• Printer Reduced Number of Pages Allowed per Issue
  • All Issues in 2023 were two Parts
    • One part had papers from IPCSD
    • One part had papers I&CPS, MSDAD, and PID
    • Special Issues published in the same part as the sponsoring Technical Committee

• Started Check on the Number of Reviewers
  • IEEE requires at least two who are not involved in the paper’s decision
    • A few papers were sent back for review in 2023
Upcoming TIA Changes

• Paper Submissions without Invitations (Tentative)
  • No trial so far has been completely successful
    • Difficult to prevent papers from reaching TCPRC’s without screening for eligibility
      • Screening rejects papers if they are out of scope, incomplete, poorly written, or otherwise ineligible for review.
    • Plan requires the transfer of papers from an administrative screening committee to one of the Technical Committees for review
      • IEEE contact says that will not work - but reason for that statement is unclear
        • IAS Editor has transferred papers from one committee to another many times without any obvious problems

• New Editor-in-Chief in 2024
Joint Publications

• Journal of Emerging and Selected Topics in Power Electronics
  • 50% owned with PELS
  • IAS now in deputy EiC Role – Fernando Briz
• Journal of Emerging and Selected Topics in Industrial Electronics
  • 10% share, mostly IES
• IEEE Electrification Magazine
• IEEE Transactions on Sustainable Energy
• IEEE Transactions on Transportation Electrification
• IEEE Transactions on Smart Grid
Red Flag Papers Report
<table>
<thead>
<tr>
<th>Date</th>
<th># papers in the list</th>
<th># papers in red</th>
<th>EMC</th>
<th>IDC</th>
<th>IPCC</th>
<th>PEDCC</th>
<th>RESC</th>
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<td>Papers by TC Nov 2022</td>
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<td>Papers by TC Nov 2023</td>
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ECCE and TIA awards and editorial initiatives
IPCSD Technical Committees’ Awards

❖ Each IPCSD Technical Committee is in charge for 2 different set of awards
  - Technical Committee ECCE award (1st, 2nd, 3rd prizes)
  - Technical Committee TIA award (1st, 2nd, 3rd prizes)
❖ All the TCs implemented and completed the process. Thank you!
  - 175 Electronic Certificates
  - 150 Printed Certificates
EMC update

1. EMC annual meeting
2. Initiatives
3. New AE appointments
4. Transactions Prize Papers
5. Publication trends
Initiatives: Process for Prospective Authors

• To submit papers presented at an IAS sponsored conference for IAS Transactions use:

https://site.ieee.org/ias-emc/transactions-form/

• On manuscript submission, explain the differences between the conference and Transactions versions in the **cover letter**.

• For more information visit EMC website:

http://sites.ieee.org/ias-emc/publications/
New AE appointment

To replace some of our outgoing AEs and to add expertise if “high volume” areas we have appointed 2 new AEs.

The selection process was based on:

a. Ongoing work as a TC for ECCE
b. Performance as a reviewer for IAS EMC
c. Expertise alignment with 2022 EMC needs

New EMC AEs are:
Matthew Gardner, Udochukwu Bola Akuru
Transactions Prize Papers

First Prize

Authors:
Emir Pošković; Luca Ferraris; Nicola Bianchi

Paper Title:
Different Approaches in the Use of Ferrites in Assisted Reluctance Machines

Second Prize

Authors:
Hui Wen; Yang Shi; Lijian Wu; Yidong Du; Youtong Fang

Paper Title:
Improving Combined Flow and Thermal Network Accuracy for Radially Air-cooled Generators by Considering the Non-linear Resistance Characteristics of T-junction Flow

Third Prize

Authors:
Daniel Ludois; Kevin Frankforter; Sarah Behringer; Finn Roberts

Paper Title:
Double Layer Capacitive Power and Heat Transfer in Rotating Machinery
ECCE prize papers

First Prize
Authors: Yuto Yamada, Hiroya Sugimoto and Kazuhito Imae

Paper Title: Efficiency Improvement of Permanent Magnet Synchronous Machines With High Slot Fill Aluminum Winding

Second Prize
Authors: Yaser Chulaee, Donovan Lewis, Greg Heins, Dean Patterson and Dan M. Ionel

Paper Title: Winding Losses in Coreless Axial Flux PM Machines with Wave and Spiral PCB Stator Topologies

Third Prize
Authors: Ryan Collin, Alex Yokochi and Annette von Jouanne

Paper Title: EDM Damage Assessment and Lifetime Prediction of Motor Bearings Driven by PWM Inverters
EMC historical trends

<table>
<thead>
<tr>
<th>Manuscript Type</th>
<th>First Decision (All Time) 2021</th>
<th>First Decision (All Time) 2022</th>
<th>First Decision (12 Months) 2021</th>
<th>First Decision (12 Months) 2022</th>
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<td>71</td>
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<table>
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<tr>
<th>Manuscript Type</th>
<th>Final Decision (All Time) 2021</th>
<th>Final Decision (All Time) 2022</th>
<th>Final Decision (12 Months) 2021</th>
<th>Final Decision (12 Months) 2022</th>
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<td>Electric Machines Committee</td>
<td>138</td>
<td>114</td>
<td>157</td>
<td>174</td>
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Action is required to improve the final decision time
Editorial Meeting

Industrial Drives Committee

Prof. Luca Zarri - Chair
University of Bologna, Italy

Prof. Jul-Ki Seok – Paper Review Chair
Yeungnam University, Korea
## Acceptance rate and days to final decision

<table>
<thead>
<tr>
<th>Period: Jan. 2023 – Oct. 2023</th>
<th>Num. of papers with a final decision</th>
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</thead>
<tbody>
<tr>
<td>Accepted papers</td>
<td>24</td>
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<tr>
<td>Rejected papers</td>
<td>34</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
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<table>
<thead>
<tr>
<th>%</th>
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<tbody>
<tr>
<td>Acceptance rate (2023)</td>
</tr>
<tr>
<td>Acceptance rate (2022)</td>
</tr>
<tr>
<td>Acceptance rate (2021)</td>
</tr>
<tr>
<td>Acceptance rate (2020)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days to first decision</td>
<td>74.1</td>
<td>69.2</td>
<td>70</td>
<td>67</td>
</tr>
<tr>
<td>Days to final decision</td>
<td>107.0</td>
<td>109.3</td>
<td>105</td>
<td>96</td>
</tr>
</tbody>
</table>
Awards Subcommittee

- María Martínez, University of Oviedo - Spain (Chair)
- Prof. Alejandro Gomez Yepes (University of Vigo - Spain)
- Prof. Gianmario Pellegrino (Politecnico di Torino)
- Prof. Nicola Bianchi (University of Padova)
- Dr. Takashi Kato (Nissan Motor Co. Ltd)
- Dr. Michael Saur (Mercedes-Benz AG)
- Dr. Hassan Eldeeb (SLPT Automotive)
- Mrs. Ozge Taskin (Safran Group)
- Prof. Liliana De Lillo (University of Nottingham)
Review criteria for selecting ECCE2022 Paper Awards and IDC Transactions Paper Awards

The review criteria included 6 specific quality indicators. A score from 0 to 10 was given for each of the parameters below.

A. **Readability** (Is the paper easy to read, do the conclusions follow from the data?).

B. **Use of Figures and Graphics** (Do the figures and graphics clearly illustrate the data?)

C. **Novelty** (Does the paper leads to a deeper understanding of the paper’s subject? Does the paper lead to a new advanced knowledge of the paper’s subject? Is it original?)

D. **Broad Interest** (Is the paper’s topic of interest outside of a narrowly targeted audience?)

E. **Significance** (Is the paper’s subject matter of significance in the paper’s defined field of interest?)

F. **Impact** (Will the paper have an impact on future research and development?)

❖ The selection was based on the highest total scores. The highest-scored papers had to satisfy a threshold set for combined scores of the Significance, Impact parameters and Novelty.

❖ The papers were ranked in decreasing order of Impact+Significance+Novelty. For the papers that had same score, a second rank considering also Readability+Figure Quality was used.

20 papers examined for the ECCE awards.

51 papers examined for the IDC Transaction awards.
2022 IEEE ECCE Conference Paper Awards


IPCSD Editorial Meeting

Report on Industrial Power Converter Committee (IPCC) Activities

Xiaoan Liu
Purdue University, IN, USA
IAS IPCC Chair

Stefano Bifaretti
University of Rome Tor Vergata, Italy
IAS IPCC Transactions Papers Review Chair

October 29th, 2023
IPCC Prize Papers Awards for ECCE 2022

- IPCC was responsible for any paper included in Track E and F
- According to the 2022 IPCSD guidelines, a preselection process has been performed to reduce the workload of the Awards Subcommittee (about 116 papers for Track E and 72 papers for Track F)

Final Ranking IPCC ECCE 2022 Awards

<table>
<thead>
<tr>
<th>Rank</th>
<th>Authors</th>
<th>Paper Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ripun Phukan, Xingchen Zhao, Che-Wei Chang, Rolando Burgos, Dong Dong, Arnaud Plat and Debbou Mustapha</td>
<td>Optimized DC-AC EMI Filter Design for DC-Fed High Speed SiC-Based Motor Drive</td>
</tr>
<tr>
<td>2</td>
<td>Thiago Pereira, Yuqi Wei, Homer A. Mantooth and Marco Liserre</td>
<td>Analysis and Design of a Multiport Resonant DC Transformer for Solid-State Transformer Applications</td>
</tr>
<tr>
<td>3</td>
<td>Ryan Olson, Ahmad El Shafei, Robert M. Cuzner, Yue Zhao, Ma Zhuxuan, Adel Nasiri and Tianchen Li</td>
<td>Derivation and Validation of a Common-Mode Model for a Neutral Point Clamped Dual Active Bridge</td>
</tr>
</tbody>
</table>
IPCC Prize Papers Awards for Transactions on Industry Applications 2022

According to the 2022 IPCSD guidelines, to reduce the workload of the Awards Subcommittee (about 100 papers published in 2022 through IPCC), the top-10 papers have been preselected, based on the M-score provided by Manuscript Central, and then evaluated.

Final Ranking for IPCC TIA 2022 Awards

<table>
<thead>
<tr>
<th>Rank</th>
<th>Authors</th>
<th>Paper Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Luca Tarisciotti, Linglin Chen, Shuai Shao, Tomislav Dragicevic, Patrick Wheeler, Pericle Zanchetta</td>
<td>Finite Control Set Model Predictive Control for Dual Active Bridge converter</td>
</tr>
<tr>
<td>2</td>
<td>Fanfan Lin, Xin Zhang, Xinze Li, Changjiang Sun; Wenjian Cai, Zhe Zhang</td>
<td>Automatic Triple Phase Shift Modulation for DAB Converter with Minimized Power Loss</td>
</tr>
<tr>
<td>3</td>
<td>Xinyuan Du, Fei Diao, Zhe Zhao, Yue Zhao</td>
<td>An All Silicon Carbide 3kV/540V Series-Resonant Converter for Electric Aircraft Systems</td>
</tr>
</tbody>
</table>
IPCSD Editorial Meeting
PEDCC Report

Francesco Iannuzzo, Aalborg University, PEDCC Chair
Zhiqiang (Jack) Wang, HUST, Wuan, China, PEDCC Transaction Chair
Jose Ortiz Gonzales, University of Warwick, UK, PEDCC Award Chair

October 29th, 2023
4 pm to 6 pm CDT
2022 Technical Committee TIA awards (PEDCC)

PEDCC selected 3 papers to receive the 2022 Technical Committee TIA awards, and can nominate 1 paper as potential candidate for the IAS Transactions awards.

Award Nomination Committee:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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</thead>
<tbody>
<tr>
<td>Tanya Gachovska</td>
<td>Solantro Semiconductor, Canada</td>
</tr>
<tr>
<td>Yushan Liu</td>
<td>Beihang University, China</td>
</tr>
<tr>
<td>Zheyu Zhang</td>
<td>Rensselaer Polytechnic Institute, USA</td>
</tr>
<tr>
<td>Jose Ortiz-Gonzalez</td>
<td>University of Warwick, UK</td>
</tr>
<tr>
<td>Zhiqiang (Jack) Wang</td>
<td>Huazhong University of Science and Technology, China</td>
</tr>
</tbody>
</table>
2022 Technical Committee TIA Awards (PEDCC)

First Prize Paper Award
Shi Pu, Fei Yang, Nathan Zhang,
Bhanu Teja Vankayalapati, and Bilal Akin
University of Texas at Dallas, USA
for the paper
“A Comparative Study on Reliability and Ruggedness
of Kelvin and Non-Kelvin Packaged SiC MOSFETs”
IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, VOL. 58, NO. 3, MAY/JUNE 2022

Second Prize Paper Award
Wenzhao Liu, Dao Zhou, Francesco Iannuzzo,
Michael Hartmann, and Frede Blaabjerg
Aalborg University, Denmark
for the paper
“Separation and Validation of Bond-Wire and Solder
Layer Failure Modes in IGBT Modules”
IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, VOL. 58, NO. 2, MARCH/APRIL 2022

Third Prize Paper Award
Koji Orikawa, Shotaro Kanno, and Satoshi Ogasawara
Hokkaido University, Japan
for the paper
“A Winding Structure of Air-Core Planar Inductors for
Reducing High-Frequency Eddy Currents”
IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, VOL. 58, NO. 6, NOVEMBER/DECEMBER 2022
Will Portnoy Award 2023 (PEDCC Best Papers Award)

• All the 15 shortlisted paper – Very high quality
• High quality submissions in our ECCE track in 2022
• 1st, 2nd and 3rd position – Awards
• Very relevant topics to Track I.

Award Committee
Professor Francesco Iannuzzo, University of Aalborg, Denmark
Dr Francisco Freijedo, Huawei Technologies, Nuremberg
Dr Yushan Liu, Beihang University, Beijing, China
Dr Zheyu Zhang, Clemson University, United States
Dr Jose Ortiz Gonzalez, University of Warwick, United Kingdom
Will Portnoy Award 2023 (PEDCC Best Papers Award)

2023 1st Prize Paper Award
Kohei Horii, Ryuzo Morikawa, Katsuhiro Hata, Kenichi Morokuma, Yukihiko Wada, Yoshiko Obiraki, Yasushige Mukunoki and Makoto Takamiya
University of Tokyo and Mitsubishi Electric Corporation

for the paper
"Sub-0.5 ns Step, 10-bit Time Domain Digital Gate Driver IC for Reducing Radiated EMI and Switching Loss of SiC MOSFETs"
presented at the 2022 IEEE Energy Conversion Congress and Exposition (ECCE)

2023 2nd Prize Paper Award
Yunlei Jiang, Borong Hu, Bo Wen, Yanfeng Shen and Teng Long
University of Cambridge and Danfoss Silicon Power R&D

for the paper
"Methodology for Large-signal Loss Characterization of Ferroelectric Class II MLCC in High-frequency Range”
presented at the 2022 IEEE Energy Conversion Congress and Exposition (ECCE)

2023 3rd Prize Paper Award
Jun Imaoka, Matsuta Kazuya, Hiroki Ochiai, Koichi Shigematsu, Mostafa Noah and Masayoshi Yamamoto
Nagoya University

for the paper
"Feasible Evaluations of Low Profile Magnetic Structure Based on Meander Winding and Split-Magnetic Cores with High-Cooling Capability Used in Power Converters"
presented at the 2022 IEEE Energy Conversion Congress and Exposition (ECCE)
ECCE 2023 Topic ‘I’
Power Semiconductor Devices, Passive Components, Packaging, Integration, and Materials

102 accepted, out of 144 digests submitted
70.8% acceptance – pretty much in line with the last, and close to that in 2019
High-quality review: average 4.5 reviews per paper (min 3), a little bit higher than 4.3 last year

Comparison with prior years

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<td>100</td>
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<td>152</td>
<td>130</td>
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<td>124</td>
<td>144</td>
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<tr>
<td>Accepted</td>
<td>65</td>
<td>51</td>
<td>60</td>
<td>62</td>
<td>57</td>
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<td>81</td>
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<td>% Accept</td>
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<td>65</td>
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<td>65</td>
<td>64</td>
<td>68</td>
<td>70.8</td>
</tr>
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</table>

Vice Chairs
Francesco Iannuzzo, Aalborg University, Denmark
Yushan Liu, Beihang University, China
Jungwon Choi, University of Minnesota, USA

F. Iannuzzo - PEDCC Editorial activity report
Other activities: Newsletters

- Starting in June 2022, six newsletters have been sent to committee members through emails, and uploaded to the committee website.
- Quarterly newsletters will be continuously sent.

September 2023 e-Newsletter

In this issue
- Announcement: PEDCC Annual Meeting at ECCE, Nashville, TN, USA
- Campaign for New Committee Secretary
- Award Announcement
  - 2024 IEEE Nikola Tesla Award
  - 2023 IEEE IAS Gerald Kliman Innovation Award
- Announcement: New IAS Annual Meeting Website
IEEE Industry Applications Society
Renewable and Sustainable Energy Conversion Systems
Committee – IEEE RSECS

Annual Meeting
29 October 2023

Chair – Akshay Kumar Rathore, Singapore
Vice Chair and TCPRC – Ke Ma, China
Vice Chair of Conferences – Eduard Muljadi, USA
Secretary – Behrooz Mirafzal, USA
Past Chair – Adel Nasiri, USA
Publications Chair Report

- Manuscripts submission to Renewable and Sustainable Energy Conversion Systems Committee:
  - 64 original + 81 revised = Total 145 (Oct. 2022 to Oct. 2023)
  - 127 with decisions (40 Accept-31%, 27 Reject-21%, 60 Revision-47%)
- Average Submission to First Decision Time: 62 days (65 days last year)

Ke Ma
Shanghai Jiao Tong University, China
Took over since Feb. 2022
Paper submission statistics by country and month

<table>
<thead>
<tr>
<th>Country/Region of Submitting Author</th>
<th># Manuscripts</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Australia</td>
<td>3</td>
<td>2.1 %</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1</td>
<td>0.7 %</td>
</tr>
<tr>
<td>Belgium</td>
<td>3</td>
<td>2.1 %</td>
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<tr>
<td>China</td>
<td>10</td>
<td>6.8 %</td>
</tr>
<tr>
<td>Denmark</td>
<td>2</td>
<td>1.4 %</td>
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<tr>
<td>Finland</td>
<td>2</td>
<td>1.4 %</td>
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<tr>
<td>Greece</td>
<td>6</td>
<td>4.1 %</td>
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<tr>
<td>India</td>
<td>62</td>
<td>42.5 %</td>
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<tr>
<td>Italy</td>
<td>4</td>
<td>2.7 %</td>
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<tr>
<td>Japan</td>
<td>1</td>
<td>0.7 %</td>
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<tr>
<td>Korea (the Republic of)</td>
<td>2</td>
<td>1.4 %</td>
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<tr>
<td>Mexico</td>
<td>3</td>
<td>2.1 %</td>
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<tr>
<td>Norway</td>
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<td>2.7 %</td>
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<tr>
<td>Saudi Arabia</td>
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<td>Spain</td>
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<td>Sweden</td>
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<td>United Arab Emirates</td>
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<td>United States</td>
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<tr>
<td>Viet Nam</td>
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<td>2.1 %</td>
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<tr>
<td><strong>Summary</strong></td>
<td><strong>146</strong></td>
<td><strong>100.0 %</strong></td>
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</table>

India 42%, U.S. 16%

<table>
<thead>
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<th>Submission Month</th>
<th># Manuscripts</th>
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<td>November 2022</td>
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<td>December 2022</td>
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<td>January 2023</td>
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<tr>
<td>February 2023</td>
<td>5</td>
<td>7.7 %</td>
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<tr>
<td>March 2023</td>
<td>3</td>
<td>4.6 %</td>
</tr>
<tr>
<td>April 2023</td>
<td>4</td>
<td>6.2 %</td>
</tr>
<tr>
<td>May 2023</td>
<td>6</td>
<td>9.2 %</td>
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<tr>
<td>June 2023</td>
<td>8</td>
<td>12.3 %</td>
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<td>July 2023</td>
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<td>4.6 %</td>
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<tr>
<td>August 2023</td>
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<td>September 2023</td>
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<tr>
<td>October 2023</td>
<td>5</td>
<td>7.7 %</td>
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<tr>
<td><strong>Summary</strong></td>
<td><strong>65</strong></td>
<td><strong>100.0 %</strong></td>
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</tbody>
</table>

1st submission: Oct.+Nov. 22%, June 12%
TIA award 2023 under RSECS

- **RSECS Transactions Papers Awards:**
  - **First:** A Comparative Simulation Study of The Different Variations of PZT Piezoelectric Material by Using A MEMS Vibration Energy Harvester - Bapi Debnath, R. Kumar
  - **Second:** Fault-Tolerant Operation of a Multi-Mode Stacked Switch Rectifier Leg through Built-In Circuit Redundancy - Reza Emamalipour, John Lam
  - **Third:** Adaptive Position Observer for Multimode Wind-BES Based Microgrid Interfaced to Distribution Network - Subarni Pradhan, Bhim Singh, Bijaya Ketan Panigrahi
### 42 Vice Chairs from IAS and PELS

<table>
<thead>
<tr>
<th>Track Name</th>
<th>Track</th>
<th>Vice Chair</th>
<th>Vice Chair</th>
<th>Vice Chair</th>
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</thead>
<tbody>
<tr>
<td>Sustainable Energy, Energy Storage and Power-to-X Technologies</td>
<td>A</td>
<td>Eduard Muljadi</td>
<td>Ariya Sangwongwanich</td>
<td>Akanksha Singh</td>
</tr>
<tr>
<td>Grid Modernization and Smart Grid</td>
<td>B</td>
<td>Radha Sree Krishna Moorthy</td>
<td>Marius Langwasser</td>
<td>Yuan Li, Gab-Su Seo, Heng Wu</td>
</tr>
<tr>
<td>Big Data, Machine Learning, Cyber Security and Design Automation</td>
<td>C</td>
<td>Yenan Chen</td>
<td>Liang Du, Yufei Li</td>
<td>Yicheng Liao</td>
</tr>
<tr>
<td>Transportation Electrification Applications</td>
<td>D</td>
<td>Matthias Preindl</td>
<td>Tao Yang</td>
<td>Jin Ye</td>
</tr>
<tr>
<td>Power Converter Topologies</td>
<td>E</td>
<td>Mahshid Amirabadi, Khurram Afridi</td>
<td>Dong Cao, Wenkang Huang, Hanh-Phuc Le</td>
<td>Jin Moon, Yong sug Suh</td>
</tr>
<tr>
<td>Controls, Modelling and Optimization of Converters</td>
<td>F</td>
<td>Pankaj Bhowmik Pradyumman Chaturvedi</td>
<td>Daniel Costinett, Petros Karamanacos</td>
<td>Jinia Roy</td>
</tr>
<tr>
<td>Electrical Machines</td>
<td>G</td>
<td>Giulio De Donato</td>
<td>Rukmi Dutta</td>
<td>Narges Taran</td>
</tr>
<tr>
<td>Electric Drives</td>
<td>H</td>
<td>Ali Bazzi, Antonio J. Marques Cardoso</td>
<td>Kevin Lee, David Reigosa</td>
<td>Sara Roggia</td>
</tr>
<tr>
<td>Power Semiconductor Devices, Passive Components, Packaging, Integration, and Materials</td>
<td>I</td>
<td>Jungwon Choi</td>
<td>Francesco Iannuzzo</td>
<td>Yushan Liu</td>
</tr>
<tr>
<td>Energy Efficient Systems Applications and Lighting Technologies</td>
<td>J</td>
<td>Padmanaban Sanjeevikumar</td>
<td></td>
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</tr>
<tr>
<td>Applied Research and Emerging Technologies</td>
<td>K</td>
<td>Qiang Wei</td>
<td>Hua Zhang</td>
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<tr>
<td>Conflict of Interest</td>
<td>M</td>
<td>Dong Dong</td>
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</table>
ECCE 2023 Contributions – Track A

- Track A - Sustainable Energy, Energy Storage and Power-to-X Technologies (RESC contributions)
- IAS-RESC provided 1 Vice Chair Ke Ma to work with the Topic Chairs:

<table>
<thead>
<tr>
<th>Subtrack</th>
<th>Topic</th>
<th>Papers submitted</th>
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<tbody>
<tr>
<td>A1</td>
<td>Wind energy applications</td>
<td>16</td>
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<td>A2</td>
<td>Solar energy applications</td>
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<td>A3</td>
<td>Power converters in renewable and sustainable energy application</td>
<td>63</td>
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<td>A4</td>
<td>Energy storage and harvesting</td>
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<td>Hybrid renewable sources</td>
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<td>A6</td>
<td>Power-to-heat applications</td>
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<td>A7</td>
<td>Power-to-hydrogen technologies</td>
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<tr>
<td>A8</td>
<td>Other topics in renewable and sustainable energy applications</td>
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</table>
ECCE 2023 Contributions – **Track A**

- 159 papers submitted
- 102 papers were accepted, acceptance rate 64%
- ECCE 2023 was decided to be in person conference
- All technical sessions were presented in person and some are video-based on demand.
- **Special thanks to our topic and session chairs!**
ECCE 2022 Prize Papers

- **First Prize:** *A Trade-off Between Cost and Efficiency in Solid-State Circuit Breakers.*
  Co-authors: Reza Kheirollahi, Xin Zan, Shuyan Zhao, Yao Wang, Hua Zhang, Xiaonan Lu, Al-Thaddeus Avestruz and Fei Lu

- **Second Prize:** *A Comparison of PI-Based and Sorting-Based State of Charge Balancing Methods in Cascaded H-Bridge Converters.*
  Co-authors: Gaowen Liang, Ezequiel Rodriguez, Glen Farivar, Naga Brahmendra Yadav Gorla, Neha Beniwal, Josep Pou, and Georgios Konstantinou

- **Third Prize:** *Automated Detection of Failures in Doubly-Fed Induction Generators for Wind Turbine Applications.*
  Co-authors: Byambasuren Battulga, Muhammad Faizan Shaikh, Sang Bin Lee, and Mohamed Osama

- **Third Prize:** *Inertia Evaluations on Grid Forming Inverters with Virtual Synchronous Generator Control Applied to Photovoltaic Power Systems.*
  Co-authors: Qiang Lin, Tetsu Shijo, Kenichirou Ogawa, Hiroshi Uno, Yasuhiro Kanekiyo, and Junichi Arai
Transportation Systems Committee (TSC) -- IPCSD Editorial Meeting

John Kisacikoglu, Ph.D.
National Renewable Energy Laboratory
TSC Vice Chair – Papers

Presenter: JiangBiao He, Ph.D.
University of Kentucky
TSC Secretary
Transaction Paper Review: Manuscript Status (Last Four Years)

**TOTAL SUBMISSIONS TO IAS-TSC**

<table>
<thead>
<tr>
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<tr>
<td>Oct. 20-Oct. 21</td>
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<td>Oct. 21-Oct. 22</td>
<td>138</td>
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<tr>
<td>Oct. 22-Oct. 23</td>
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**ACCEPTANCE RATIO**

<table>
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<th>Period</th>
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<tr>
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</table>
TSC ECCE Prize Paper Award - 2023

A High Power Density 3-phase/1-phase Compatible MISN-PFC Converter for On-Board Charger

Wending Zhao
College of Electrical Engineering
Zhejiang University
Hangzhou, China
zhaowending@zju.edu.cn

Tianlin Huang
College of Electrical Engineering
Zhejiang University
Hangzhou, China
zhli@zju.edu.cn

Xinke Wu
College of Electrical Engineering
Zhejiang University
Hangzhou, China
wuxinke@zju.edu.cn

Active Filter Circuit in the HF AC-link of a Bidirectional Wireless Battery Charger for EV

Asier Garcia-Bediaga
Power Electronics Area
Inerlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0002-8788-3875

Ander Avila
Power Electronics Area
Inerlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0002-1668-8923

Iztar Azaurren
Power Electronics Area
Inerlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0003-0147-5334

Alejandro Rujas
Power Electronics Area
Inerlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0002-2005-6816

Miroslav Vasic
Center for Industrial Electronics (CEI)
Technical University of Madrid (UPM)
Madrid, Spain
0000-0001-9597-6409

Impact of Vehicle Requirements on Accessory Power Module Design for Ulitum Electric Vehicle Platforms

Ranyu Badawi
Engineering Product Development
General Motors
Pontiac, MI, United States
ranyu.badawi@gm.com

Steven Wybo
Engineering Product Development
General Motors
Warren, MI, United States
steven.wybo@gm.com

Mahboud Tajmoradgh
Engineering Product Development
General Motors
Warren, MI, United States
mahboud.tajmoradgh@gm.com

Mohammad Ansari
Engineering Product Development
General Motors
Warren, MI, United States
mohammad.ansari@gm.com

Industrial Power Conversion Systems Department
TSC Prize Paper Award for IEEE Transactions on Industry Applications - 2022

Noninvasive Aging Analysis of Lithium-Ion Batteries in Extreme Cold Temperatures
Adrian Soto, Student Member, IEEE, Alberto Berrueta, Member, IEEE, Ignacio Oficialdegui, Pablo Sanchis, Senior Member, IEEE, and Alfredo Ursúa, Senior Member, IEEE.

Analytical Derivation of Phase-Current Waveform for Elimination of Torque and Input-Current Ripples of Switched Reluctance Motor Operating Under Magnetic Saturation
Takayuki Kasumi, Member, IEEE, Kosuke Kobayashi, Kazuhiro Umetani, Member, IEEE, and Eiji Hiraki, Member, IEEE.

Modeling, Simulation, and Characterization of a Supercapacitor in Automotive Applications
Vincenzo Castiglia, Nicola Campagna, Student Member, IEEE, Antonino Oscar Di Tommaso, Rosario Miceli, Member, IEEE, Claudio Nevoloso, Filippo Pellicer, Christian Puccio, and Fabio Viola.
IEEE Open Journal of Industry applications update

EiC: Prof. Pericle Zanchetta

October 2023
Governance

Advisory Board
- Prof. Pericle Zanchetta, University of Nottingham (UK) and University of Pavia (Italy) - **Editor in Chief**
- Prof. Luca Solero, University of Roma Tre - **Deputy Editor in Chief**
- Prof. Andy Knight, University of Alberta (Canada) – **President, IEEE IAS**
- Prof. Leon Tolbert, University of Tennessee, (USA) – **Publications Dept Chair, IEEE IAS**

Editorial Board
- Composed by the editor in chief, the deputy editor in chief and 19 Associate Editors from all IAS departments.
Journal Statistics

Papers: 258

Accepted: 104

Rejected: 150

Acceptance Rate: 41%

Avg Days to First Decision: 62.7

Avg Days to Final Decision

<table>
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<th>Region</th>
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<tr>
<td>2019</td>
<td>63.64%</td>
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</tr>
</tbody>
</table>
Journal performance

Indexing

• 4 issues of the OJIA have been released so far:
  ❖ 2020 (23 papers)
  ❖ 2021 (31 papers)
  ❖ 2022 (21 papers)
  ❖ 2023 (26 papers up to October)

• The journal checked all boxes for being indexed and receive an IF in 2023 however, due to issues between IEEE publications and Scopus, its registration was delayed.

• All papers are now present in Scopus, even if the journal is not yet in the Scopus titles list that is updated only twice per year (May and November). It should be there by the end of 2023.
Journal performance

2022

Total Usage for Jan - Dec 2022: 46,461
Usage per Article: 534.03
Cites per Article: 13.79
Impact Factor: N/A

By Time Period

By Article Title

By Geography

* Citation counts in graph are only for time period(s) selected.
Total Citations to Date: 1,076
Journal performance

2023
**2023 Special issue** IEEE Open Journal of Industry Applications

**MATRIX CONVERTERS**

**FREE PUBLICATION – NO APC**

Deadline for Submission of Manuscripts: 31/12/2023

Editors: Prof. Pericle Zanchetta and Prof. Pat Wheeler University of Nottingham UK

**Invited papers (NO APC)**

Review papers on popular subjects are sought from prominent scientist in order to increase the visibility of the journal. Suggestions are welcome

**Article Processing Charge (APC): US$1995 – effective 1 January 2024**

**Discounts**

IEEE Members receive a 5% discount.
IEEE Society Members receive a 20% discount.
These discounts cannot be combined.
Thanks for your attention
Questions?
Report on IPCSD Standards Committee

Emmanuel Agamloho
IPCSD-SC 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:
  ► Bruno Lequesne – TSC
  ► Tanya Gachovskaya – PEDCC
  ► Haran Karmaker – EMC
  ► Kevin Lee – IDC
  ► Lee Empiringham – IPCC
  ► Adel Nasiri – RSEC
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
List of On-going Standards

Project #1: IEEE P-11 (with PES)
“IEEE Std. 11: IEEE Standard for Rotating Electric Machinery for Rail and Road Vehicles”
- WG Chair: Tim Burress
- On-going revision since June 2015
- Seeking a new WG Chair

Project #2: IEEE P-1812 (with PES)
- WG Chair: Yao Duan
- On-going revision since August 2016
- Final approval obtained in 07/2023
- Currently under editor review to be published

Project #3: IEEE P-1415 (with PES)
“IEEE Std. 1415: Induction Machinery Maintenance Testing and Failure Analysis”
- WG Chair: Pinjia Zhang
- On-going revision since Oct. 2019

Project #4: IEEE P-620 (with PES)
“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)
- Final approval obtained in 02/2022 and published in 06/2022

Project #5: IEEE P-252 (with PES)
IEEE Standard Test Procedure for Polyphase Induction Motors Having Liquid in the Magnetic Gap
- PAR submitted August 31, 2018 for revision
- Final approval obtained in 12/2022 and published in 08/2023

Project #6: IEEE P-114 (IAS/EMC)
IEEE Standard Test Procedure for Single-Phase Induction Motors
- PAR approved September 26, 2021
- WG Chair: Maher Al-Badri
- First WG meeting held on October 26, 2021
- On-going revision
Active Projects Since formation of IPCSD Stds Committee

- **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*

- **P3114**: IEEE Standard for Datasheet Parameters and Testing Protocols for Ultraviolet (UV) Light-emitting Diodes (LEDs)
  - *Chair: Tanya Gachovskaya, Vice Chair: Zheyu Zhang*

- **P114**: IEEE Standard test procedure for single-phase induction motors
  - *WG Chair: Maher Al-Badri*

- IPCC ?? PELS P3380 ??

- **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.

- **WG Members from University and Industry**
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.

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.
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
Xiaqing 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
# Ongoing Projects

Visit the IPCSD website for ongoing projects: [https://site.ieee.org/ias-ipcsd/](https://site.ieee.org/ias-ipcsd/)

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## Ongoing Projects

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.

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:bureau@ornl.gov">bureau@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><a href="mailto:ykhersonsky@ieee.org">ykhersonsky@ieee.org</a></td>
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<tr>
<td>IEEE Std. 114</td>
<td>Single-phase induction machines</td>
<td>EMC</td>
<td>Published 2010</td>
<td><a href="mailto:ykhersonsky@ieee.org">ykhersonsky@ieee.org</a></td>
</tr>
<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>
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<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>
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<td>IEEE Std. 1812</td>
<td>PM machine testing</td>
<td>EMC</td>
<td>Under revision</td>
<td><a href="mailto:eagami@ieee.org">eagami@ieee.org</a></td>
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<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:eagami@ieee.org">eagami@ieee.org</a></td>
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<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:eagami@ieee.org">eagami@ieee.org</a></td>
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<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:stauber@capps.fsu.edu">stauber@capps.fsu.edu</a></td>
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<tr>
<td>IEEE SCC21</td>
<td>Fuel cells, photovoltaics, dispersed generation, and energy storage</td>
<td>Various</td>
<td></td>
<td><a href="mailto:nasin@uw.edu">nasin@uw.edu</a></td>
</tr>
<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>
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<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>
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<tr>
<td>IEEE P3114</td>
<td>IEEE Standard for Datasheet Parameters and Testing Protocols for Ultraviolet (UV) Light-emitting Diodes (LEDs)</td>
<td>IPCSD/DPTIGD</td>
<td>New activity</td>
<td><a href="mailto:tgachovska@yahoo.com">tgachovska@yahoo.com</a></td>
</tr>
</tbody>
</table>

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*IEEE P11*: Rotating Electric Machinery for Rail and Road Vehicles

IEEE P11 is up for revision and update, and a working group has been set up. The PAR was officially approved March 2014. The IEEE P11 standard was first developed when the only traction motors were DC or induction.
State of Standards Subcommittees in 2023

- Several IPCSD Technical Committees are active in standards.
- IDC, PEDCC, EMC have active ongoing projects and new projects within the year 2022.
- IPCC, RSEC, TSC have no new activity within 2022. Several members of these committees are engaged with standard elsewhere, e.g. TSC is involved with standards within TEC, RSEC is involved with SCC.
- IPCC standards chair resigned in 2021 and new chair (Prof. Lee Empringham) was appointed. This new leadership is beginning to involve IPCC in stds development.
- We are encouraging all TCs to increase their activities.
Thanks
Report on IPCSD Diversity, Equality and Inclusion Committee

Giovanna Oriti

IPCSD-DEIC Chair
IEEE-IAS IPCSD DEIC (Diversity, Equity and Inclusion Committee)

- Committee newly created in February 2023.
- Kick-off meeting in May 2023

**Scope**: to promote and enhance DEI [Diversity, Equity and Inclusion] practices within IPCSD and its technical committees. Following the IEEE DEI guidelines, this committee will ensure that IPCSD pursues its technical objectives using the “the talents and perspectives of people with different personal, cultural, and disciplinary backgrounds”.

- Chair appointed by the IPCSD Chair
- One member from each IPCSD TC
- Three Liaisons: Africa, North Africa and South America
IEEE-IAS IPCSD DEIC Members

• Chair – Giovanna Oriti, NPS

• TC Representatives:
  • Xu Yang, Wisk Aero, USA [Electric Machines]
  • Elisabetta Tedeschi, NTNU, Norway/U. of Trento, Italy [Industrial Power Converters]
  • Maria Martinez, U. of Oviedo, Spain [Industrial Drives]
  • Akanksha Singh, DNV, USA [Renewable and Sustainable Energy Conversion Systems]
  • Sara Roggia, magniX, USA [Transportation Systems]
  • Yushan Liu, Beihang Univ., China [Power Electronics Devices and Components]

• Liaisons:
  • Africa: Mhret Behre Gebremariam, U. of Oviedo, Spain
  • North Africa: Donia Ammami, Renault, Tunisia
  • South America: Diana Lopez-Caiza, Univ. Andres Bello, Santiago, Chile
IPCSD DEIC Activities

Launched Student Design Contest (Africa)
https://site.ieee.org/ias-ipcsd/scdc-africa/

Design topics
- Components and systems for motor drives.
- Renewable energy power conditioning systems.
- Components and systems for transportation electrification.
- Power electronics for energy efficiency and to reduce fossil fuel consumption.
- Functional apps related to motor/renewable energy/transportation electrification systems.
- IoT devices.
- 3D printing or rapid model.
- Wireless PCB prototypes.

IEEE IAS-IPCSD Engineering Student Chapter Design Contest (Africa)

$2000 each (three awards)

APPLICATION WILL OPEN SOON
Apply to contribute to technological advancement for humanity.
https://site.ieee.org/ias-ipcsd/

Who can apply
- All IEEE Students Members of African Student Chapters.
- Teams: 4 to 6 IEEE student/graduate members, including Team leader
  - At least one student member of the IEEE IAS
  - Woman lead will have preference.
  - Diverse team encouraged.
  - The design must provide a practical solution and within the scope of the IEEE IAS.

Submission requirements
- Short video (max 5 minutes) and presentation in PDF format.
- A letter of recommendation from IEEE IAS Student Branch Chapter or IEEE Student Branch or IEEE IAS Section Chapter or IEEE Section.

Evaluation criteria
- Innovation and impact on African countries.
- Diversity of the team members.
- Significance of the work to the scope of IAS.
- The quality of the presentation and video.

Other Projects

- Collaboration with the IAS Education Department and the IAS Chapter and Membership Development Department
- Sponsor Africa Liaison’s participation to Power Africa conference
- Student Design Contest for global participation
- IAS Mid-Career Awards
- Support South American students
- Ideas and Suggestions are welcome!
Report on IPCSD Conference Development Committee

Xiaonan Lu

IPCSD-CDC Chair
IPCSD Sponsored / Co-sponsored conferences in last 12 months
IPCSD Sponsored / Co-sponsored conferences in last 12 months

**Location**

![Pie chart showing distribution of conferences by continent]

- Africa: 5.06%
- Asia: 39.24%
- Europe: 29.11%
- North America: 25.32%
- South America: 1.27%

**Dates**

![Bar chart showing monthly distribution of conferences]

- January: 2.53%
- February: 1.27%
- March: 17.72%
- April: 3.80%
- May: 12.66%
- June: 15.19%
- July: 5.06%
- August: 2.53%
- September: 8.86%
- October: 6.33%
- November: -7.59%
- December: 16.46%

**Size**

![Bar chart showing the size distribution of conferences]

- Size range: [80, 380] (58), [380, 680] (10), [680, 980] (4), [980, 1280] (3), [1280, 1580], [1580, 1880], [1880, 2180], [2180, 2480], [2480, 2780], [2780, 3080], [3080, 3345], > 3345 (2)
<table>
<thead>
<tr>
<th>#</th>
<th>Conference name</th>
<th>Venue</th>
<th>Region</th>
<th>Date</th>
<th>Attendees</th>
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<tbody>
<tr>
<td>1</td>
<td>2023 IEEE Applied Power Electronics Conference and Exposition (APEC)</td>
<td>Orlando, FL USA</td>
<td>North America</td>
<td>Mar 19, 2023 - Mar 23, 2023</td>
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<td>2023 5th International Youth Conference on Radio Electronics, Electrical</td>
<td>Moscow, Russia</td>
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<td>Mar 16, 2023 - Mar 18, 2023</td>
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<td></td>
<td>and Power Engineering (REEPE)</td>
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<td>2023 22nd International Symposium INFOTEH-JAHORINA (INFOTEH)</td>
<td>East Sarajevo, Bosnia and Herzegovina</td>
<td>Europe</td>
<td>Mar 15, 2023 - Mar 17, 2023</td>
<td>200</td>
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<td>4</td>
<td>2023 IEEE IAS Electrical Safety Workshop (ESW)</td>
<td>Reno, NV USA</td>
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<td>Mar 13, 2023 - Mar 17, 2023</td>
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<td>5</td>
<td>2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies</td>
<td>Male, Maldives</td>
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<td>(GlobConHT)</td>
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<td>6</td>
<td>2023 IEEE Power and Energy Conference at Illinois (PECI)</td>
<td>Champaign, IL USA</td>
<td>North America</td>
<td>Mar 2, 2023 - Mar 3, 2023</td>
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<td>2023 IEEE Texas Power and Energy Conference (TPEC)</td>
<td>College Station, TX USA</td>
<td>North America</td>
<td>Feb 13, 2023 - Feb 14, 2023</td>
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<td>8</td>
<td>2023 5th Biennial International Conference on Nascent Technologies in</td>
<td>Navimumbai, India</td>
<td>Asia</td>
<td>Jan 20, 2023 - Jan 21, 2023</td>
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<td></td>
<td>Engineering (ICNTE)</td>
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<tr>
<td>9</td>
<td>2023 International Conference on Power Electronics and Energy (ICPEE)</td>
<td>Bhubaneswar, India</td>
<td>Asia</td>
<td>Jan 3, 2023 - Jan 5, 2023</td>
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<td>2022 22nd National Power Systems Conference (NPSC)</td>
<td>New Delhi, India</td>
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<td>Dec 17, 2022 - Dec 19, 2022</td>
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<td>12</td>
<td>2022 IEEE International Conference on Power Electronics, Drives and Energy</td>
<td>Jaipur, India</td>
<td>Asia</td>
<td>Dec 14, 2022 - Dec 17, 2022</td>
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<td>Systems (PEDES)</td>
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<tr>
<td>14</td>
<td>2022 4th International Conference on Smart Power &amp; Internet Energy Systems</td>
<td>Beijing, China</td>
<td>Asia</td>
<td>Dec 9, 2022 - Dec 12, 2022</td>
<td>100</td>
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<td>(SPIES)</td>
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<td>2022 International Conference on Environmental Science and Green Energy</td>
<td>Shenyang, China</td>
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<td>Dec 9, 2022 - Dec 11, 2022</td>
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<td>17</td>
<td>2022 12th International Electric Drives Production Conference (EDPC)</td>
<td>Regensburg, Germany</td>
<td>Europe</td>
<td>Nov 29, 2022 - Nov 30, 2022</td>
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<td>2022 4th International Conference on Electrical, Control and Instrumentation Engineering (ICECIE)</td>
<td>Kuala Lumpur, Malaysia</td>
<td>Asia</td>
<td>Nov 26, 2022 - Nov 26, 2022</td>
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<td>2022 6th International Conference on Power and Energy Engineering (ICPEE)</td>
<td>Shanghai, China</td>
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<td>Nov 25, 2022 - Nov 27, 2022</td>
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<td>2022 IEEE 10th Power India International Conference (PIICON)</td>
<td>New Delhi, India</td>
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<td>Nov 25, 2022 - Nov 27, 2022</td>
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<td>21</td>
<td>2022 IEEE 5th Student Conference on Electric Machines and Systems (SCEMS)</td>
<td>Busan, Korea (South)</td>
<td>Asia</td>
<td>Nov 24, 2022 - Nov 26, 2022</td>
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<td>22</td>
<td>2022 Second International Conference on Sustainable Mobility Applications, Renewables and Technology (SMART)</td>
<td>Cassino (FR), Italy</td>
<td>Europe</td>
<td>Nov 23, 2022 - Nov 25, 2022</td>
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<td>23</td>
<td>2022 14th Seminar on Power Electronics and Control (SEPOC)</td>
<td>Santa Maria, Brazil</td>
<td>South America</td>
<td>Nov 12, 2022 - Nov 15, 2022</td>
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<td>2022 XIV International Symposium on Industrial Electronics and Applications (INDEL)</td>
<td>Banja Luka, Bosnia and Herzegovina</td>
<td>Europe</td>
<td>Nov 9, 2022 - Nov 11, 2022</td>
<td>100</td>
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<td>2022 IEEE IAS Petroleum and Chemical Industry Technical Conference (PCIC)</td>
<td>Denver, CO USA</td>
<td>North America</td>
<td>Sep 26, 2022 - Sep 29, 2022</td>
<td>1500</td>
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<td>35</td>
<td>2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC)</td>
<td>Brasov, Romania</td>
<td>Europe</td>
<td>Sep 25, 2022 - Sep 28, 2022</td>
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<td>2022 7th International Conference on Power and Renewable Energy (ICPRE)</td>
<td>Shanghai, China</td>
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<td>Sep 23, 2022 - Sep 26, 2022</td>
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<td>2022 IEEE Global Conference on Computing, Power and Communication Technologies (GlobConPT)</td>
<td>New Delhi, India</td>
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<td>Sep 23, 2022 - Sep 25, 2022</td>
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<td>38</td>
<td>2022 11th International Conference on Renewable Energy Research and Application (ICRERA)</td>
<td>Istanbul, Turkey</td>
<td>Asia</td>
<td>Sep 18, 2022 - Sep 21, 2022</td>
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<td>2022 International Conference on Electrical Machines (ICEM)</td>
<td>Valencia, Spain</td>
<td>Europe</td>
<td>Sep 5, 2022 - Sep 8, 2022</td>
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<td>2022 International Conference on Smart Energy Systems and Technologies (SEST)</td>
<td>Eindhoven, Netherlands</td>
<td>Europe</td>
<td>Sep 5, 2022 - Sep 7, 2022</td>
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<td>42</td>
<td>2022 IEEE 2nd International Conference on Sustainable Energy and Future Electric Transportation (SeFeT)</td>
<td>Hyderabad, India</td>
<td>Asia</td>
<td>Aug 4, 2022 - Aug 6, 2022</td>
<td>500</td>
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<td>45</td>
<td>2022 IEEE/IAS Industrial and Commercial Power System Asia (I&amp;CPS Asia)</td>
<td>Shanghai, China</td>
<td>Asia</td>
<td>Jul 8, 2022 - Jul 11, 2022</td>
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<td>46</td>
<td>2022 8th International Youth Conference on Energy (IYCE)</td>
<td>Eger, Hungary</td>
<td>Europe</td>
<td>Jul 6, 2022 - Jul 9, 2022</td>
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<td>47</td>
<td>2022 14th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)</td>
<td>Ploieşti, Romania</td>
<td>Europe</td>
<td>Jun 30, 2022 - Jul 1, 2022</td>
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<tr>
<td>49</td>
<td>2022 10th International Conference on Smart Grid (icSmartGrid)</td>
<td>Istanbul, Turkey</td>
<td>Asia</td>
<td>Jun 27, 2022 - Jun 29, 2022</td>
<td>150</td>
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<tr>
<td>50</td>
<td>2022 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM)</td>
<td>Sorrento, Italy</td>
<td>Europe</td>
<td>Jun 22, 2022 - Jun 24, 2022</td>
<td>300</td>
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<td>51</td>
<td>2022 11th IET International Conference on Power Electronics, Machines and Drives (PEMD)</td>
<td>Newcastle, United Kingdom</td>
<td>Europe</td>
<td>Jun 21, 2022 - Jun 23, 2022</td>
<td>400</td>
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<td>54</td>
<td>2022 IEEE 21st Mediterranean Electrotechnical Conference (MELECON)</td>
<td>Palermo, Italy</td>
<td>Europe</td>
<td>Jun 14, 2022 - Jun 16, 2022</td>
<td>200</td>
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<tr>
<td>56</td>
<td>2022 Joint Conference on Electrostatics (ESA)</td>
<td>Charlotte, NC USA</td>
<td>North America</td>
<td>Jun 12, 2022 - Jun 15, 2022</td>
<td>170</td>
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<tr>
<td>59</td>
<td>2022 23rd International Carpathian Control Conference (ICCC)</td>
<td>Sinaia, Romania</td>
<td>Europe</td>
<td>May 29, 2022 - Jun 1, 2022</td>
<td>120</td>
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<tr>
<td>60</td>
<td>2022 IEEE 5th International Electrical and Energy Conference (CIEEC)</td>
<td>Nabjing, China</td>
<td>Asia</td>
<td>May 27, 2022 - May 29, 2022</td>
<td>270</td>
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<td>61</td>
<td>2022 International Conference on Development and Application Systems (DAS)</td>
<td>Suceava, Romania</td>
<td>Europe</td>
<td>May 26, 2022 - May 28, 2022</td>
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<td>63</td>
<td>2022 IEEE IAS Global Conference on Emerging Technologies (GlobConET)</td>
<td>Romania</td>
<td>Europe</td>
<td>May 20, 2022 - May 22, 2022</td>
<td>1000</td>
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<tr>
<td>64</td>
<td>2022 International Conference on Industrial Engineering, Applications and Manufacturing (ICIEAM)</td>
<td>Adler, Sochi, Russia</td>
<td>Europe</td>
<td>May 16, 2022 - May 20, 2022</td>
<td>180</td>
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<tr>
<td>#</td>
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<tr>
<td>49</td>
<td>2022 10th International Conference on Smart Grid (icSmartGrid)</td>
<td>Istanbul, Turkey</td>
<td>Asia</td>
<td>Jun 27, 2022 - Jun 29, 2022</td>
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<td>51</td>
<td>2022 11th IET International Conference on Power Electronics, Machines and Drives (PEMD)</td>
<td>Newcastle, United Kingdom</td>
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<td>Europe</td>
<td>May 16, 2022 - May 20, 2022</td>
<td>180</td>
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</tbody>
</table>
IPCSD Conference Development Committee Report

Next

- Identify opportunities for expansion, e.g.
  - No conferences in Australia
  - Only one in Central-South America
Report IAS Education Department

Pericle Zanchetta

IAS Education Department Chair
Education Department Report - IAS IPCSD Meeting

Pericle Zanchetta
October 29th 2023
Department Structure

IEEE IAS Education Department
Chair: Pericle Zanchetta

Webinar Committee
Chair: Payman Dehghanian

Tutorial Committee
Chair: Akshay Kumar Rathore

PCDRM Committee
Chair: Nishad Mendis

- Looking for volunteers to work in the three committees
- There should be at least one representative from each technical department in all committees
- Chair term duration the same as for operation departments

Pericle.Zanchetta@ieee.org
Department activities

PCDRM (Professional and Career Development Resources for Members) Committee

IEEE IAS Global Mentoring Program (GMP) Contest 2023

In line with the proposed IAS five-year strategic plan (2020-2025), the Global Young Professional Mentoring Program (GMP) Contest was developed and endorsed by the IAS Executive Board in 2021.

The GMP contest offers many other benefits to YPs and student members other than mentoring. These include developing public relation (PR) skills, development of management skills, value addition to IAS membership, etc.
Department activities

PCDRM Committee (Nishad Mendis rasanjana2000@gmail.com)

IEEE IAS Virtual Academy Program

The IEEE IAS Education Department is organizing an “IEEE IAS Virtual Academy Program” which enables interested people to undertake certificate courses.

Many courses required by industry to upskills their existing workforce.

It has started as a trial program, approved at Q4 2022 Ex Board and funded by IAS. Depending on success, it may be extended to not only industrial oriented courses and be self-sustainable.

Courses duration will be between 25 to 30 hours in the space of max 3 months 2/3 hours per weekend. Course content will be developed by liaising with the Experts who are responsible for running these courses. At the end of the training courses, a certificate will be issued by the IEEE IAS virtual academy for the participants who have successfully completed the course.

Call for proposals for possible course subjects
Department activities

Webinar Committee (Payman Dehghanian payman@email.gwu.edu)

IAS Webinar series

In general 1 hour long seminars on subjects in the remit of the society.

The target is to have a minimum of 1 webinar per month:

1. Each technical committee should be proactive in regularly propose tutorials - e.g. to ask recipients of best paper awards (both conference and transactions) to present their work in a webinar

2. Have IAS distinguished lecturers to give at least 1 webinar each per year

3. Advertisement through the new website, Facebook and twitter accounts, Newsletter and email from technical committee chairs to committee members
Department activities

Tutorials Committee (Akshay Kumar Rathore akshay.k.rathore@ieee.org)

3 to 5 hours long tutorials on subjects in the remit of the society

The Tutorial committee invites proposals for Tutorials throughout the year. Tutorials offer participants from different technical backgrounds the chance to explore innovative trends and learn new techniques from experts in the field. One or more of the following elements are strongly encouraged for the proposal: a) Industry-led or co-hosted lectures; b) Cross-disciplinary topics; c) Interactive and engaging approach. The tutorials are delivered online via an online conferencing tool managed by the IEEE IAS Society.

Interested speakers can propose the tutorial in the following format:
1. Title of the tutorial and the duration
2. Speaker: Name, position, affiliation and short bio or 2 page CV
3. Outline: Define the topics and subtopics
4. Briefly explain why this topic is important for the IAS community and outline the learning outcomes.
Members who missed the live events can review them at the IAS Resource Center [https://resourcecenter.ias.ieee.org/](https://resourcecenter.ias.ieee.org/). More info on planned and past activities can be found at [https://ias.ieee.org/education.html](https://ias.ieee.org/education.html).

Thank you
EMC Report

Greg Heins

EMC Chair
EMC update

1. EMC annual meeting
2. Initiatives
   • Attendance
   • Special Sessions
3. Appendix
   • Standards
   • Publications
EMC annual meeting

IEEE IAS
Electric Machines Committee

2023 Committee Meeting
Nashville Tennessee

Room 201 AB, Music City Center
Tuesday the 31st of October, 4:00 pm to 5:30 pm.

Chair: Greg Heins

Agenda
1. Memorial
2. Attendance
3. Review and Approval of 2022 Committee Meeting Minutes
4. Awards
   a. Member recognitions
   b. Awards outside the EMC
5. Executive Reports
   a. Chair: Transactions Papers Status Review
   b. Vice-Chair: ECCE 2023 Technical Program
6. Subcommittee Reports:
   a. Prize Paper Awards Presentation
   b. Standards
7. ECCE Session Chair Reports (2023 ECCE sessions completed as of meeting time)
8. New Business:
   a. 2023 Officers – EMC Past Chair Nominates Slate of Officers
   b. Publications Update and IAS Sponsored Conferences
   c. ECCE 2023 – Update
   d. ECCE 2023 – Preparation for ECCE 2024
   e. Other Upcoming Conferences
9. Other Business
10. Adjournment
Initiatives: Attendance

EMC website

New member sign-up

NEW MEMBER SIGN-UP:
1. All attendees registered for this meeting will automatically become EMC members
2. Alternatively, new members can register at list
   https://site.ieee.org/ias-emc/member-subscriptions/

Note: Formally, you must be an IAS member to vote on IAS committee business.
**INITIATIVES: SPECIAL SESSIONS**

**Wednesday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
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<tbody>
<tr>
<td>10:40AM - 12:20PM</td>
<td><strong>209C</strong> Battery Tech vs. Charging Infrastructure: Driving Towards a Sustainable Mobility Future</td>
</tr>
<tr>
<td>12:20PM - 2:00PM</td>
<td><strong>201A</strong> Bidirectional Switches: Are You Ready?</td>
</tr>
<tr>
<td>2:00PM - 3:40PM</td>
<td><strong>205C</strong> Transient and Dynamic Modeling and Control of Large-Scale, Resilient Distribution Systems with High Penetration of Inverter-based Distributed Energy Resources and Loads</td>
</tr>
<tr>
<td>3:40PM - 5:20PM</td>
<td><strong>205A</strong> The Role of Power Hardware-in-the-Loop Simulation in the Successful Rollout of New Power Electronics Solutions</td>
</tr>
</tbody>
</table>

**Thursday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30AM - 10:10AM</td>
<td><strong>209C</strong> Future of Electric Machines Design - Computational Advancements</td>
</tr>
<tr>
<td></td>
<td><strong>209A</strong> Design Automation for Power Electronics - from Device to Systems Design, Verification and Certification</td>
</tr>
<tr>
<td></td>
<td><strong>209B</strong> Emerging Applications of Inductive Power Transfer Technology</td>
</tr>
<tr>
<td></td>
<td><strong>209A</strong> Finger on the Pulse: Sustainable &amp; Robust Data Centers</td>
</tr>
</tbody>
</table>

EMC members are coordinating three special sessions on the future of electric machine design (Manufacturing, Materials, Comutation)

To disseminate the outcomes of these panels more widely, the plan is to summarise the discussion for potential inclusion in an IAS magazine article.

EMC volunteers are requested to take notes and forward them to Pete Wung (pwung@earthlink.net)
IDC Report

Luca Zarri

IDC Chair
Current 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
New IDC secretary
Dr. David Reigosa

• David Reigosa was born in Spain. He received the M.E. and Ph.D. degrees in Electrical Engineering from the University of Oviedo, Gijon, Spain, in 2003 and 2007, respectively.

• Currently a Full Professor with the Electrical Engineering Department of the University of Oviedo, and Director for Sustainable Mobility at the Vice-rectorate for Sustainability, Mobility and Environment of the University of Oviedo.

• Recipient of 9 IEEE Industry Applications Society Conference and IEEE Energy Conversion Congress and Exposition prize paper awards.

• Recipient of the First Price from the Spanish Royal Academy of Engineers for his contributions on “Development temperature and magnetization stated techniques in synchronous machines” in 2019.

• Served in scientific committees and as Vice Chair or Technical Program Chair of several conferences, including ECCE, ICEMS and SLED.

• Senior member of IEEE, member of Industry Application Society and associate editor of IAS Transactions.

• Research interests: electronic power converters and ac drives, machine design, monitoring and diagnostics, and digital signal processing.
Associate Editors (11)

- Davide Barater, University of Parma, Italy
- Prerit Pramod, Nexteer Automotive Corporation, USA
- David Díaz-Reigosa, University of Oviedo, SPAIN
- Dinesh Kumar, Danfoss Drives Global R&D Center, Denmark (new)
- Giacomo Scelba, University of Catania, Italy
- Wei Xu, Huazhong University of Science and Technology (HUST), China
- Pinjia Zhang, Tsinghua University, China
- Arijit Banerjee, University of Illinois at Urbana-Champaign, US
- Peng Han, Ansys Inc, US
- Fabio Immovilli, University of Modena and Reggio Emilia, Italy
- Juan Manuel Guerrero Munoz, University of Oviedo, Spain
- Ramakrishna Raja, Halla mechatronics, USA
## Number of original submissions (new papers)

<table>
<thead>
<tr>
<th>Previous years</th>
<th>Number of new submissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 2022 – Oct. 2023</td>
<td>76</td>
</tr>
<tr>
<td>Papers invited and not submitted yet</td>
<td>18</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>94</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Previous years</th>
<th>Number of new submissions (invited papers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 2020-Oct. 2021</td>
<td>95 (111)</td>
</tr>
<tr>
<td>Jan. 2022-Oct. 2022</td>
<td>56 (69)</td>
</tr>
<tr>
<td>Nov. 2022 – Oct. 2023</td>
<td>76 (94)</td>
</tr>
</tbody>
</table>

*35% rise (compared to 2022)*
## Acceptance rate and days to final decision

<table>
<thead>
<tr>
<th>Period: Jan. 2023 – Oct. 2023</th>
<th>Num. of papers with a final decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepted papers</td>
<td>24</td>
</tr>
<tr>
<td>Rejected papers</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
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</tbody>
</table>

### Acceptance rate (%)

<table>
<thead>
<tr>
<th></th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance rate (2023)</td>
<td>41.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceptance rate (2022)</td>
<td>39.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceptance rate (2021)</td>
<td>50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceptance rate (2020)</td>
<td>36%</td>
<td></td>
<td></td>
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</table>

### Days to decision

<table>
<thead>
<tr>
<th></th>
<th>2023</th>
<th>2022</th>
<th>2021</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days to first decision</td>
<td>74.1</td>
<td>69.2</td>
<td>70</td>
<td>67</td>
</tr>
<tr>
<td>Days to final decision</td>
<td>107.0</td>
<td>109.3</td>
<td>105</td>
<td>96</td>
</tr>
</tbody>
</table>
ECCE 2023 Technical Program Committee Members, Electric Drives

Vice-chairs: David Diaz Reigosa, Antonio J. Marques Cardoso, Sara Roggia, Ali Bazzi, Kevin Lee

Topic Chairs (14)

- Juan Guerrero
- Sandro Rubino
- Roberto Petrella
- Giacomo Scelba
- Di Pan
- Prerit Pramod
- Ramakrishnan Rajavenkitasubramony
- Maria Martinez
- Marcello Pucci
- Mario Pulvirenti
- Arshiah Mirza
- Michele Mengoni
- Lei Hao
- Luca Vancini
ECCE 2023 Technical Program Committee Members, Electric Drives

- Track H: 5 oral sessions, 4 poster sessions.
- Two session chairs are assigned to each session.

Session Chairs

- Sneha Narasimhan
- Roberto Petrella
- Zhe Zhang
- Raja Ramakrishnan
- Nicola Bianchi
- Lei Hao
- Mohammed Agamy
- Michael Harke
- Marcello Pucci
- Maria Martinez Gomez
- Nidhi Haryani
- Mahesh Swamy
- David Diaz Reigosa
- Antonio J. Marques Cardoso
- Sara Roggia
- Ali Bazzi
IDC Digest Submissions (132 digests)

Sub-tracks are organized as follows:

1. General Electric Drives 6
2. Induction motor drives 23
3. PM and IPM Motor Drives 39
4. Control of electric drives 5
5. Sensorless drives 10
6. Sensors and Transducers 14
7. Diagnostics, Reliability and EMI 1
8. High Speeds and Direct Drives 7
9. Energy Efficient Motor Drives and Standards 9
10. Medium Voltage Drives and High Power Drives 3
11. New Technologies and Integrated Drives 13
12. Electrical Drives for Aerospace and Traction Applications 2
13. Electrical Drives for Wind and Other Renewable Integration 0
Yearly Submission Trends

- 1712 submissions (19.5%)
- 25 special sessions
- 24 tutorial sessions
- 3 sessions to recognize contributions by Professors Fred Lee, Thomas Jahn and Po-Tai Cheng.
Awards Subcommittee

- María Martínez, University of Oviedo - Spain (Chair)
- Prof. Alejandro Gomez Yepes (University of Vigo - Spain)
- Prof. Gianmario Pellegrino (Politecnico di Torino)
- Prof. Nicola Bianchi (University of Padova)
- Dr. Takashi Kato (Nissan Motor Co. Ltd)
- Dr. Michael Saur (Mercedes-Benz AG)
- Dr. Hassan Eldeeb (SLPT Automotive)
- Mrs. Ozge Taskin (Safran Group)
- Prof. Liliana De Lillo (University of Nottingham)
2022 IEEE ECCE Conference Paper Awards


2022 Industrial Drives Committee Transactions Paper Awards


IEEE IAS P2943 Working Group

“Energy Efficiency Test Methods for Three-Phase Variable Frequency Drive Systems”

Scope of Work:
This standard establishes a testing method for determining energy efficiency of a motor drive system operating at varying load conditions. The standard will cover the drive system with

- The rated system voltage not to exceed 690Vac (line-line).
- Single or multiple drives fed from a common AC to DC rectifier or a DC source.
- All three-phase and multi-phase AC motors including linear motors.
- Ancillary equipment, including input harmonic and/or EMI filters, output filter with long cable lengths, and step-up/down isolation transformer at input or output of drives.

Team Members:
University:
Fernando Briz, Jiangbiao He, Eric Armando, Fang Luo, Zheyu Zhang

Industry:
Kevin Lee, Mahesh Swamy, Lei Hao, Di Pan, Jiangang Hu, Mohamad Koteich, Hassan Eldeen
## Project Status

The progress is on track. 60% of the tasks are completed.

<table>
<thead>
<tr>
<th>Task</th>
<th>Document Section</th>
<th>Task Leader(s)</th>
<th>Completion Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General</td>
<td>Hassan</td>
<td>02/20/2023</td>
<td>Completed</td>
</tr>
<tr>
<td>2</td>
<td>System settings</td>
<td>Mahesh</td>
<td>05/22/2023</td>
<td>Completed</td>
</tr>
<tr>
<td>3</td>
<td>Test measurements</td>
<td>Fernando, Di</td>
<td>06/26/2023</td>
<td>Completed</td>
</tr>
<tr>
<td>4</td>
<td>Testing procedures of system thermal equilibrium</td>
<td>Mahesh, Hassan</td>
<td>06/26/2023</td>
<td>Completed</td>
</tr>
<tr>
<td>5</td>
<td>Testing procedures of multi-drive system</td>
<td>Mahesh, Fernando</td>
<td>Oct</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Load test schedule</td>
<td>Kevin, Jiangang, Lei, Di</td>
<td>July</td>
<td>Complete</td>
</tr>
<tr>
<td>7</td>
<td>Torque offset measurement</td>
<td>Eric, Jiangang, Mohamad</td>
<td>Oct</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>System sub-System efficiency measurement</td>
<td>Lei Hao, Zheyu, Mohamad, JiangBiao</td>
<td>Nov</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Final Review</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Current Problem:

**Lack of participants.** Normally there are 6-8 people who attend the group meeting. Recently less than 6 people attended the meeting and the monthly group meeting had to be cancelled, twice.
Call for Volunteers

To revitalize our committee and involve the younger members in the IDC activities, we are looking for volunteers for the following aims:

1) Promoting activities for student members and young professionals

2) Liaison members with different IEEE regions and local IEEE chapters promoting cultural diversity and network building

3) IDC representative for the IAS Webinar committee

4) IDC Webmaster

5) IDC chair of a committee promoting new activities, such as journal special issues
IPCC Report

Xiaonan Lu

IPCC Chair
Membership

- Membership roster is at 445 (+12 people since last meeting)
- Membership roster clean-up to make sure that we have up-to-date information for active members (invalid emails updated/removed)
Committee for 2023

Committee Officers

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Xiaonan Lu</td>
<td><a href="mailto:xiaonan.lu@ieee.org">xiaonan.lu@ieee.org</a></td>
</tr>
<tr>
<td>Vice-Chairman</td>
<td>Yongsg Suh</td>
<td><a href="mailto:ysuh@jbnu.ac.kr">ysuh@jbnu.ac.kr</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Wenkang Huang</td>
<td><a href="mailto:wkhuang@ieee.org">wkhuang@ieee.org</a></td>
</tr>
<tr>
<td>Past Chairman</td>
<td>Luca Solero</td>
<td><a href="mailto:luca.solero@uniroma3.it">luca.solero@uniroma3.it</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>Stefano Bifaretti</td>
<td><a href="mailto:stefano.bifaretti@uniroma2.it">stefano.bifaretti@uniroma2.it</a></td>
</tr>
<tr>
<td>Transactions Review Co-Chair</td>
<td>Shafiq Odhano</td>
<td><a href="mailto:shafiq.odhano@newcastle.ac.uk">shafiq.odhano@newcastle.ac.uk</a></td>
</tr>
<tr>
<td>Fellow and Award Nominating Chair</td>
<td>Robert N. Guenther</td>
<td><a href="mailto:rnguenther@gmail.com">rnguenther@gmail.com</a></td>
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<tr>
<td>Standards Chair</td>
<td>Lee Empringham</td>
<td><a href="mailto:lee.empringham@nottingham.ac.uk">lee.empringham@nottingham.ac.uk</a></td>
</tr>
<tr>
<td>Special Activity Chair</td>
<td>Elisabetta Tedeschi</td>
<td><a href="mailto:elisabetta.tedeschi@ntnu.no">elisabetta.tedeschi@ntnu.no</a></td>
</tr>
<tr>
<td>Special Activity Co-Chair</td>
<td>Tianqi Hong</td>
<td><a href="mailto:thong@anl.gov">thong@anl.gov</a></td>
</tr>
<tr>
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<td>Junichi Itoh</td>
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</tr>
<tr>
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</tr>
<tr>
<td>European Liaison Officer</td>
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</tr>
<tr>
<td>European Liaison Officer</td>
<td>Petros Karamanakos</td>
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</tr>
</tbody>
</table>

Industry members
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IPCC involvement

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info@rna-associates.com
ECCE 2023 – Track E

- Submitted 188
- Accepted (final) 116
- Percentage 61.7%

Power Converter Topologies

Vice Chair: Mahshid Amirabadi, Northeastern University, United States
Vice Chair: Khurram Afridi, Cornell University, USA
Vice Chair: Dong Cao, University of Dayton, USA
Vice Chair: Wenkang Huang, Infineon Technologies, USA
Vice Chair: Hanh-Phuc Le, University of California San Diego, USA
Vice Chair: Jin Moon, FAMU-FSU College of Engineering, USA
Vice Chair: Yongsug Suh, Jeonbuk National University, Korea

Winway Chen, Diodes Incorporated, USA
Tianjiao Liu, Onsemi, USA
Santanu Mishra, Indian Institute of Technology Kanpur, India
Shuiliin Tian, Innoscience Incorporated, USA
Dongbin Hou, Texas Instruments, USA
Yonglei Zhang, China University of Mining and Technology, China
David Perreault, Massachusetts Institute of Technology, USA
Ashish Kumar, Our Next Energy, USA
Saad Pervaiz, Texas Instruments, USA
Samantha Gunter, General Motors, USA
Dehong Xu, Zhejiang University, China
Gui-jia Su, Oak Ridge National Laboratory, USA
Yuheng Wu, John Deere, USA
Tao Yang, University of Nottingham, United Kingdom
Xibo Yuan, University of Bristol, United Kingdom
Li Zhang, Huazhong University of Science and Technology, China
Fei Diao, John Deere, USA
Yam Siwakoti, University of Technology Sydney, Australia
Mahima Gupta, Portland State University, USA

Xiaofeng Lyu, Zhejiang University, China
Woongkul Lee, Michigan State University, USA
Renato Torres, General Motors, USA
Xin Zan, University of Maryland, USA
Kahyun Lee, Ewha University, Korea
Zhehui Guo, Florida State University, USA
Ali Reza Safaeef, Apple Inc, USA
Ali Khajehoddin, University of Alberta, Canada
Bilal Akin, University of Texas at Dallas, USA
Ebrahim Babaei, University of Tabriz & Near East University, Iran
Jürgen Biela, ETH Zurich, Switzerland
Luca Solero, Roma Tre University, Italy
Junichi Itoh, Nagaoka University of Technology, Japan
Yeonho Jeong, University of Rhode Island, USA
Manuel Arias, University of Oviedo, Spain
Marco di Benedetto, Roma Tre University, Italy
Xiaofeng Yang, Beijing Jiaotong University, China
Hua Zhang, Rowan University, USA
Control, Modeling and Optimization of Power Converters

Vice Chair: Pankaj Bhowmik, Power Engineer, USA
Vice Chair: Pradyumn Chaturvedi, Visvesvaraya National Institute of Technology, Nagpur, India
Vice Chair: Daniel Costinett, University of Tennessee Knoxville, USA
Vice Chair: Petros Karamanakos, Tampere University, Finland
Vice Chair: Jitina Roy, GE Research, USA

Kevin Bai, University of Tennessee Knoxville, USA
Juan Rodriguez Mendez, Universidad de Oviedo, Spain
Jessica Boles, University of California Berkeley, USA
Mostak Mohammad, Oak Ridge National Laboratory, USA
Hongjie Wang, Utah State University, USA
Ling Jiang, Analog Devices, Inc., USA
Lei Gu, University of Pennsylvania, USA
Vikram Roy Chowdhury, National Renewable Energy Laboratory, USA

Tianqi Hong, University of Georgia, USA
Haryani Nidhi, Delta Electronic, USA
Asaad Adib, Oak Ridge National Laboratory, USA
Xiaofan Cui, Stanford University, USA
Michele Mengoni, University of Bologna, Italy
Ludovico Ortombina, University of Padova, Italy
Elisabetta Tedeschi, Norwegian University of Science and Technology, Norway
Andrea Formentini, University of Genova, Italy

Tennent Harnefors, ABB Corporate Research, Sweden
Alessandro Lidozzi, ROMA TRE University, Italy
Diego Pérez-Estévez, University of Vigo, Spain

- Submitted 186
- Accepted (final) 134
- Percentage 72.0%
Special Activities

- **Working Group: Grid Interactive Power Converters**
  - Preliminary step for “testing the water”
  - ECCE 2023 tutorial on *modeling, control and industrial standardization of grid-forming inverters*
  - ECCE 2023 special session on *dynamic modeling and control of grid-interactive power converters*

- **Working Group: Next Steps**
  - Broad impacts within and beyond IPCC
  - Potential outreach with other flagship conferences
Standards

– Dr. Lee Empringham – appointed and engaged in IPCC-related standards activities
– Industry engagement: ITT Goulds Pumps, Sprint Electric, TTPi, Infineon, ST Microelectronics
– IAS-PELS P3380 coordination from IPCC/IPCSD side
Other Activities

‒ **APEC 2024 Track Chair support from IPCC**: AC-DC converters, devices and components, Control, among others

‒ **IPCC Transaction Paper Award**
  – L. Tarisciotti, *et al.*, “Finite Control Set Model Predictive Control for Dual Active Bridge Converter”

‒ **ECCE 2022 Paper Award**
  – R. Olson, *et al.*, “Derivation and Validation of a Common-Mode Model for a Neutral Point Clamped Dual Active Bridge”
PEDCC Report

Francesco Iannuzzo

PDECC Chair
1. PEDCC Introduction – Officers & related issues
2. ECCE 2023 Summary Report
3. IAS Transactions Report
4. Awards Report
5. PEDCC Standards
6. PEDCC Newsletters & Media
PEDCC Introduction

F. Iannuzzo, PEDCC Chair
PEDCC Officers for the 2022-2023 term (1/2)

Prof. Francesco Iannuzzo
Aalborg University, Denmark
PEDCC Chair

Assoc. Prof. Yushan Liu
Beihang University, China
PEDCC Vice-Chair

Assist. Prof. Zheyu Zhang
Rensselaer Polytechnic Institute, USA
PEDCC Secretary
PEDCC Officers for the 2022-2023 term (2/2)

Dr. Zhiqiang (Jack) Wang  
PEDCC Transaction Chair

Dr. Enrico Santi  
PEDCC Transaction Co-Chair

Dr. Jose Gonzalez  
Committee Award Chair

Dr. Tanya Gachovska  
Newly appointed  
Standard Chair

F. Iannuzzo - PEDCC Committee Report 148
Next term - issues

F. Iannuzzo - PEDCC Committee Report
ECCE 2023 Summary Report

Francesco Iannuzzo, Topic I Vice Chair

F. Iannuzzo - PEDCC Committee Report
ECCE 2023 Topic ‘I’

Power Semiconductor Devices, Passive Components, Packaging, Integration, and Materials

102 accepted, out of 144 digests submitted
70.8% acceptance – pretty much in line with the last, and close to that in 2019
High-quality review: average 4.5 reviews per paper (min 3), a little bit higher than 4.3 last year

Comparison with prior years

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</table>
Thank you so much for the hard work to all topic chairs and reviewers!!!

ECCE 2023 Topic ‘I’

Vice Chairs
Francesco Iannuzzo, Aalborg University, Denmark
Yushan Liu, Beihang University, China
Jungwon Choi, University of Minnesota, USA

Topic Chairs
Helen Cui University of Tennessee
Thomas Ebel South Denmark University
Mona Ghassemi University of Texas
Emre Gurpinar Sikorski innovations
Andrew Lemmon University of Alabama
Jose Ortiz Gonzalez University of Warwick
Srivatsa Ragunath Infineon
Amy Romero Wolfspeed
Adam Skorek Université du Québec à Trois-Rivières
Hongfei Wu Nanqing University of Aeronautics and Astronautics
Hengzhao Yang ShanghaiTech University
Shu Yang Zhejiang University
Xiu Yao University at Buffalo
IAS Transactions Report

Zhiqiang (Jack) Wang, PEDCC Transaction Chair
# Manuscripts Received (Oct. 2022 ~ Sep. 2023)

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<th>Dates</th>
<th>Original Submissions</th>
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<td>Oct 2020/Sep 2021</td>
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## Manuscripts Accepted by Country/Region (Oct. 2022 ~ Sep. 2023)

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<td>China</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>83.33%</td>
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<tr>
<td>Denmark</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>100.00%</td>
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<tr>
<td>Germany</td>
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<td>India</td>
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<td>100.00%</td>
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<td><strong>12</strong></td>
<td><strong>32</strong></td>
<td><strong>62.50%</strong></td>
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## Associate Editors

<table>
<thead>
<tr>
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<th>Affiliation</th>
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<tbody>
<tr>
<td>Enrico Santi</td>
<td>University of South Carolina, USA</td>
</tr>
<tr>
<td>Bruno Allard</td>
<td>INSA Lyon, France</td>
</tr>
<tr>
<td>Tanya Gachovska</td>
<td>Solantro Semiconductor, Canada</td>
</tr>
<tr>
<td>Francesco Iannuzzo</td>
<td>Aalborg University, Denmark</td>
</tr>
<tr>
<td>Cong Li</td>
<td>GE Research, USA</td>
</tr>
<tr>
<td>Muhammad Nawaz</td>
<td>Hitachi ABB Power Grids Research, Sweden</td>
</tr>
<tr>
<td>Jean-Luc Schanen</td>
<td>Grenoble Alpes University, France</td>
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<tr>
<td>Shuo Wang</td>
<td>University of Florida, USA</td>
</tr>
<tr>
<td>Zheyu Zhang</td>
<td>Clemson University, USA</td>
</tr>
<tr>
<td>Richard Lukaszewski</td>
<td>Rockwell Automation, USA</td>
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<tr>
<td>Yueshi Guan</td>
<td>Harbin Institute of Technology, China NEW AE</td>
</tr>
<tr>
<td>Zhiqiang (Jack) Wang</td>
<td>Huazhong University of Science and Technology, China</td>
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Awards Report

Zhiqiang (Jack) Wang, PEDCC Transaction Chair
Jose Ortiz Gonzales, PEDCC Award Chair
2022 Technical Committee TIA awards (PEDCC)

PEDCC selected 3 papers to receive the 2022 Technical Committee TIA awards, and can nominate 1 paper as potential candidate for the IAS Transactions awards.

Award Nomination Committee:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Tanya Gachovska</td>
<td>Solantro Semiconductor, Canada</td>
</tr>
<tr>
<td>Yushan Liu</td>
<td>Beihang University, China</td>
</tr>
<tr>
<td>Zheyu Zhang</td>
<td>Rensselaer Polytechnic Institute, USA</td>
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<tr>
<td>Jose Ortiz-Gonzalez</td>
<td>University of Warwick, UK</td>
</tr>
<tr>
<td>Zhiqiang (Jack) Wang</td>
<td>Huazhong University of Science and Technology, China</td>
</tr>
</tbody>
</table>
2022 Technical Committee TIA Awards (PEDCC)

First Prize Paper Award
Shi Pu, Fei Yang, Nathan Zhang, Bhanu Teja Vankayalapati, and Bilal Akin
University of Texas at Dallas, USA
for the paper
“A Comparative Study on Reliability and Ruggedness of Kelvin and Non-Kelvin Packaged SiC MOSFETs”

IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, VOL. 58, NO. 3, MAY/JUNE 2022

Second Prize Paper Award
Wenzhao Liu, Dao Zhou, Francesco Iannuzzo, Michael Hartmann, and Frede Blaabjerg
Aalborg University, Denmark
for the paper
“Separation and Validation of Bond-Wire and Solder Layer Failure Modes in IGBT Modules”

IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, VOL. 58, NO. 2, MARCH/APRIL 2022

Third Prize Paper Award
Koji Orikawa, Shotaro Kanno, and Satoshi Ogasawara
Hokkaido University, Japan
for the paper
“A Winding Structure of Air-Core Planar Inductors for Reducing High-Frequency Eddy Currents”

IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, VOL. 58, NO. 6, NOVEMBER/DECEMBER 2022
Will Portnoy Award 2023 (PEDCC Best Papers Award)

Award Committee Selection Procedure (New for 2023)

Step 1  Selection of the best 15 papers based on digest evaluation score.
Step 2  Assemble the Best Paper Award Review Committee (5 members, composed of both Industry and Academic Experts)
Step 3  Each member selects their top 5 papers, giving them 5 to 1 points (5, 4, 3, 2, 1 points)
Step 4  Select the three papers with the maximum number of points
Will Portnoy Award 2023 (PEDCC Best Papers Award)

- All the 15 shortlisted paper – Very high quality
- High quality submissions in our ECCE track in 2022
- 1st, 2nd and 3rd position – Awards
- Very relevant topics to Track I.

Award Committee
Professor Francesco Iannuzzo, University of Aalborg, Denmark
Dr Francisco Freijedo, Huawei Technologies, Nuremberg
Dr Yushan Liu, Beihang University, Beijing, China
Dr Zheyu Zhang, Clemson University, United States
Dr Jose Ortiz Gonzalez, University of Warwick, United Kingdom
Will Portnoy Award 2023 (PEDCC Best Papers Award)

**2023 1st Prize Paper Award**

Kohei Horii, Ryuzo Morikawa, Katsuhiro Hata, Kenichi Morokuma, Yukihiko Wada, Yoshiko Obiraki, Yasushige Mukunoki and Makoto Takamiya
University of Tokyo and Mitsubishi Electric Corporation

for the paper

"Sub-0.5 ns Step, 10-bit Time Domain Digital Gate Driver IC for Reducing Radiated EMI and Switching Loss of SiC MOSFETs"
presented at the 2022 IEEE Energy Conversion Congress and Exposition (ECCE)

**2023 2nd Prize Paper Award**

Yunlei Jiang, Borong Hu, Bo Wen, Yanfeng Shen and Teng Long
University of Cambridge and Danfoss Silicon Power R&D

for the paper

"Methodology for Large-signal Loss Characterization of Ferroelectric Class II MLCC in High-frequency Range”
presented at the 2022 IEEE Energy Conversion Congress and Exposition (ECCE)

**2023 3rd Prize Paper Award**

Jun Imaoka, Matsuta Kazuya, Hiroki Ochiai, Koichi Shigematsu, Mostafa Noah and Masayoshi Yamamoto
Nagoya University

for the paper

"Feasible Evaluations of Low Profile Magnetic Structure Based on Meander Winding and Split-Magnetic Cores with High-Cooling Capability Used in Power Converters"
presented at the 2022 IEEE Energy Conversion Congress and Exposition (ECCE)
Kliman Award 2023

- Munaf Rahimo (MTAL, formerly ABB Switzerland) nominated – unfortunately, he didn’t get awarded
PEDCC Standards

Tanya Gachovska, PEDCC Standard Chair
IEEE IAS PEDCC Standards

Standard Chair, Dr. Tanya Gachovska; Standard Vice Chair, Dr. Zheyu Zhang
1. P2964 IEEE Standard for Datasheet Parameters and Tests for Integrated Gate Drivers
2. P3114 Standard for Datasheet Parameters and Testing Protocols for Ultraviolet (UV) Light-emitting Diodes (LEDs)

Dr. Tanya Gachovska
Standard Chair
Chairs of Driver and UV LED standards

Dr. Zheyu Zhang
Standard Vice Chair
Vice Chair of Driver standard

Dr. Pratibha Sharma
Vice Chair of UV LED standard
PEDCC Newsletters & Media

Zheyu Zhang, PEDCC Secretary
Newsletters

- Starting in June 2022, SIX newsletters have been sent to committee members through emails, and uploaded to the committee website
- Quarterly newsletters will be continuously sent
Social Media

- Facebook & LinkedIn
  - Groups -> IEEE-IAS Power Electronics Devices and Components Committee
  - PEDCC Website & Newsletters
Thank you

Francesco Iannuzzo, Aalborg University
fia@energy.aau.dk
RSECS Report

Akshay Rathore

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

**Annual Meeting**
31 October 2023

Chair – Akshay Kumar Rathore, Singapore
Vice Chair and TCPRC – Ke Ma, China
Vice Chair of Conferences – Eduard Muljadi, USA
Secretary – Behrooz Mirafzal, USA
Past Chair – Adel Nasiri, USA
Agenda

- Call to Order (Akshay Rathore)
- Introduction of the attendees
- Approval of 2022 Meeting Minutes
- Nagamori Award Presentation (Yasushi Nishimura)
- TCPRC Report – Ke Ma
- ECCE Activities 2023 – Eduard Muljadi
- IAS-RSECS Committee Co-Sponsored Conferences – Eduard Muljadi
- RSECS Committee Election of Officers for 2024-2025 - Adel Nasiri
- RSECS Prize Paper Awards – Akshay Rathore
- ECCE 2024 Presentation (TBA)
- EOI for ECCE 2024 Topic Chairs and Session Chairs (Behrooz Mirafzal)
- EOI for TIA Associate Editors (Eduard Muljadi)
- AOB
- Adjourn (Akshay Rathore)
Publications Chair Report

- New Manuscripts submission to Renewable and Sustainable Energy Conversion Systems Committee:
  - 64 original + 81 revised = Total 145 (Oct. 2022 to Oct. 2023)
  - 127 with decisions
- Average Submission to First Decision Time: **62 days** (65 days last year)

Ke Ma
Shanghai Jiao Tong University, China
Took over since Feb. 2022
RSECS Decision Ratio - 1st submission

Submission to Renewable and Sustainable Energy Conversion Systems Committee

Oct. 2022 to Oct. 2023

<table>
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<tr>
<th>Decision</th>
<th># Manuscripts</th>
<th>Percentage</th>
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<tr>
<td>Reject</td>
<td>23</td>
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<td>Return to author for mandatory revisions (to address reviewer comments)</td>
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Decision for 1st submission papers
RSECS Decision Ratio – overall

Submission to Renewable and Sustainable Energy Conversion Systems Committee

Decision Ratio By Manuscript Type

Oct. 2022 to Oct. 2023

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<th>Decision</th>
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<th>Percentage</th>
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<tr>
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<td>Accept for publication in Transactions</td>
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<tr>
<td>Reject</td>
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<td>Total:</td>
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Decision for original and revised papers
### Paper submission statistics by country and month

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<tr>
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<tr>
<td>China</td>
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<td>6.8 %</td>
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<tr>
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<td>Greece</td>
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<td>Korea (the Republic of)</td>
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<tr>
<td><strong>Summary</strong></td>
<td>65</td>
<td><strong>100.0 %</strong></td>
</tr>
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</table>

**1st submission:**  
Oct.+Nov. 22%, June 12%

India 42%, U.S. 16%
Thanks to Associate Editors under RSECS

- Dinesh Kumar (Denmark), since 2017
- Yongheng Yang (China), since 2020
- Xiaofeng Yang (China), since 2020
- Satarupa Bal (USA), since 2022
- Dao Zhou (Denmark), since 2022
- Liyan Qu (USA), since 2023

◆ Call for AEs in the fields of Microgrid, Renewable energy system, Storage.
ECCE 2023 Technical Program

- ECCE 2023 and TPC meetings are totally back to in-person again.
- 1009 digest submissions, 32% less compared to last year (1472).
- Vice Chairs (VC) and Topic Chairs (TC) serving for the tracks to handle the digests review and sessions design.
- Number of digests per Topic Chair (TC) limited to allow ample time to review the digests and make a decision.
- The program includes 856 papers in 107 oral, 25 poster, 30 remote live Q&A sessions, and 24 Tutorials
2023 ECCE Paper Review

12 TPCs

42 x Vice Chairs (VCs)
(1/2 from IAS + 1/2 from PELS)

Topic Chairs (TCs)

Reviewers

Reviewers
# 42 Vice Chairs from IAS and PELS

<table>
<thead>
<tr>
<th>Track Name</th>
<th>Track</th>
<th>Vice Chair 1</th>
<th>Vice Chair 2</th>
<th>Vice Chair 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Energy, Energy Storage and Power-to-X Technologies</td>
<td>A</td>
<td>Eduard Muljadi</td>
<td>Ariya Sangwongwanich</td>
<td>Akanksha Singh</td>
</tr>
<tr>
<td>Grid Modernization and Smart Grid</td>
<td>B</td>
<td>Radha Sree Krishna Moorthy</td>
<td>Marius Langwasser</td>
<td>Yuan Li, Gab-Su Seo, Heng Wu</td>
</tr>
<tr>
<td>Big Data, Machine Learning, Cyber Security and Design Automation</td>
<td>C</td>
<td>Yenan Chen</td>
<td>Liang Du, Yufei Li</td>
<td>Yicheng Liao</td>
</tr>
<tr>
<td>Transportation Electrification Applications</td>
<td>D</td>
<td>Matthias Preindl</td>
<td>Tao Yang</td>
<td>Jin Ye</td>
</tr>
<tr>
<td>Power Converter Topologies</td>
<td>E</td>
<td>Mahshid Amirabadi, Khurram Afridi</td>
<td>Dong Cao, Wenkang Huang, Hanh-Phuc Le</td>
<td>Jin Moon, Yongsoo Suh</td>
</tr>
<tr>
<td>Controls, Modelling and Optimization of Converters</td>
<td>F</td>
<td>Pankaj Bhowmik Pradyumn Chaturvedi</td>
<td>Daniel Costinett, Petros Karamanakos</td>
<td>Jinia Roy</td>
</tr>
<tr>
<td>Electrical Machines</td>
<td>G</td>
<td>Giulio De Donato</td>
<td>Rukmi Dutta</td>
<td>Narges Taran</td>
</tr>
<tr>
<td>Electric Drives</td>
<td>H</td>
<td>Ali Bazzi, Antonio J. Marques Cardoso, Kevin Lee, David Reigosa</td>
<td>Sara Roggia</td>
<td></td>
</tr>
<tr>
<td>Power Semiconductor Devices, Passive Components, Packaging, Integration, and Materials</td>
<td>I</td>
<td>Jungwon Choi</td>
<td>Francesco Iannuzzo</td>
<td>Yushan Liu</td>
</tr>
<tr>
<td>Energy Efficient Systems Applications and Lighting Technologies</td>
<td>J</td>
<td>Padmanaban Sanjeevikumar</td>
<td>Hua Zhang</td>
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</tr>
<tr>
<td>Applied Research and Emerging Technologies</td>
<td>K</td>
<td>Qiang Wei</td>
<td>Dong Dong</td>
<td></td>
</tr>
<tr>
<td>Conflict of Interest</td>
<td>M</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
ECCE 2023 Contributions – **Track A**

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

<table>
<thead>
<tr>
<th>Subtrack</th>
<th>Topic</th>
<th>Papers submitted</th>
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<tbody>
<tr>
<td>A1</td>
<td>Wind energy applications</td>
<td>16</td>
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<tr>
<td>A2</td>
<td>Solar energy applications</td>
<td>18</td>
</tr>
<tr>
<td>A3</td>
<td>Power converters in renewable and sustainable energy application</td>
<td>63</td>
</tr>
<tr>
<td>A4</td>
<td>Energy storage and harvesting</td>
<td>27</td>
</tr>
<tr>
<td>A5</td>
<td>Hybrid renewable sources</td>
<td>5</td>
</tr>
<tr>
<td>A6</td>
<td>Power-to-heat applications</td>
<td>2</td>
</tr>
<tr>
<td>A7</td>
<td>Power-to-hydrogen technologies</td>
<td>11</td>
</tr>
<tr>
<td>A8</td>
<td>Other topics in renewable and sustainable energy applications</td>
<td>17</td>
</tr>
</tbody>
</table>
ECCE 2023 Contributions – Track A

- 159 papers submitted
- 102 papers were accepted, acceptance rate 64 %
- ECCE 2023 was decided to be in person conference
- All technical sessions were presented in person and some are video-based on demand.
- Special thanks to our topic and session chairs!
ECCE 2022 Prize Papers

• **First Prize:** *A Trade-off Between Cost and Efficiency in Solid-State Circuit Breakers.* Co-authors: Reza Kheirollahi, Xin Zan, Shuyan Zhao, Yao Wang, Hua Zhang, Xiaonan Lu, Al-Thaddeus Avestruz and Fei Lu

• **Second Prize:** *A Comparison of PI-Based and Sorting-Based State of Charge Balancing Methods in Cascaded H-Bridge Converters.* Co-authors: Gaowen Liang, Ezequiel Rodriguez, Glen Farivar, Naga Brahmandra Yadav Gorla, Neha Beniwal, Josep Pou, and Georgios Konstantinou

• **Third Prize:** *Automated Detection of Failures in Doubly-Fed Induction Generators for Wind Turbine Applications.* Co-authors: Byambasuren Battulga, Muhammad Faizan Shaikh, Sang Bin Lee, and Mohamed Osama

• **Third Prize:** *Inertia Evaluations on Grid Forming Inverters with Virtual Synchronous Generator Control Applied to Photovoltaic Power Systems.* Co-authors: Qiang Lin, Tetsu Shijo, Kenichirou Ogawa, Hiroshi Uno, Yasuhiro Kanekiyo, and Junichi Arai
EC Nominations and Elections (2024-2025)

- Chair – Ke Ma (China)
- Vice Chair & TPC – Eduard Muljadi (USA)
- Vice Chair (Conferences) – Behrooz Mirafzal (USA)
- Secretary – Dinesh Kumar, Denmark (Industry, Europe)
- Past Chair – Akshay Kumar Rathore (Singapore)

Dinesh Kumar has been with the Global R&D Center of Danfoss Drives A/S, Denmark, where he is involved in Danfoss sponsored joint research at Aalborg University, Denmark Technical University, Queensland University, Australia and Indian Institute of Technology (IIT) Madras, India. He is a member of the IEC standardization Working Group in TC77A and SyC LVDC. He is an AE of IEEE Transactions on Industry Applications, IAS DL (2024-25), and contributed as topic chair for the APEC, ECCE, ITEC India and PEDES confs. He is Treasurer of the IEEE IAS Danish chapter.
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RSECS Committee Paper Awards - Transactions

Third Prize

Subarni Pradhan, Bhim Singh, Bijaya Ketan Panigrahi

“Adaptive Position Observer for Multimode Wind-BES Based Microgrid Interfaced to Distribution Network”
Second Prize

Reza Emamalipour, John Lam

“Fault-Tolerant Operation of a Multi-Mode Stacked Switch Rectifier Leg through Built-In Circuit Redundancy”
First Prize

Bapi Debnath, R. Kumar

“A Comparative Simulation Study of The Different Variations of PZT Piezoelectric Material by Using A MEMS Vibration Energy Harvester”
Third Prize

Automated Detection of Failures in Doubly-Fed Induction Generators for Wind Turbine Applications. Byambasuren Battulga, Muhammad Faizan Shaikh, Sang Bin Lee, and Mohamed Osama

Inertia Evaluations on Grid Forming Inverters with Virtual Synchronous Generator Control Applied to Photovoltaic Power Systems.

Qiang Lin, Tetsu Shijo, Kenichirou Ogawa, Hiroshi Uno, Yasuhiro Kanekiyo, and Junichi Arai
Second Prize

A Comparison of PI-Based and Sorting-Based State of Charge Balancing Methods in Cascaded H-Bridge Converters.

Gaowen Liang, Ezequiel Rodriguez, Glen Farivar, Naga Brahmendra Yadav Gorla, Neha Beniwal, Josep Pou, and Georgios Konstantinou
First Prize

A Trade-off Between Cost and Efficiency in Solid-State Circuit Breakers

Reza Kheirollahi, Xin Zan, Shuyan Zhao, Yao Wang, Hua Zhang, Xiaonan Lu, Al-Thaddeus Avestruz and Fei Lu
TSC Report

Mohammad Anwar

TSC Chair
Committee Membership Updates

• IEEE IAS TSC has an active website at - [http://sites.ieee.org/ias-tcs/](http://sites.ieee.org/ias-tcs/)

• Total members as of Sept. 22 2023 is **275** *(increased from 226 members in Dec 2022)*.
  ➢ Some members’ e-mails may need to be updated as a result of the changes in their affiliations.
  ➢ Please send your updated information's to [jiangbiao@ieee.org](mailto:jiangbiao@ieee.org)
    ➢ Include First & Last Name, Affiliation and e-mail address when sending updated details

• If you are interested in being a TSC member, please send your contact information to Dr. JiangBiao He at [jiangbiao@ieee.org](mailto:jiangbiao@ieee.org)

• We seek a volunteer to be the webmaster of the TSC website.

• We also seek volunteers to lead the standards subcommittee.
Where are our TSC Members from?

- 76% of the TSC members are from USA.
- Need to encourage more members from other regions or countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>TSC members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>3</td>
</tr>
<tr>
<td>Austria</td>
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<tr>
<td>Canada</td>
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<tr>
<td>China</td>
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<tr>
<td>France</td>
<td>10</td>
</tr>
<tr>
<td>Italy</td>
<td>6</td>
</tr>
<tr>
<td>Japan</td>
<td>4</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1</td>
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<tr>
<td>Netherlands</td>
<td>2</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>8</td>
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<tr>
<td>Singapore</td>
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<td>Spain</td>
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<tr>
<td>United Arab Emirates</td>
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</tr>
<tr>
<td>United Kingdom</td>
<td>4</td>
</tr>
<tr>
<td>United States</td>
<td>209</td>
</tr>
</tbody>
</table>

* Total number of users subscribed to the list: 275
* Total number of countries represented: 15
Regional Liaison Subcommittee Formation for 2023-2025

Regional liaison subcommittee for 2023-2025:

**Regional Liaison Subcommittee Officers**

- Asia: Prof. Zheng Wang, Southeast University, China
- Australia/Oceania: Prof. Rabiul Islam, University of Wollongong, Australia
- Europe: Prof. Yusuf Yasa, Istanbul Technical University, Turkey
- Africa: Not filled
- South America: Not filled

- Help increase membership base for TSC
- Help publicize TSC activities within their region

**Term Duration**

- Two years (January 2023-December 2024)
- After two years a new liaison officer is appointed.
- Next appointment will be in 2025

If you are interested in being liaison officer in the above available positions, please send your info to jiangbiao.he@uky.edu or indicate this in the provided link.
TSC Transaction Paper Submission Process:

- TSC started reviewing papers for IA transactions/magazines since 2012
- First conference policy
- You request for invitation to submit a paper to be considered by TSC
- At least 20% of change is expected with respect to conf. paper. Make it visible!
- Reach out to VC-Papers (john.kisacikoglu@nrel.gov) to request an invitation
- Next year Rakib Islam (rakibulislam2000@gmail.com) will be taking over this role starting 2024

Topic areas for TSC include:

- transportation systems analysis (mobility, routing, etc.)
- power electronics (traction, charging, etc.)
- electric motors for transportation
- grid integration analysis and solutions (low power, high power, wired, wireless, etc.)
- energy storage systems used in transportation (battery, hydrogen and other alternative sources)
- cyber/physical security applications that focus on transportation systems.
Transaction Paper Review: Manuscript Status (Last Four Years)
Transaction Paper Submission per Country
(Last Three Years)
TSC ECCE Prize Paper Award - 2023

Award Committee
Chair – Dr. Dong Cao
Vice Chair – Dr. Khoshrude Alam

Committee Members:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Fei Lu</td>
<td>Drexel University</td>
</tr>
<tr>
<td>Dr. Anup Anurag</td>
<td>Delta Electronics</td>
</tr>
<tr>
<td>Dr. Arshan Khan</td>
<td>CNH Industrial</td>
</tr>
<tr>
<td>Dr. Woongkul (Matt) Lee</td>
<td>Michigan State University</td>
</tr>
<tr>
<td>Dr. Akm Arafat</td>
<td>Drive System Design</td>
</tr>
</tbody>
</table>

The award committee evaluated 8 top ranked digests from ECCE 2022 Track D - Transportation System Applications. Total number of accepted papers under Track D was 55.
A High Power Density 3-phase/1-phase Compatible MISN-PFC Converter for On-Board Charger

Wenling Zhao
College of Electrical Engineering
Zhejiang University
Hangzhou, China
ZJU-Hangzhou Global Scientific and Technological Innovation Center
Hangzhou, China
zhao.wenling@zju.edu.cn

Tianlin Huang
College of Electrical Engineering
Zhejiang University
Hangzhou, China
ZJU-Hangzhou Global Scientific and Technological Innovation Center
Hangzhou, China
thl@zju.edu.cn

Xinke Wu
College of Electrical Engineering
Zhejiang University
Hangzhou, China
ZJU-Hangzhou Global Scientific and Technological Innovation Center
Hangzhou, China
wuxinke@zju.edu.cn

Active Filter Circuit in the HF AC-link of a Bidirectional Wireless Battery Charger for EV

Asier Garcia-Bedia
Power Electronics Area
Berlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0002-8789-3875

Ander Avila
Power Electronics Area
Berlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0002-1668-8933

Izuzar Aldaguren
Power Electronics Area
Berlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0003-0147-5334

Alejandro Rujas
Power Electronics Area
Berlan Technology Research Centre
Arrasate-Mondragón, Spain
0000-0002-2005-9816

Miroslav Vasic
Center for Industrial Electronics (CEI)
Technical University of Madrid (UPM)
Madrid, Spain
0000-0001-9597-6409

Impact of Vehicle Requirements on Accessory Power Module Design for Ultium Electric Vehicle Platforms

Ranya Badawi
Engineering Product Development
General Motors
Pontiac, MI, United States
ranya.badawi@gm.com

Steven Wybo
Engineering Product Development
General Motors
Warren, MI, United States
steven.wybo@gm.com

Mehrdad Tavarrudkh
Engineering Product Development
General Motors
Warren, MI, United States
mehrdad.tavarrudkh@gm.com

Mohammad Annwar
Engineering Product Development
General Motors
Warren, MI, United States
mohammad.annwar@gm.com
TSC Transaction Prize Paper Award - 2023

Award Committee
Chair – Dr. Dong Cao
Vice Chair – Dr. Khorshed Alam

Committee Members:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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</thead>
<tbody>
<tr>
<td>Dr. Yue Cao</td>
<td>Oregon State University</td>
</tr>
<tr>
<td>Dr. Jin Ye</td>
<td>University of Georgia</td>
</tr>
<tr>
<td>Dr. Mehdi Farasat</td>
<td>Louisiana State University</td>
</tr>
<tr>
<td>Dr. Hua Zhang</td>
<td>Rowan University</td>
</tr>
<tr>
<td>Dr. Subrata Saha</td>
<td>Aisin Corporation</td>
</tr>
<tr>
<td>Dr. Deepak Ronanki</td>
<td>Indian Institute of Technology Madras</td>
</tr>
<tr>
<td>Dr. Matt Lee</td>
<td>Michigan State University</td>
</tr>
</tbody>
</table>

The award committee evaluated **10 top ranked** published from IEEE Transactions on Industry Applications
Transportation System Committee in 2022.
Total number of accepted papers published in Transportation System Committee in 2022 was **22**.
TSC Prize Paper Award for IEEE Transactions on Industry Applications - 2022

Noninvasive Aging Analysis of Lithium-Ion Batteries in Extreme Cold Temperatures
Adrian Soto®, Student Member, IEEE, Alberto Berrueta®, Member, IEEE, Ignacio Ofoicialdegui, Pablo Sanchis®, Senior Member, IEEE, and Alfredo Ursúa®, Senior Member, IEEE

Analytical Derivation of Phase-Current Waveform for Elimination of Torque and Input-Current Ripples of Switched Reluctance Motor Operating Under Magnetic Saturation
Takayuki Kasumi®, Member, IEEE, Kosuke Kobayashi, Kazuhiro Umetani®, Member, IEEE, and Eiji Hiraki®, Member, IEEE

Modeling, Simulation, and Characterization of a Supercapacitor in Automotive Applications
Vincenzo Castiglia®, Nicola Campagna, Student Member, IEEE, Antonino Oscar Di Tommaso®, Rosario Miceli®, Member, IEEE, Claudio Nevoloso®, Filippo Pellitteri, Christian Puccio, and Fabio Viola®
ECCE 2023 – Transportation Electrification Applications

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xiaofeng Yang</td>
<td>Beijing Jiaotong University</td>
</tr>
<tr>
<td>Yuhua Du</td>
<td>Northwestern Polytechnical University</td>
</tr>
<tr>
<td>Woongkul Lee</td>
<td>Michigan State University</td>
</tr>
<tr>
<td>Mehdi Zadeh</td>
<td>NTNU, Norway</td>
</tr>
<tr>
<td>Arnaud Gaillard</td>
<td>University of Technology of Belfort-Montbeliard</td>
</tr>
<tr>
<td>Ehsan Jamshidpour</td>
<td>University of Lorraine</td>
</tr>
<tr>
<td>Catherine Jones</td>
<td>University of Strathclyde</td>
</tr>
<tr>
<td>Dianxun Xiao</td>
<td>The Hong Kong University of Science and Technology</td>
</tr>
<tr>
<td>Niloofar Torabi</td>
<td>Smart Wires</td>
</tr>
<tr>
<td>Lavanya Vadamodala</td>
<td>altair</td>
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<tr>
<th></th>
<th>Oral</th>
<th>Poster</th>
<th>Withdrawn</th>
<th>Rejected</th>
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<th>Acceptance Rate</th>
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<td>ECCE2019</td>
<td>25</td>
<td>32</td>
<td>7</td>
<td>23</td>
<td>87</td>
<td>65.50%</td>
</tr>
<tr>
<td>ECCE2020</td>
<td>34</td>
<td>33</td>
<td>10</td>
<td>37</td>
<td>114</td>
<td>58.80%</td>
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<tr>
<td>ECCE2021</td>
<td>44</td>
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<td>3</td>
<td>21</td>
<td>68</td>
<td>64.70%</td>
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<td>4</td>
<td>19</td>
<td>78</td>
<td>70.50%</td>
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<td>ECCE2023</td>
<td>40</td>
<td>56</td>
<td>3</td>
<td>41</td>
<td>137</td>
<td>70.10%</td>
</tr>
</tbody>
</table>
Session topics:
1. Battery management for Electric Vehicles—(1 session, 5 papers)
2. Wireless Power Transfer I—(2 sessions, 10 papers)
3. Charging for Electric Vehicles—(1 session, 5 papers)
4. Electric Machine for Transportation Electrification—(1 session, 5 papers)
5. Motor Drive for Transportation Applications—(1 session, 5 papers)
6. Power Converters and Motor Drives for Transportation Electrification—(1 session, 5 papers)
7. Solid State Circuit Breaker for Transportation Applications—(1 session, 5 papers)
ECCE’23

Brad Lehman (Xiaonan Lu)

General Chair
IEEE ECCE 2023 - Nashville
(Conference record #53617)
Music City Center; October 29- November 2

IEEE ECCE 2023 Summary

Brad Lehman
General Chair
1. General Co-Chairs

- Shanelle Foster, Professor, Michigan State
- Joseph Ojo, Professor, Tennessee Tech
- Jean-Luc Schanen, Professor, Univ. Grenoble Alpes, France

2. TPC Co-Chairs

- Olorunfemi Ojo, Tennessee Tech University, USA
- Xiaonan Lu, Purdue University, USA
- Xiongfei Wang, KTH Royal Institute of Technology, Sweden
- Minjie Chen, Princeton University, USA
- Mahshid Amirabadi, Northeastern University, USA
- Vandana Rallabandi, Oak Ridge National Laboratory, USA
- Jin Wang, Ohio State University, USA
- Tanya Rachovska, MDA, Canada

Note for ECCE 2023 organizing committee: ~1/3 industry, ~1/3 women, about 75 members
Overview of ECCE

- **Attendees:** (Data for 10/22)
  - ECCE paid full ~1450 (1250 from ECCE website + ~200 from IAS website (we think))
  - Additional attendees (exhibitors + comp tutorial speakers + ... = 290)
  - Total ~1740

- **Usually 14 parallel sessions** (reduced from 15-18)

- **~1050 paper presentations:**
  - oral presentations (2\textsuperscript{nd} floor)
  - 4 poster sessions (in Exhibit Hall or on Thursday 4\textsuperscript{th} floor)

- **24 industry/applications special sessions** (mostly 2\textsuperscript{nd} floor)

- **Expo hall:** *broke all records (10/25 data)*
  - Booths contracted: ~61 booths
  - University Tables Contracted: 8
  - Sponsorships: 16 at various levels (4 x $10k sponsors, 5 Silver sponsors)
  - Current sales total: ~$272k compared to total ~$160k in 2022 (previous record).
A Few ECCE Highlights

- **Incredible Keynote Panel:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Company</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Elf Balkas</td>
<td>CTO</td>
<td>Wolfspeed</td>
<td>Silicon Carbide Technology Development: Unlocking Efficiency and Sustainability in Clean Energy</td>
</tr>
<tr>
<td>Riona Armesmith</td>
<td>CTO</td>
<td>magniX</td>
<td>Enabling Innovations of Electrification of Aviation</td>
</tr>
<tr>
<td>Dr. Susan Hubbard</td>
<td>Deputy Lab Director S&amp;T</td>
<td>ORNL</td>
<td>Accelerating Technologies to Enable the Grid of the Future</td>
</tr>
<tr>
<td>Annette Clayton</td>
<td>CEO and President</td>
<td>Schneider Electric, NA</td>
<td>The Electrification and Digitization of the New Energy Landscape</td>
</tr>
</tbody>
</table>

- **All invited to WiE sessions:** (preregistration helpful, not required)
  - Lunch w/keynote speakers to ask career questions Monday 11am
  - PELS WiE Leadership breakfast Wednesday morning

- **Luminaries Special Session:** Meet pioneers Dr. Fred Lee and Dr. Tom Jahns! (Tuesday, Rm 207/209)
  - Arrive early (<5pm) and stay after to meet historic figures in PELS/IAS!
High School Student Outreach

Wind Energy Generator Design Contest

Partnering with Engineering for US All (e4usa), ECCE is thrilled to host its first-ever high school outreach event. We're on a mission to demystify and democratize engineering, inviting students to dive into the captivating world of energy conversion.

Students will have the chance to engage in an exciting wind turbine engineering design challenge using custom kits from KidWind. They'll create their own generators and explore various magnetic materials. High school teachers and students will interact with graduate students, enjoying student demonstrations and lunchtime conversations.

ECCE High School Outreach Event: Wind Energy Generator Design Contest
Monday, October 30 | 8:30AM – 1:30PM
Location: Back of Exhibit Hall B
Many Networking/Social Opportunities

1. Networking Opportunities at Conference
   • Use mobile apps to meetup with people
   • Utilize coffee breaks to meet people (increased to 30min)
   • Attend Women in Engineering Events (open to all)
     • Monday – lunch, Wednesday – IEEE PELS leadership breakfast
   • Young Professional
     • (Monday night) social – off-site, IEEE PELS YP mentoring lunch (Tuesday, registration)
     • Wed Night Networking Dinner (Buffet dinner with games + live music).

2. Social Events and Activities
   • Electric Vehicle Ride & Drive (Tuesday) – on the street
   • Tuesday tours (sign up registration desk): Country music Hall of Fame, Radio City Recording Studios (usually tours sell out!!)
   • Enjoy Music City Row (1 block from here) where about dozens of bands are playing morning, noon and night.
Includes 46 journal to conference papers
“Paper” summary

<table>
<thead>
<tr>
<th></th>
<th>Withdrawn</th>
<th>Final</th>
<th>Rejected</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>114</td>
<td>981</td>
<td>425</td>
<td>1520</td>
</tr>
<tr>
<td>Journal</td>
<td>4</td>
<td>42</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Late Breaking</td>
<td>5</td>
<td>27</td>
<td>26</td>
<td>58</td>
</tr>
<tr>
<td>Grand Total</td>
<td>123</td>
<td>1050</td>
<td>480</td>
<td>1624</td>
</tr>
</tbody>
</table>

Papers:
- Accepted (71%), Withdrawn (7.5%) = 64% published
- 2 page late breaking papers 3.7% of submissions and 2.7% of final program presentations.

Journal to Conference:
- Accepted (100%), Withdrawn (8.7%)
- Represent 4% of the presentations.
### Tutorials

<table>
<thead>
<tr>
<th>#Submission</th>
<th>Main Topics</th>
<th>#Accepted</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>Motor and Drives: 11 Components: 10 Converter Design: 7 Grid: 7 Applications: 5 Control: 4 Batteries: 2</td>
<td>24</td>
<td>- Sunday: 22 Tutorials - 1,5 hour: 6 - 3 hours: 18 - 6 from industry - 2 from government agencies - 16 from academia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24</td>
<td>- 1,5 hour: 6 - 3 hours: 18 - 6 from industry - 2 from government agencies - 16 from academia</td>
</tr>
<tr>
<td>15 from industry</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3 from government agencies</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>28 from academia</td>
<td></td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

### Special Sessions

<table>
<thead>
<tr>
<th>#Submission</th>
<th>Main Topics</th>
<th>#Accepted</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 + New Category Submissions</td>
<td>Grid : 8 Wide band gap Devices :4 Applications: 5 Motor and Drives: 6 Converter Design: 4 Batteries: 1 Misc (Company Advertising) : 2</td>
<td>24</td>
<td>- Other Additional Sessions - 2 Award Sessions - 1 PELS EBL Session - The newly introduced category of individual and industry presentation was well received</td>
</tr>
<tr>
<td>New Category Submissions Individual Presentations - 3 Industry Focused Presentation - 3</td>
<td>8 from industry 3 from academia 19 mixed</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8 from industry</td>
<td></td>
<td>5 from industry 2 from academia 17 mixed</td>
<td></td>
</tr>
<tr>
<td>3 from academia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 mixed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 Luminaries Special Sessions

- Fred Lee
- Tom Jahns

Post Journal special sessions: 46 submitted - 46 Accepted

- Included in the Technical Program
Finances

Projections from 10/25 data
- ~$1.42M expenses. (Record high - inflation on labor + F&B)
  - On 10/25, we have ~3% net revenue
  - Best guess projection on 10/25 is 10% ~13% net revenue.
- Late registrations unpredictable in post-covid era.

<table>
<thead>
<tr>
<th>REVENUE</th>
<th>Orig Projected</th>
<th>10/25/2023</th>
<th>Updated Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration Fees</td>
<td>$823,185.00</td>
<td>$893,190.00</td>
<td>$937,849.50</td>
</tr>
<tr>
<td>Paper Fees</td>
<td>$107,100.00</td>
<td>117,600</td>
<td>117,600</td>
</tr>
<tr>
<td>Tutorials + 1 Day registration</td>
<td>$80,860</td>
<td>38,400</td>
<td>40,320</td>
</tr>
<tr>
<td>Exhibits</td>
<td>$101,250</td>
<td>$180,350.00</td>
<td>$180,350.00</td>
</tr>
<tr>
<td>Sponsorship</td>
<td>$45,000</td>
<td>$91,250.00</td>
<td>91,000</td>
</tr>
<tr>
<td>Social Event</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IAS Annual meeting</td>
<td>$35,000</td>
<td>45,000</td>
<td>45,000</td>
</tr>
<tr>
<td>All Other Receipts</td>
<td>$84,390</td>
<td></td>
<td>85,000</td>
</tr>
<tr>
<td><strong>TOTAL INCOME</strong></td>
<td>$1,276,785</td>
<td>$1,365,790</td>
<td>$1,497,120</td>
</tr>
<tr>
<td>Conference Loans</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Total Receipts</strong></td>
<td>$1,376,785</td>
<td>$1,465,790</td>
<td>$1,597,120</td>
</tr>
</tbody>
</table>
Nomination of ECCE’26 GC

Fernando Briz

IPCSD Chair
Michael Harke, Ph.D.
Senior Technical Fellow, Systems Engineering
Collins Aerospace
Rockford, IL

Work Experience

- Collins Aerospace
  - Senior Technical Fellow, Systems Engineering, Oct. 2022 – Present
  - Associate Director, Systems Engineering, Feb. 2022 – Oct. 2022
  - Senior Principal Engineer, Systems Engineering, Apr. 2018 – Feb. 2022
  - Staff Engineer, Systems Engineering, July 2013 – Apr. 2018
- Danfoss Drives
  - Staff Engineer, Control Engineering, June 2010 – June 2013
- Hamilton Sundstrand (now a part of Collins Aerospace)
  - Staff Engineer, Applied Research, Dec. 2006 – June 2010
GC ECCE’26

ECCE / IAS Annual Meeting Service

- IAS Industrial Representative at ECCE Steering Committee (since 2022)
- Session Organizer, IEEE-Industry Applications Society Conference 2008
- Technical Program Topic Chair
  - IEEE-ECCE 2009, San Jose, CA
  - IEEE-ECCE 2023, Nashville, TN
  - IEEE-ECCE 2019, Baltimore, MD
  - IEEE-ECCE 2020, Detroit, MI Virtual
- Technical Program Vice-Chair
  - IEEE-ECCE 2010, Atlanta, GA
  - IEEE-ECCE 2011, Phoenix, AZ
  - IEEE-ECCE 2012, Raleigh, NC
- Technical Program Co-Chair,
  - IEEE-ECCE 2013, Denver, CO
  - IEEE-ECCE 2021, Vancouver, BC Virtual
IEEE Service

- Officer, IEEE-IAS Industrial Drives Committee, 2010-2019
  - Secretary, Vice-Chair Programs, Vice-Chair Papers, Chair, Past-Chair
- Associate Editor, IEEE Transaction on Industrial Applications, 2008-2014
- Guest Associate Editor, IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020.
- IEEE Sensors Council, IAS Representative, 2018-2021
- Technical Program Committee, Steering Committee for IEEE-SLED 2018, 2019
- Reviewer for IEEE-ECCE & IAS Conferences.
Nomination of IPCSD Vice Chair

Pericle Zanchetta

IPCSD Past-Chair
Prof. Luca Zarri
Department of Electrical, Electronic and Information Engineering “G. Marconi”
University of Bologna, Italy
IAS Industrial Drives Committee Chair

Early years

• In 1989, Luca Zarri co-founded a team of videogame programmers for micro and personal computers, which collaborated with national and international software houses from 1990 to 1992.

• Dr. Zarri received the MSc degree (with honours) in Electrical Engineering (5 years) from the University of Bologna, Italy, in 1998 (he served in the army in 1996), and since 1999 he has been a registered professional engineer in Italy. Then, he received a PhD degree in Electrical Engineering (3 years) from the same institution.

• In 1999, he joined a municipal enterprise (Bologna Metropolitan Holding Company) as a designer of electrical and mechanical plants in public contracts of remarkable size (new Faculty of Engineering in Bologna, the new Museum of Modern Art, the cogeneration plant of the Fair District, the new Faculty of Chemistry and Astronomy, the new Department of Arts of the University of Bologna).

• In 2005, he joined the Department of Electrical Engineering as an Assistant Professor of power electronics, electric machines, and drives. He was an associate professor from 2014 to 2020, and he has been a full professor since 2020.

• Since 2005, Dr. Zarri has been involved as principal investigator or coinvestigator in several research contracts with private companies or national research projects, generally concerning problems of power electronics and control of electric drives.
RESEARCH FIELDS:
• Design, control and applications of direct ac-ac matrix converters
• Design, control, and applications of multiphase electric drives
• Optimized modulation strategies for conventional three-phase voltage source inverters and multilevel converters
• High-speed electric drives based on induction machines and wounded-rotor synchronous machines
• Online monitoring and fault detection techniques for electric drives (recently with machine learning and AI)
• Control and design of tubular actuators for positioning systems
• Sensorless and adaptive control for electric drives

METRICS
Scopus: 170 papers, 4040 citations, h-index 30, 30% documents in the top 25% most cited documents worldwide
Google Scholar: 190 papers, 5448 citations, h-index 36
Awards: 5 best paper awards in IEEE conferences

POSITIONS IN IEEE CONFERENCES OR JOURNALS
Guest AE for TPEL/TIA or JESTPE special issues: 3
Special session organizer: 2
Member of organizing committees: 7
Treasurer: 1
Guest EiC for JESTPE: 1
IAS representative for JESTPE
Topic Chair: I’ve lost count, but probably > 10
Tutorial Chair: 1
Special Session Chair: 2
Award Chair: for IDC in 2014-2015, and member of the awards committee of IECON 2012 and ICEM 2016.
Publication Chair in conferences: 3
Vice Chair for ECCE: 3 (Track F in 2014, Track H in 2018-2019)
Other business

Fernando Briz

IPCSDD Chair
IAS website

• Work on TCs websites planned to start after ECCE
• IPCSD Webmaster Anant Singh will coordinate
• TCs advised to define who will interact with Anan/Luca Solero (short response time required)
• TCs pictures in the new website
  are you happy?
TCs initiatives

- JESTPE Special Issues proposals
- Webinars (IAS Education Department)
- 50% budget project proposals (only EMC used this in 2022)
Motion to Adjourn

Fernando Briz

IPCSD Chair