



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

Tuesday, October 31, 2023

2:00 PM to 3:00 PM (EDT)

# Agenda



## **1. Approvals of the Agenda and 2022 Meeting Minutes**

## **2. Old Business and Reports**

- Vice-chair, Transactions paper report
- Vice-chair, Conference paper report
- Standards Subcommittee report

## **3. Awards and Recognitions**

- Awards Subcommittee 2023
- Conference Paper Awards
- Transactions Paper Awards
- Associate Editors
- Nagamori Awards

## **4. New Business**

- New secretary
- Nomination of 2024 IDC Slate of Officers
- Diversity, Equity and Inclusion Committee
- Submission of Papers to Transactions on Industry Applications
- Future Conferences (ECCE 2024 and other conferences)
- Recruit Topic Chairs & Session Chairs for ECCE 2024
- New activities

## **5. Closing Remarks & Motion to Adjourn**

# 1. Approvals of the Agenda and 2022 Meeting Minutes

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

Motion for approval

# IEEE Fellows and new members

Please stand up

## 2. Old Business and Reports

- Vice-chair, Paper Review – Transactions Papers
- Vice-chair, Programs – Report on ECCE 2023
- Chair, Standards Subcommittee

## 2. Old Business and Reports

### Vice-Chair Programs – Report on ECCE 2023

Kevin Lee

Eaton, USA

# ECCE 2023 Technical Program Committee Members

## Track H - Electric Drives

**Vice-chairs:** Kevin Lee, David Diaz Reigosa, Sara Roggia (IDC)  
Ali Bazzi, Antonio J. Marques Cardoso (PELS)

### Topic Chairs

- ❖ Juan Guerrero
- ❖ Sandro Rubino
- ❖ Roberto Petrella
- ❖ Giacomo Scelba
- ❖ Di Pan
- ❖ Prerit Pramod
- ❖ Ramakrishnan Raja
- ❖ Venkita Subramony
- ❖ Maria Martinez
- ❖ Marcello Pucci
- ❖ Mario Pulvirenti
- ❖ Arshiah Mirza
- ❖ Michele Mengoni
- ❖ Lei Hao
- ❖ Luca Vancini

Thank you to all Topic Chairs!

## ECCE 2023 Technical Program Committee Members, Track H - Electric Drives

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

### Session Chairs

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

Thank you to all Session Chairs!

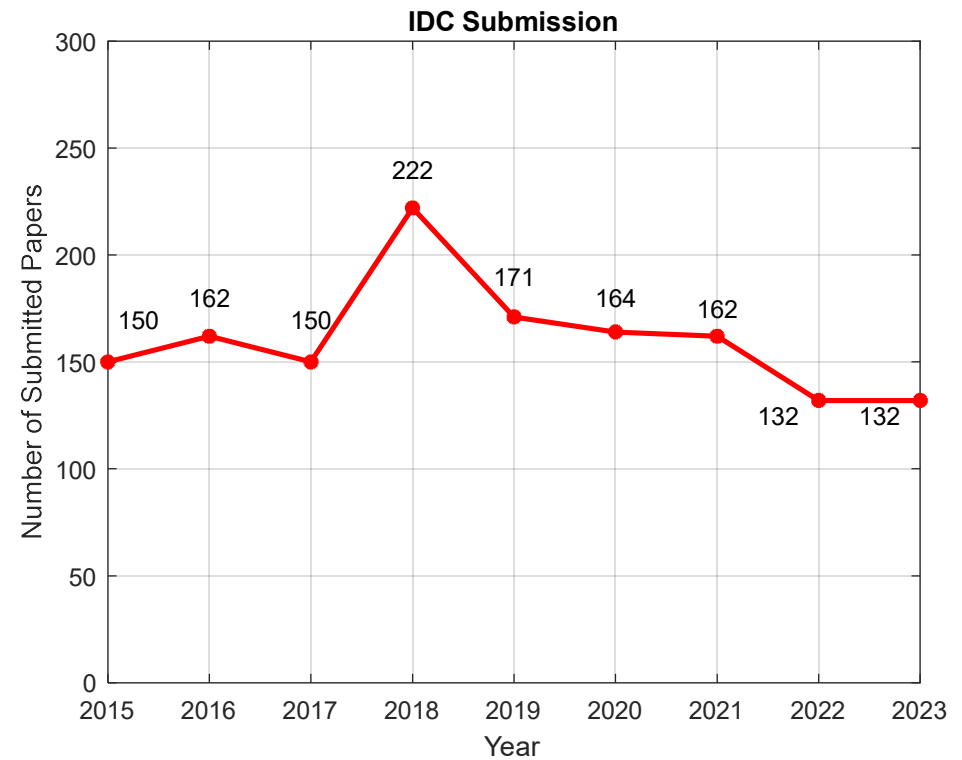
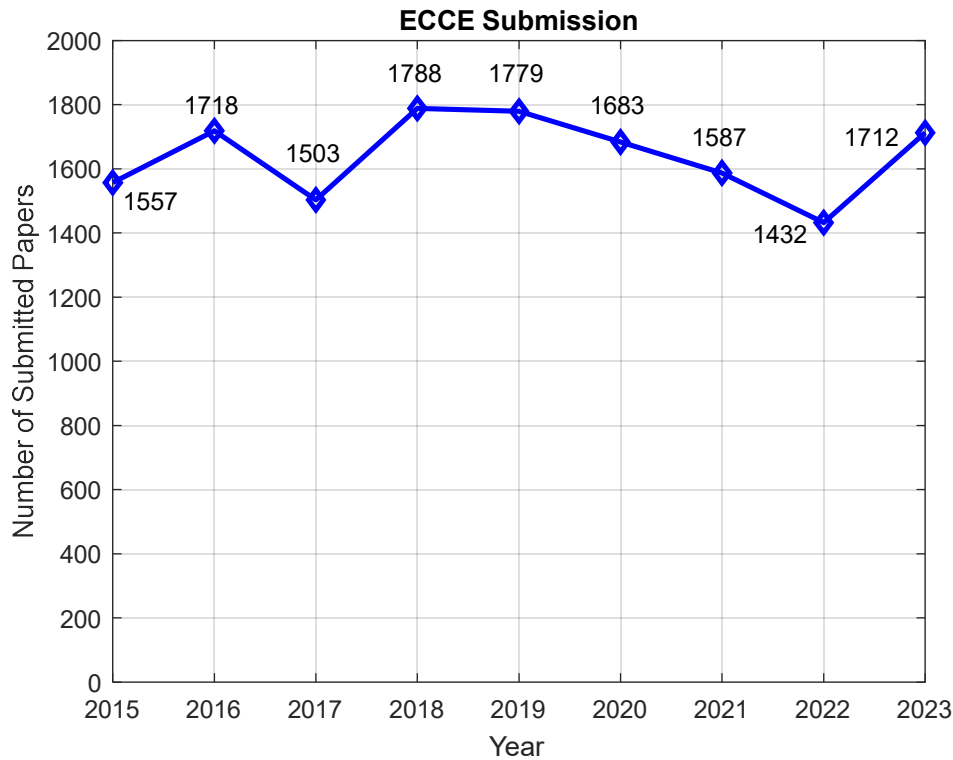


# IDC Digest Submissions (132 digests)

## Sub-tracks are organized as:

1. General Electric Drives	6	
2. Induction motor drives	23	← ② →
3. PM and IPM Motor Drives	39	← ① →
4. Control of electric drives	5	
5. Sensorless drives	10	
6. Sensors and Transducers	14	← ③ →
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	

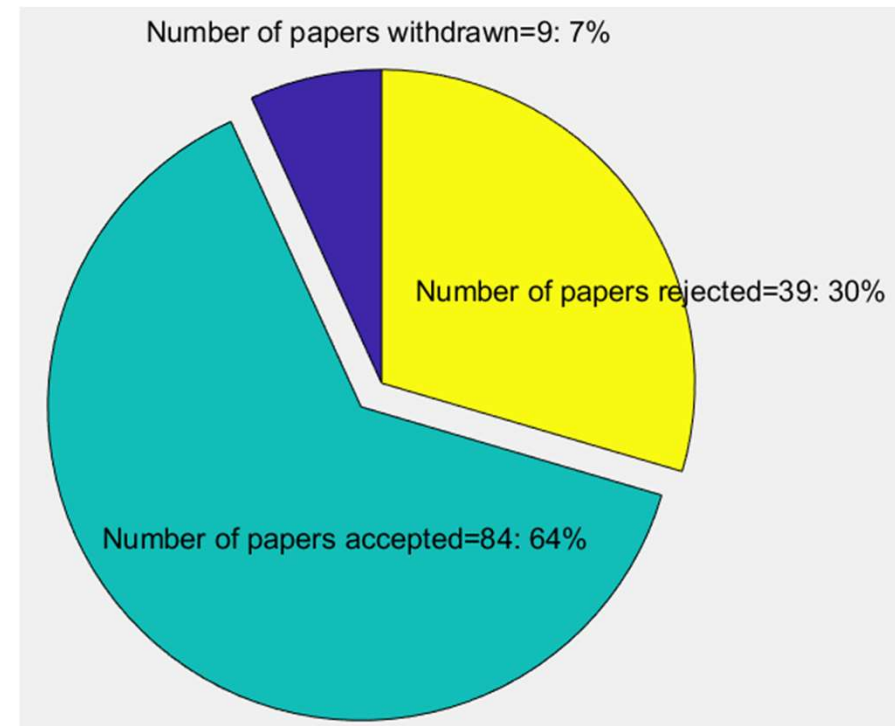
# Yearly Submission Trends



- 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.

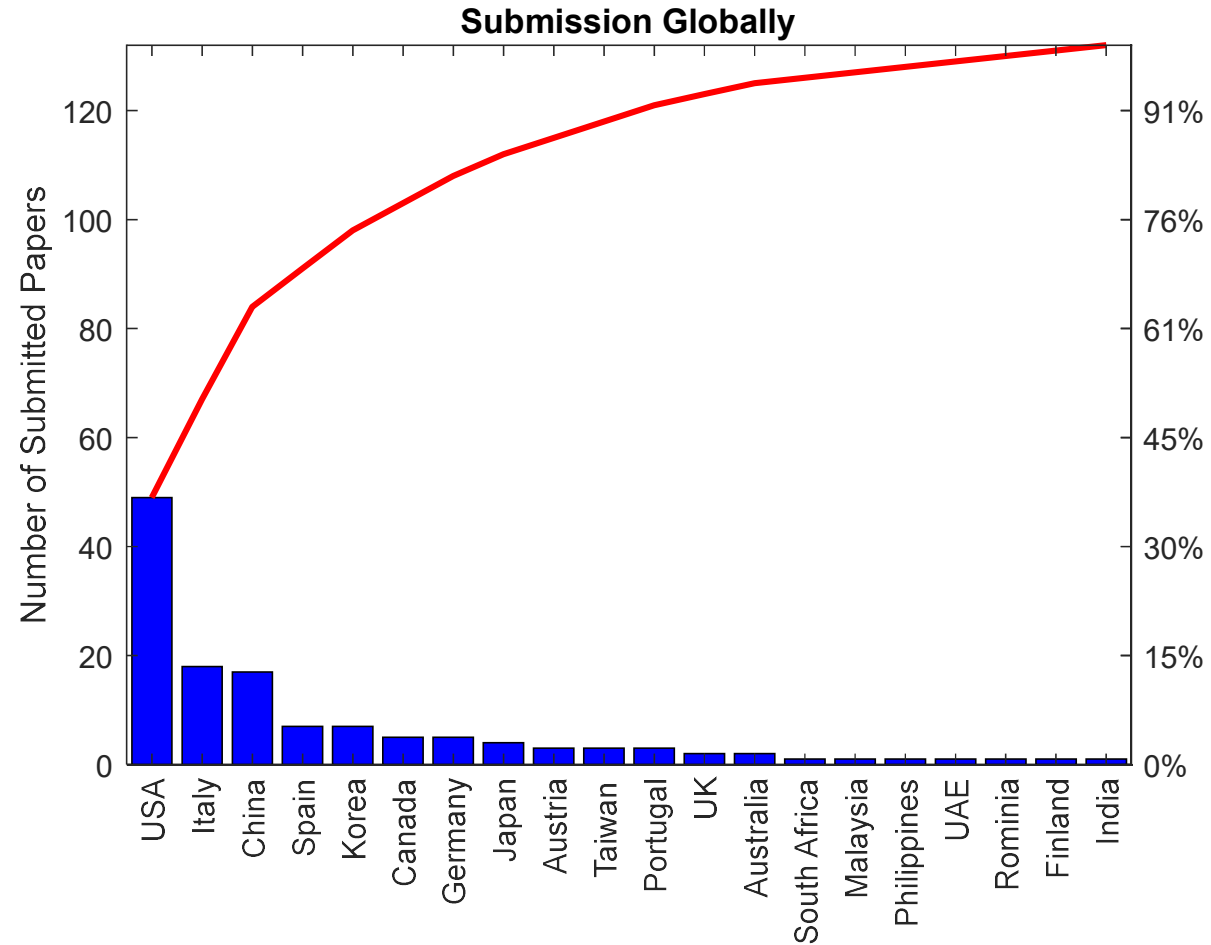
## Overall Statistics (2023)

- Number of digests: 132
- Number of papers withdrawn: 9
- Number of papers accepted: 84
- Number of papers rejected: 39
- The acceptance ratio is 64% for 132 papers.
- 84 accepted papers were distributed into 9 technical sessions.
- Review Quality:
  - All papers with at least 3 reviews
  - The average number of reviews per paper is 4.0 (4.5 last year).



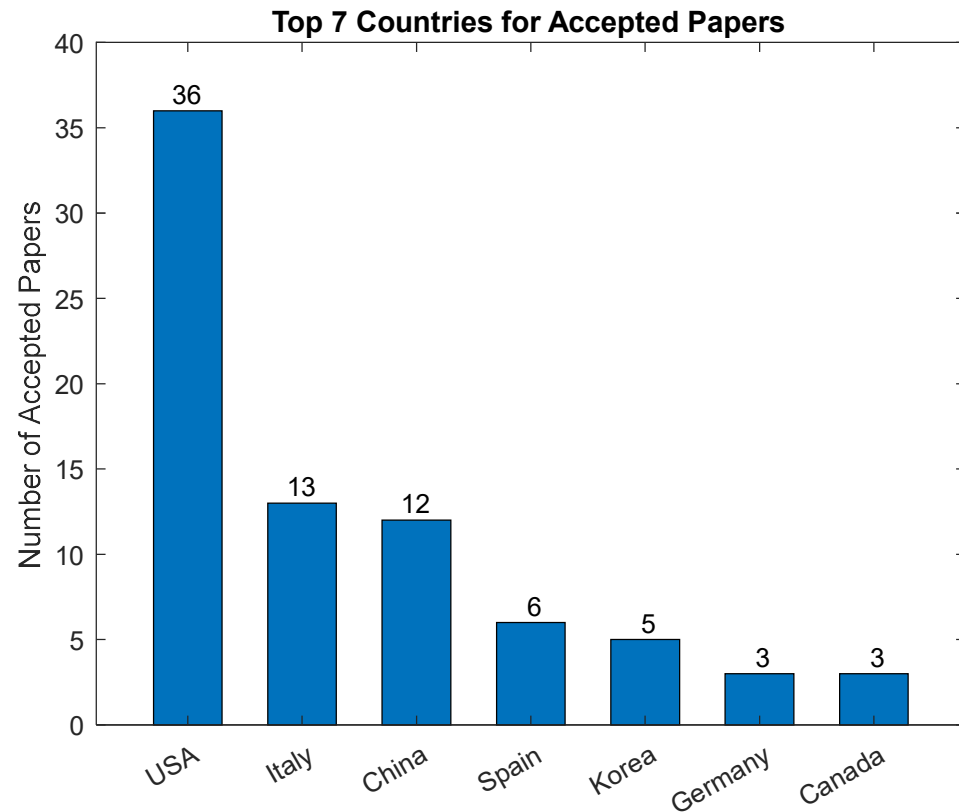
## Submission in Geological Distribution based on First Author

- 132 digests from 20 different geological locations
- United States (49), Italy (18), China (17), Korea (7), Spain (7)

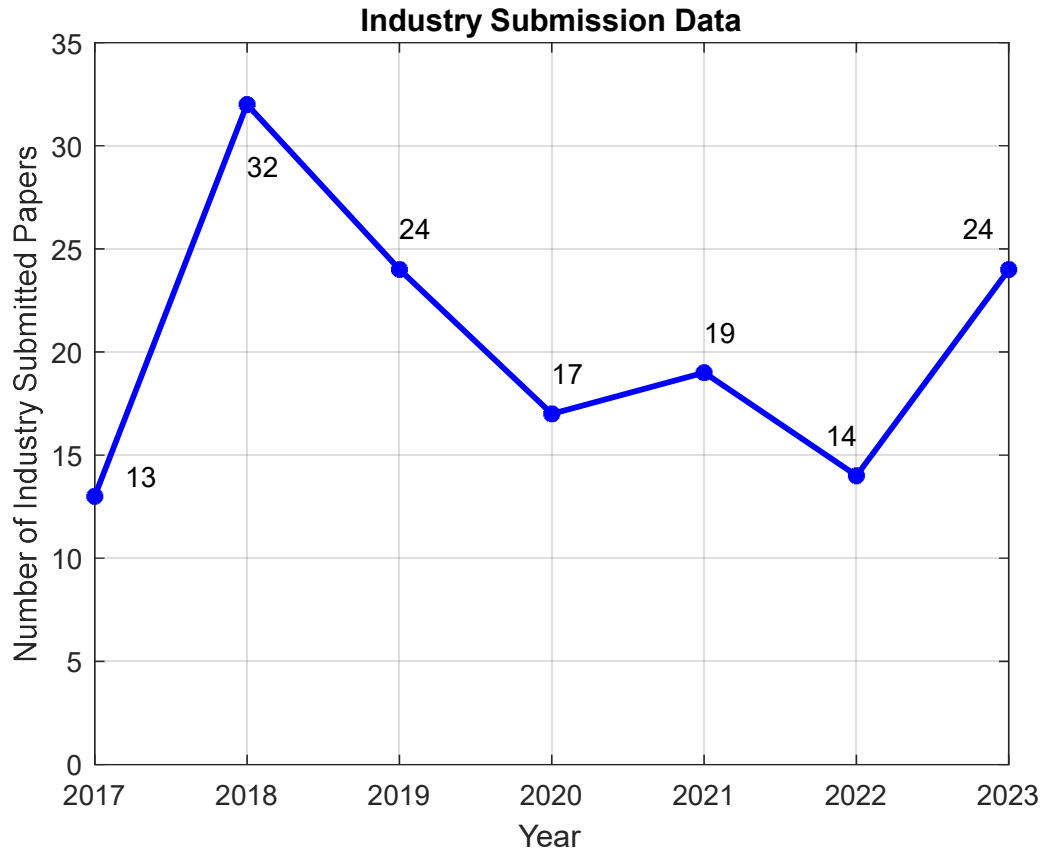


## Distribution of Accepted Papers from First Author

- About **93%** of the accepted papers come from United States (36), Italy (13), China (12), Spain (6), Korea (5), Germany (3), and Canada (3).



# Industry Papers Submission Statistics



- Industry papers acceptance rate in 2022: 35.7%
- Industry papers acceptance rate in 2023: 67%

## 2. Old Business and Reports

- Vice-chair, Paper Review – Transactions Papers
- **Vice-chair, Programs – Report on ECCE 2023**
- Chair, Standards Subcommittee

## 2. Old Business and Reports

### Vice-Chair Paper Review Report on Transactions Papers

**Prof. Jul-Ki Seok**

Yeungnam University, Korea



## Number of original submissions (new papers)

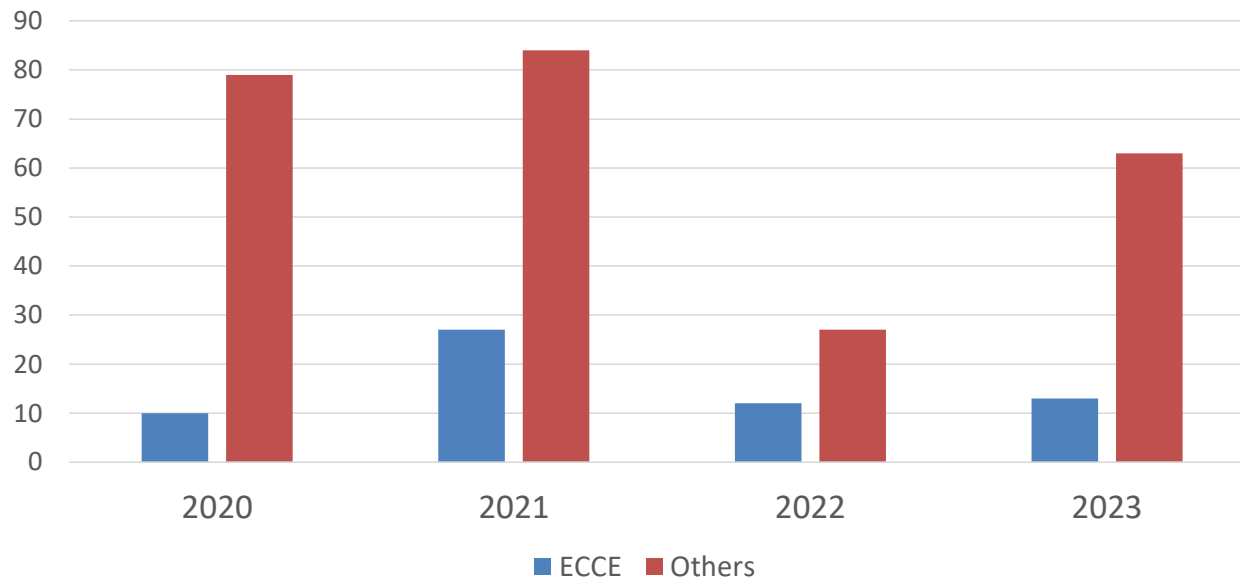
	Number of new submissions
Nov. 2022 – Oct. 2023	76
Papers invited and not submitted yet	19
<b>TOTAL</b>	<b>95</b>

Previous years	Number of new submissions Papers (invited papers)
Jan. 2019-Oct.2020	68 (89)
Oct. 2020-Oct. 2021	95 (111)
Jan. 2022-Oct. 2022	56 (69)
Nov. 2022 – Oct. 2023	76 (95)

**35% rise  
(compared to  
2022 )**

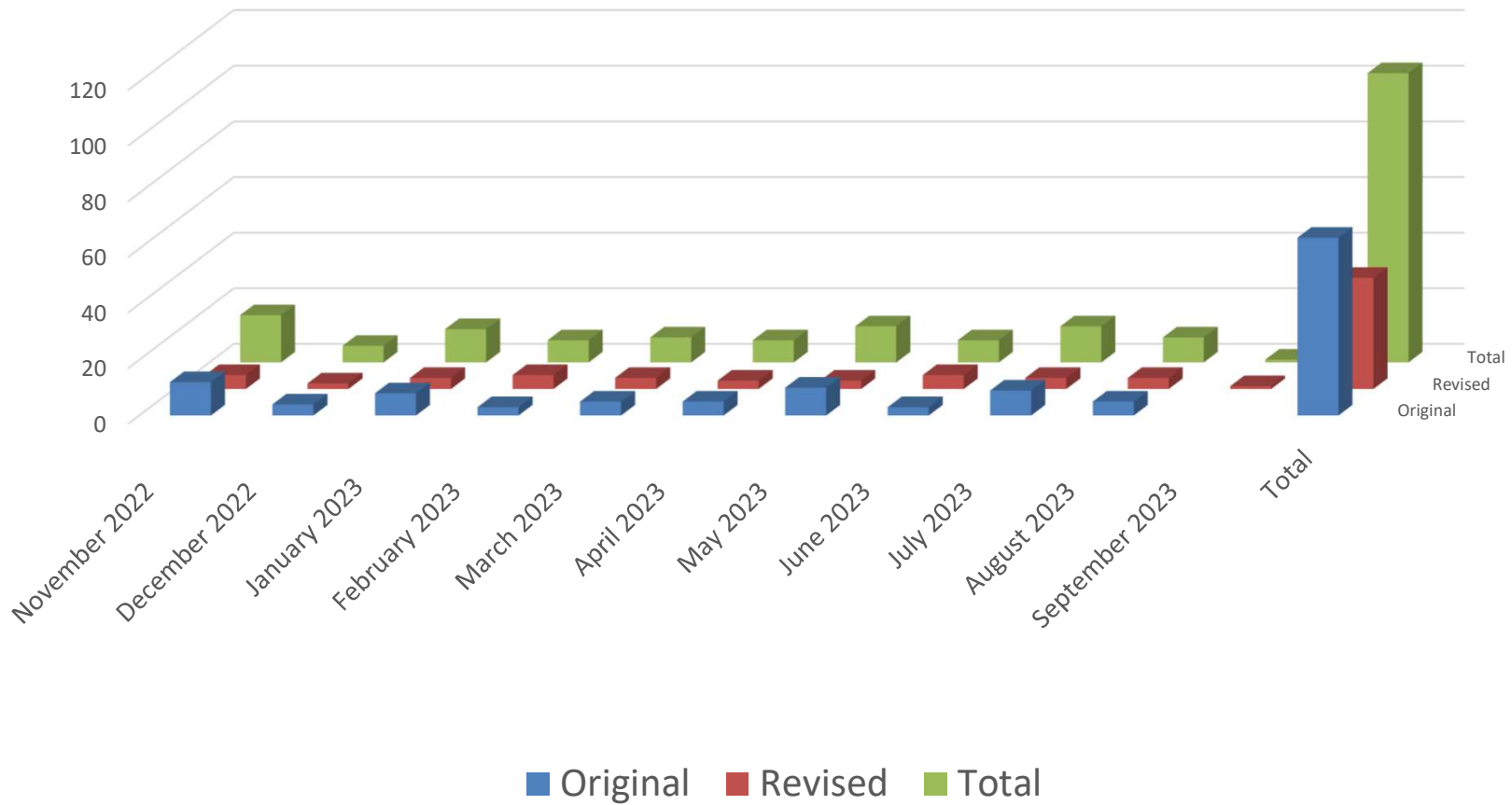
## Number of submissions From IAS-sponsored Conferences

TIA submission from Conferences

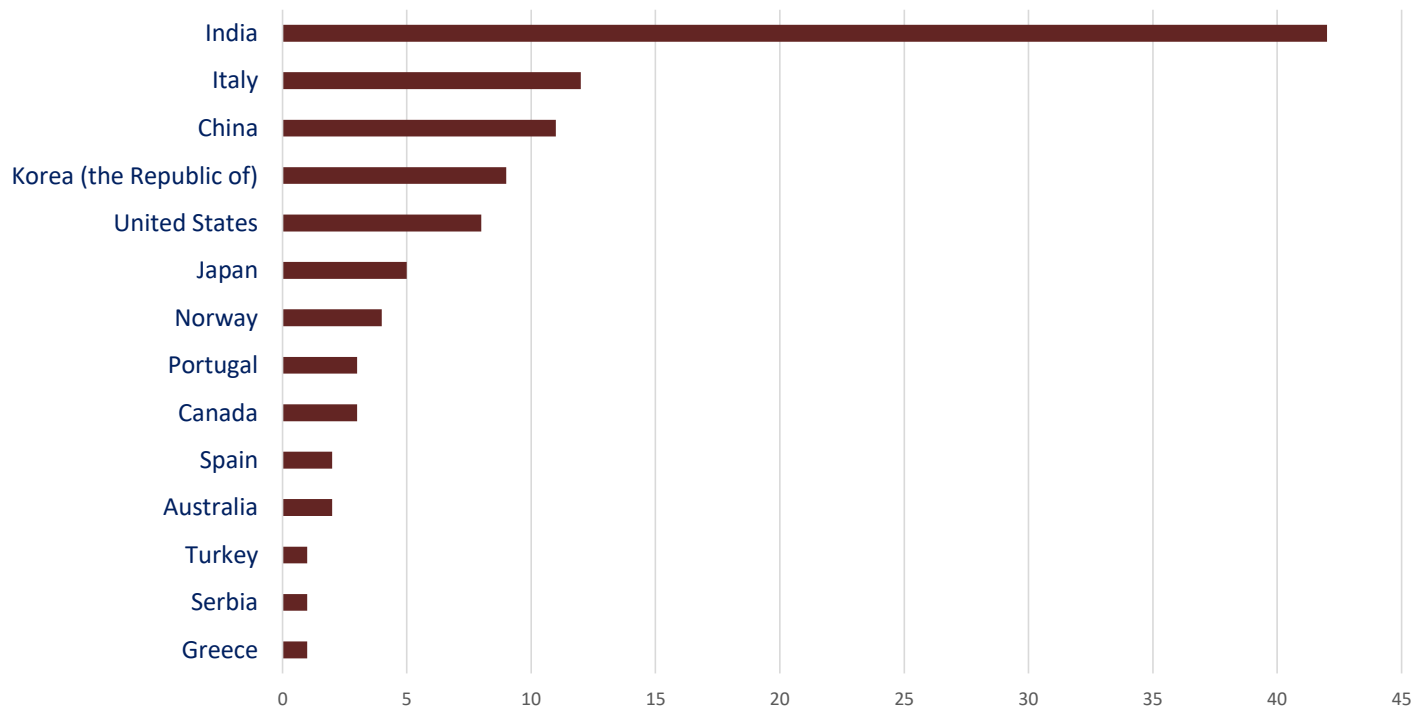


**Submission from other conferences has been increased by 133% (compared to 2022 ).**

## Time distribution of the submissions



## Country of the corresponding author (Nov. 2022-Oct 2023)



Country/Region of Submitting Author	Number of Manuscripts
India	42
Italy	12
China	11
Korea (the Republic of)	9
United States	8
Japan	5
Norway	4
Canada	3
Portugal	3
Australia	2
Spain	2
Greece	1
Serbia	1
Turkey	1

## Acceptance rate and days to final decision

Period: Jan. 2023 – Oct. 2023	Num. of papers with a final decision
Accepted papers	25
Rejected papers	35
<b>Total</b>	<b>60</b>

Acceptance rate	%
<b>2023</b>	<b>41.7%</b>
2022	39.5%
2021	50%
2020	36%

	<b>2023</b>	2022	2021	2020
Days to first decision	<b>62.5</b>	69.2	70	67
Days to final decision	<b>105.06</b>	109.3	105	96

## 2. Old Business and Reports

- Vice-chair, Paper Review – Transactions Papers
- Vice-chair, Programs – Report on ECCE 2023
- **Chair, Standards Subcommittee**

## Mission Statement of IDC Standards Subcommittee

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

## 2. Old Business and Reports

### Standards Subcommittee

**Mahesh Swamy**

Eaton



# 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

## Key Difference between existing and present standard

- Power has been replaced by energy – this helps avoid snap-shot results – makes the results more repeatable.
- Included ancillary equipment like input/output filters, EMI filters, long cable lengths, etc. as part of system. Efficiency numbers are now system dependent and gives better picture of energy consumption.
- Multiple VFDs operating multiple motors being fed from a single rectifier has been added to the new and improved standard.
- Added testing points beyond base speed to document efficiency values for motors operating in flux weakening region, for both IM and PM.

## Project Status:

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

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

## 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.

## 2. Awards and Recognitions

- Conference and Transactions Paper Awards
- Associate Editors
- Nagamori Awards

## 3. Awards and Recognitions

Prize Papers and Awards Subcommittee

**Prof. Jul-Ki Seok**

Yeungnam University, Korea

## 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)

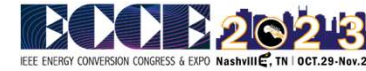


# Review criteria for ECCE2022 Paper Awards and IDC Transactions Paper Awards



- ❖ 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.

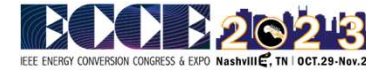
# Procedure for 2022 ECCE Paper Awards



- ❖ Any IDC paper presented at ECCE 2022 was eligible for the IDC prize paper awards (the requirement that the papers must be submitted to IAS Transaction is no longer applicable).
- ❖ **20** papers were pre-selected based on the review score of the ECCE digests.
- ❖ IDC Award sub-committee reviewed the full paper version for the final selection.
- ❖ The review process rules included:
  - Two members of the Sub-Committee (one coming from university, one coming from industry) were asked to review 5 papers. The sub-committee member could choose to review any additional paper from the general list if he/she declared no conflict of interest.
  - The reviewers were assigned considering their nationality (the authors' nationality differed from the reviewer's).
  - Reviewers had to declare no conflict of interest for the papers assigned to them.
  - Papers authored by the same author were assigned to different groups of reviewers (if possible).
- ❖ The highest total scores were selected. All three papers satisfied a threshold set for the combined scores of the Novelty, Significance and Impact parameters.
- ❖ The papers were ranked in decreasing order of Impact+Significance+Novelty. A second rank considering Readability+Figure Quality was used for the documents with the same score.



# Procedure for IDC Transaction Paper Awards



- ❖ A total of **51** papers recommended by IDC were published in the IEEE Transaction on Industry Applications in 2022 (Volume 58).
- The task of the IDC Awards Sub-Committee was to rank the best three papers.
- The review process rules included:
  - Two members of the Sub-Committee (one coming from university, one coming from industry) were assigned to review 13 papers (one group was given 12 papers). The sub-committee member could choose to review any additional paper from the general list if they declared no conflict of interest.
  - The reviewers were assigned considering their nationality (the authors' nationality differed from the reviewers').
  - Reviewers had to declare no conflict of interest for the papers assigned to them.
  - Papers authored by the same author were assigned to different groups of reviewers (were possible).
- ❖ One paper with the highest total and combined scores for the Significance and Impact parameters was recommended for the Transaction Paper Award.
- ❖ Three papers with the highest total scores were selected for the committee-level awards. All three papers satisfied a threshold set for the combined scores of the Novelty, Significance and Impact parameters.
- ❖ The papers were ranked in decreasing order of Impact+Significance+Novelty. A second rank considering Readability+Figure Quality was used for the documents with the same score.

# 2022 IEEE ECCE Conference Paper Awards



## Third Prize Paper Award

*Three-Level Optimized Pulse Patterns With Reduced Common Mode Voltage*

### Authors

*Isavella Koukoul*

*Petros Karamanakos*

*Tobias Geyer*

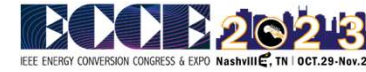
Faculty of Inf. Technol. and Commun. Sciences, Tampere University, Tampere, Finland

Faculty of Inf. Technol. and Commun. Sciences, Tampere University, Tampere, Finland

ABB System Drives, ABB Switzerland Ltd, Turgi, Switzerland



# 2022 IEEE ECCE Conference Paper Awards



## Second Prize Paper Award

*Stable and Passive Observer-Based V/Hz Control for Induction Motors*

### Authors

*Lauri Tiitinen*

Aalto University, Espoo, Finland

*Marko Hinkkanen*

Aalto University, Espoo, Finland

*Lennart Harnefors*

ABB Corporate Research, Västerås, Sweden



# 2022 IEEE ECCE Conference Paper Awards



## First Prize Paper Award

*Fault Tolerant Operation of an LCI and VSI-fed Hybrid Induction Machine Drive for Medium Voltage High Power Applications*

### Authors

*Harikrishnan Pookulangara*

*Pratyush Pandey*

*Jose Titus*

*Kamalesh Hatua*

Dept. of Electrical Engg, IIT Madras, Tamilnadu, India

Dept. of Electrical Engg, IIT Madras, Tamilnadu, India

Dept. of Electrical Engg, IIT Hyderabad, Telangana, India

Dept. of Electrical Engg, IIT Madras, Tamilnadu, India



# 2022 Industrial Drives Committee Transactions Paper Awards

## Third Prize Paper Award

*Effect of Choke Placement on Common-Mode Noise in Three-Phase Variable Speed Drives*

### Authors

Amir Ganjavi, School of Information Technology and Electrical Engineering, The University of Queensland, Brisbane, QLD, Australia

Dinesh Kumar, Global Research and Development Center, Danfoss Drives A/S, Gråsten, Denmark

Firuz Zare, School of Electrical Engineering and Robotics, Queensland University of Technology, Brisbane, QLD, Australia

Amin Abbosh, School of Information Technology and Electrical Engineering, The University of Queensland, Brisbane, QLD, Australia

Hansika Rathnayake, GSMT Consulting Pty Ltd, Brisbane, QLD, Australia

Pooya Davari, AAU Energy Department, Aalborg University, Aalborg, Denmark



# 2022 Industrial Drives Committee Transactions Paper Awards

## Second Prize Paper Award

*Control of a Waveshaper-MMC With Thyristor-Based Front-End Converter for  
Open-End Winding Variable Speed Medium-Voltage Induction Motor Drive*

### Authors

*Shuvam Chakraborty*  
*Suman Maiti*

Department of Electrical Engineering, IIT Kharagpur, Kharagpur, India  
Department of Electrical Engineering, IIT Kharagpur, Kharagpur, India



# 2022 Industrial Drives Committee Transactions Paper Awards

## First Prize Paper Award

*Synchronous PWM Control With Carrier Wave Phase Shifts for Permanent Magnet Synchronous Motor*

### Authors

Takafumi Hara, Shun Taniguchi, Toshiyuki Ajima, Masanori Sawahata, Masahiro Hori

Mobility Drive Systems Research Department, Hitachi, Ltd., Research and Development Group, Hitachi, Japan

Takaya Tsukagoshi, Powertrain Technology Development Department, Hitachi Astemo, Ltd., Hitachinaka, Japan

Katsuhiro Hoshino, System Design Department, Hitachi Astemo, Ltd., Hitachinaka, Japan



## 2. Awards and Recognitions

- Conference and Transactions Paper Awards
- **Associate Editors**
- Nagamori Awards



# 3. Awards and Recognitions

## Associate Editors

- 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
- 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

Thank you to all Associate Editors for your help!

## 2. Awards and Recognitions

- Conference and Transactions Paper Awards
- Associate Editors
- Nagamori Awards

# 3. Awards and Recognitions

## Nagamori Awards

**Dr. Yasushi Nishimura**

Secretary General, Nagamori Foundation



# Our Mission: Nagamori Foundation

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Support research and development engineers in the technical fields of motors, power generators, actuators, and related technologies.

## Nagamori Awards:

- Commend those who have made innovative technological development in the **motor related technical fields**.
- Will be given to approximately **six people**. The Grand Nagamori Award winner will receive a prize of **5 million yen**, and each of the Nagamori Award winners will receive **2 million yen**.
- Applicants must be **entry to mid-career researchers and engineers**.



# Application Guideline for the 10<sup>th</sup> Nagamori Awards

Fields covered	Technical fields related to motors, actuators and power generators, and their control methods, application technologies, etc.
Applicant eligibility	Applicants must be entry to mid-career researchers or development engineers who have made an outstanding achievement in the fields covered by the Nagamori Awards. <b><u>Entry to mid-career – normally defined as no more than 30 years of research after obtaining the Bachelor's degree.</u></b>
Application method	Self-nomination or nomination from academic institution are accepted. <b><u>A recommendation letter</u></b> by an expert in the field covered by the Awards, or a senior member of your Academic Society, organization, research department, etc. must be submitted.



# Application Guideline for the 10<sup>th</sup> Nagamori Awards

Application period	<b>November 01, 2023 - January 31, 2024</b> Applications must be postmarked on, or before, January 31, 2024
Application condition	Documents must be submitted in either English or Japanese.
Awards & prizes	Nagamori Awards will be given to approximately six people. The winner of <u>The Grand Nagamori Award will be announced during the Awards ceremony</u> . The Grand Nagamori Award winner will receive a prize of <b>5 million yen</b> , and each of the Nagamori Award winners will receive <b>2 million yen</b> .

\*The 10<sup>th</sup> Nagamori Awards Ceremony will be held on September 8, 2024, **in Kyoto, Japan**

Nagamori Foundation: <https://www.nidec.com/en/nagamori-f/>





# Winners of The 9<sup>th</sup> Nagamori Awards



<b>Ke-Horng Chen</b>	Chair Professor Department of Electronics and Electrical Engineering/ Institute of Electrical and Control Engineering, National Yang Ming Chiao Tung University
<b>Juri Jatskevich</b>	Professor Department of Electrical and Computer Engineering, Faculty of Applied Science, The University of British Columbia
<b>Sangbae Kim</b>	Professor Department of Mechanical Engineering, Massachusetts Institute of Technology
<b>Nobuyuki Kurita*</b> *Grand Nagamori Award	Associate Professor Department of Surgery, Baylor College of Medicine/ Congenital Heart Surgery, Texas Children's Hospital
<b>Sheldon Williamson</b>	Professor and NSERC Canada Research Chair Department of Electrical, Computer, and Software Engineering; Faculty of Engineering and Applied Science; Ontario Tech University
<b>Junming Zhang</b>	Professor, College of Electrical Engineering, Zhejiang University

# 4. New Business

## New Slate of Officers

**Dr. Mahesh Swamy**

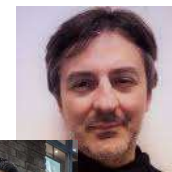
IDC Past Chair



# 4. New Business

## 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



## 4. New Business

### New IDC secretary – Prof. 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 Prize 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.

# 4. New Business

## 2024 IAS-IDC slate of officers

- Jul-Ki Seok, Chair of the IAS Industrial Drives Committee



- Kevin Lee, IDC Vice-chair Papers



- Di Pan, IDC Vice-chair Programs



- David Reigosa, IDC Secretary



- Luca Zarri, Past Chair



Motion for approval

## 4. New Business

- **2023 ECCE Conference paper Awards**
  - Any IDC paper of Track H and presented at ECCE 2023 is eligible (the requirement that the papers must be submitted to IAS Transaction is no more applicable).
  - 20 papers are pre-selected, based on the review scores of the ECCE digests.
  - The IDC Award sub-committee will review the full paper version for final selection.
- **IDC Transactions Paper Awards**
  - The IDC Award sub-committee will review all IDC papers published in 2023 in Transactions on Industry Applications.
  - The IDC Transactions Awards are open to all papers processed by IDC, not only those presented at ECCE (but the awards ceremony will be at ECCE 2024).

## 4. New Business

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

Committee newly created in February 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** – Giovanna Oriti, Naval Postgraduate School

## Launched Student Design Contest (Africa) <https://site.ieee.org/ias-ipcspd/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 printings or rapid model.
- Wireless PCB prototypes.



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



**\$2000 each (three awards)**

**Application Deadline: Nov 15**  
**Awards Announcement: Dec 20**

**CONTACT US** Mhret Berhe  
IPCSD-DEIC Liaison for Africa  
[mhret.berhe@ieee.org](mailto:mhret.berhe@ieee.org)

### 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.



### APPLICATION WILL OPEN SOON

Apply to contribute to technological advancement for humanity.

<https://site.ieee.org/ias-ipcspd/>

### 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!**

## 4. New Business



# How to Submit Papers to IEEE Trans. on Ind. Applications

In order to be considered for publication in Transactions or the Magazine, authors must first present their work at an IAS sponsored conference and then request an invitation to submit a paper.

To request an invitation, please send an email to the Publications Chair:

Jul-Ki Seok ([doljk@ynu.ac.kr](mailto:doljk@ynu.ac.kr)) – till December 31, 2023

Kevin Lee ([Kevin\\_Lee@ieee.org](mailto:Kevin_Lee@ieee.org)) – from January 1, 2024

Detailed instructions can be found in the section “Publications” on the IDC website:

<https://site.ieee.org/ias-idc/>

IEEE IAS Industrial Drives Committee

Search IEEE IAS Industrial Drives Committee

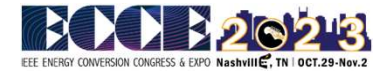
Home Officers Subcommittees Publications Standards Recognition News Resources Pictures Join

**Home**  
The Industrial Drives Committee is a committee of the Industry Applications Society (IAS) of the Institute of Electrical and Electronic Engineers (IEEE).  
The scope of the Industrial Drives Committee (IDC) is the treatment of all matters within the scope of the IAS in which the dominant factors relate to the suitability and application of electric motor drive systems equipment to industrial machines and processes. In addition to conventional motor drives, the scope includes other applications for the conversion of energy from electrical to mechanical or vice versa.  
The objective of IDC is "to advance the theory, standards and practice of industrial drives as related to the design, operation and installation of equipment within the scope of the Industrial Drives Committee." As a means of achieving its objective, IDC selects subjects and encourages the development of formal papers, panel groups, tutorials, etc. to be presented at the conferences and meetings sponsored by the Committee.  
The Committee works actively in developing and promoting standards within its scope.

**Latest News**  
• October 2020  
• September 2020  
• July 2020  
• June 2020  
• May 2020  
• April 2020  
• February 2020  
• January 2020  
• January 2019  
• October 2018  
• July 2018  
• December 2017  
• November 2017

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# 4. New Business



## How to Submit Papers to IEEE Trans. on Ind. Applications

A new on-line form has been developed to simplify the request for submission invitations.

- This feature is currently under test.
- Available from the end of November.

IEEE IAS Industrial Drives Committee 

[Home](#) [Officers](#) [Subcommittees](#) [Publications](#) [Standards](#) [Recognition](#) [News](#) [Resources](#) [Pictures](#) [Join](#)

[Home](#) / Invitation to submit a paper to Transactions on Industry Applications

### Invitation to submit a paper to Transactions on Industry Applications

In the case of an IAS Sponsored Conference, you must wait until after the conference is over. You have to provide the following information:

- Corresponding author given name, family name, and email (this must be the email that you use with your Industry Applications Manuscript Central Account)
- Affiliation
- Paper Title
- Conference Name and Date

For co-sponsored conferences, the organizers must identify first the paper's eligible to receive an invitation. In case of doubt, the authors are invited to contact the Editor-in-Chief.

#### Request for submission invitations

This form collects the data necessary for a submission invitation.

**Corresponding author's first name (Required)**  
Please enter the corresponding author's first name.

**Email Address (Required)**  
Please enter your preferred email address.  
Enter Email  Confirm Email

**Corresponding author's last name (Required)**  
Please enter the corresponding author's last name.

**Affiliation (Required)**  
Please enter the corresponding author's affiliation

**Email address in Manuscript Central (Required)**  
Please write the corresponding author's email address used in Manuscript Central.  
Enter Email  Confirm Email

**Paper title (Required)**  
Please write the original title of the conference paper.

**Conference (Required)**



## 4. New Business

### 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 Special Activity Chair to promote new activities, such as journal special issues, special sessions at ECCE and other conferences.

Please send an email to Di Pan ([pandi@ieee.org](mailto:pandi@ieee.org)). A formal call will follow.

# 4. New Business

Presentation of ECCE 2024

Prof. Luca Solero, TPC member

Università degli Studi di Roma 3



IEEE ENERGY CONVERSION CONGRESS & EXPO PHOENIX, ARIZONA, USA ☀️ OCT. 20-24

## *ECCE 2023 Steering Committee Meeting*

**General Chair, Rolando Burgos ([rburgos@ieee.org](mailto:rburgos@ieee.org))**

**General Co-Chairs, Sudip Mazumder & Pedro Rodriguez**



# IEEE ECCE 2024 – Phoenix

(Conference record #55643)



- Convention Center:  
<https://www.phoenixconventioncenter.com/>



- Exhibit Hall: 102,080 sq.ft.
- Ballroom: 2,024 people, 22,000 sq.ft.
- Ballroom foyer: 15,000 sq.ft.

# IEEE ECCE 2024 Convention Center

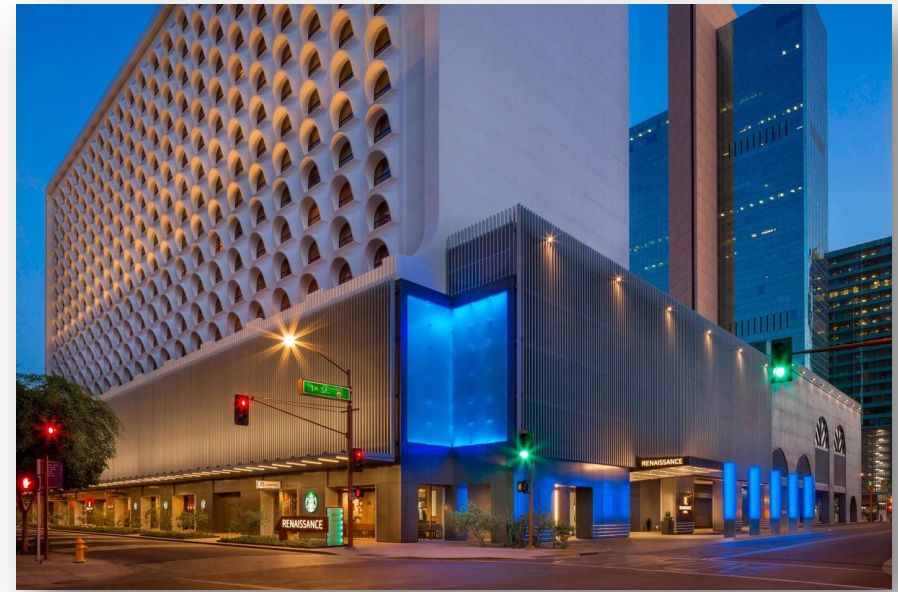


- Meeting Rooms (100 Level, ECCE)
  - 21 x 1,500 sq.ft. rooms (144 people theatre style)
  - 4 x 4,360 sq.ft. rooms (220 people theatre style)
- Meeting Rooms (200 Level, IAS)
  - 24 x 1,500 sq.ft. rooms (144 people theatre style)
  - 2 x 4,360 sq.ft. rooms (220 people theatre style)

# IEEE ECCE 2024 — HOTELS



**Hyatt Regency Phoenix**



**Renaissance Phoenix Downtown Hotel**

# Organizing Committee (Thus Far...)

## ■ **General Treasurer**

- Xiu Yao, University at Buffalo

## ■ **General Co-Chairs**

- Sudip Mazumder, University of Illinois Chicago
- Pedro Rodriguez, Luxembourg Institute of Science and Technology

## ■ **TPC**

- Pericle Zanchetta, University of Nottingham, UK (TPC Head)
- Luca Solero, University Roma Tre, Italy
- Helen Li, Florida State University
- Maryam Saeedifard, Georgia Tech
- Kevin Bai, University of Tennessee, Knoxville

## ■ **Publicity Chair**

- Helen Cui, Tianjin University, China
- Gen Li, Aalborg University, Denmark

# Organization Update

- Logo competition winner:
  - Hitesh Kumar!
- Submission deadlines:
  - March 8, **digests**
  - March 8, **tutorial proposals**
  - April 1, **special session proposals**
  - June 7, **late breaking research briefs**





## 4. New Business

Topic Chairs, Session Chairs for ECCE 2024, APEC,...

Business cards, please!

Or send an email to Kevin Lee and Di Pan (by Nov. 30, 2023)

[kevin\\_lee@ieee.org](mailto:kevin_lee@ieee.org), [pandi@ieee.org](mailto:pandi@ieee.org)

# 4. New Business

## Presentation of ICEM 2024

Prof. Gianmario (Jimmy) Pellegrino

Politecnico di Torino, Italy



Politecnico  
di Torino

# ICEM

International Conference on Electrical Machines

*Torino 2024*



50<sup>TH</sup> YEAR  
ICEM  
2024

SEPTEMBER 1-4, 2024  
POLITECNICO DI TORINO, TURIN, ITALY



TORINO



# ART & CULTURE

## MUSEUMS

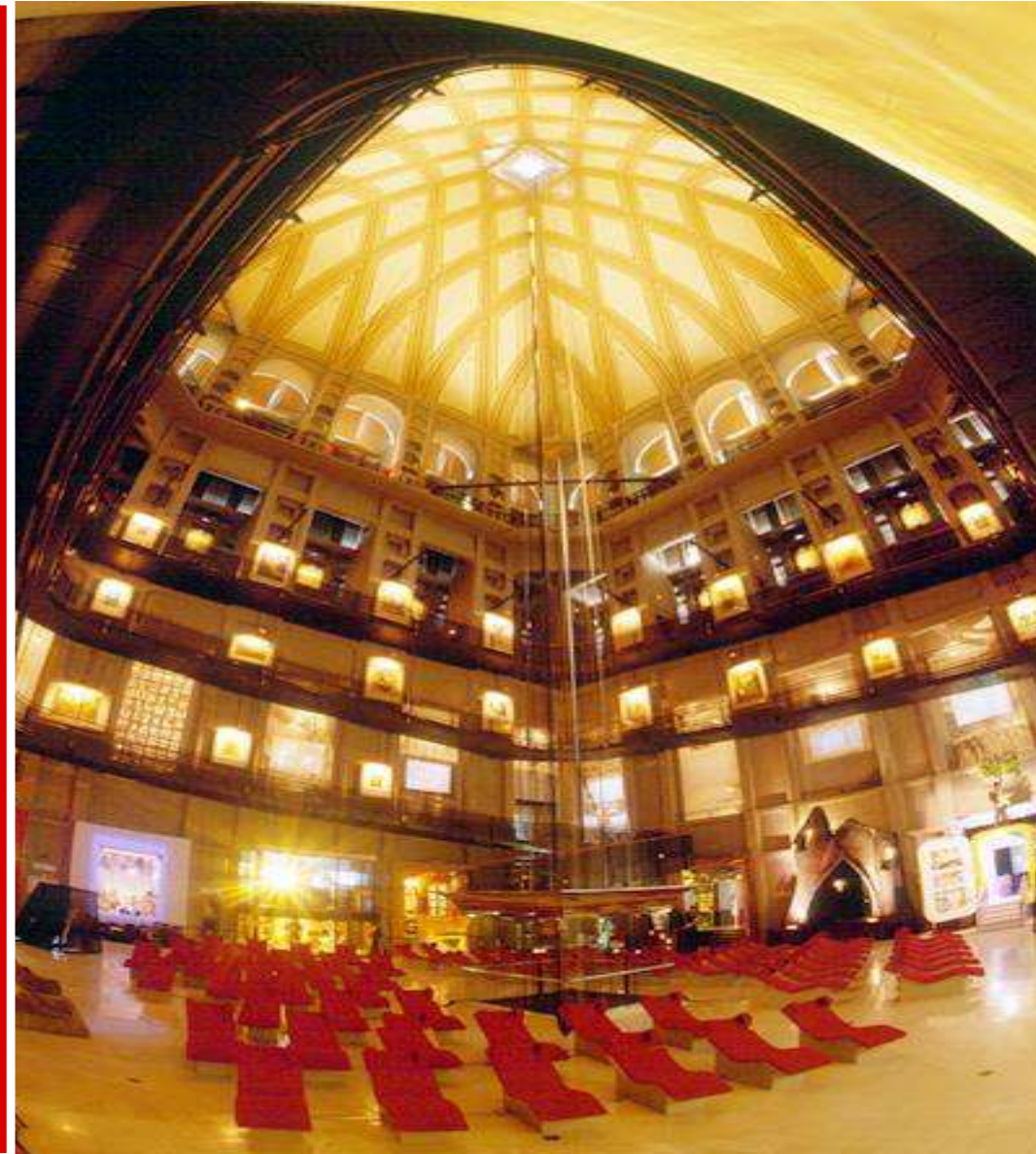
THE CITY BOASTS 42 MUSEUMS, FROM THE EGYPTIAN MUSEUM TO THE NATIONAL MUSEUM OF CINEMA, PASSING THROUGH MANY MUSEUMS DEDICATED TO CONTEMPORARY ART

## ROYAL RESIDENCES

TORINO AND PIEMONTE BOAST THE AMAZING CIRCUIT OF THE “CROWN OF DELIGHTS”, CONSTITUTED BY THE 15 SAVOY RESIDENCES DECLARED A WORLD HERITAGE SITE BY UNESCO IN 1997

## CONTEMPORARY ART

MUSEUMS, FOUNDATIONS, GALLERIES, EXHIBITION SITES INCLUDING OPEN-AIR SHOWS NOW BRING TOGETHER THE LEGACY OF ARTISTIC MOVEMENTS THAT BEGAN AND FLOURISHED IN AND AROUND THE PROVINCE'S CAPITAL FROM THE EARLY 1900S



# CAPITAL OF TASTE

## FOOD AND WINE

EATING WELL IN TORINO IS AN ART, A TRADITION OF EXCELLENCE THAT SPANS FROM WINE TO CHEESE, AND FROM COFFEE TO APERITIFS

## APERITIF

A BEFORE-DINNER DRINK ACCOMPANIED BY COUNTLESS NIBBLES IS A RITE THAT CAN'T BE MISSED

## CHOCOLATE

THE HISTORY OF CHOCOLATE IS STRICTLY CONNECTED TO TORINO AND PIEMONTE, WHERE THE VERY FIRST HOT CHOCOLATE, CHOCOLATE HOUSES AND THE “GIANDUIOTTO” - THE TYPICAL TURIN CHOCOLATE MADE OF COCOA AND HAZELNUT — WERE INVENTED



# ICEM 2024 ON CAMPUS



**Politecnico  
di Torino**



For over 160 years, Politecnico di Torino has been one of the most prestigious public institutions at international and national levels in education, research, technology transfer and services in architecture and engineering

# CONFERENCE FACILITIES



**THE AUDITORIUM  
MAIN CAMPUS  
452 SEATS**



# THE CONFERENCE FACILITIES



**LECTURE ROOMS**  
**CAMPUS CITTADELLA**  
**4 X 150 SEATS, 4 X 100 SEATS,**  
**3 X 80 SEATS ROOMS**



**CALL FOR PAPERS**

# 50TH ANNIVERSARY EDITION!



September 1-4, 2024

The **International Conference for Electrical Machines** is the reference meeting for specialists of electrical machines and drives from industry and academia

Held every two years since 1974, it is the 26<sup>th</sup> and 50<sup>th</sup> anniversary edition

Presented papers will be published in the IEEE Xplore Digital Library

Post-conference submission follows the rules of the respective IEEE journals; detailed information is on our website [www.icem.cc/2024](http://www.icem.cc/2024)

# TOPICS / TECHNICAL TRACKS



**T1** Rotating Machines

**T2** Design Issues (Optimization, Modeling, Simulation)

**T3** Special and Linear Machines, Actuators, Sensors

**T4** Thermal and Loss Issues, Magnetic and Insulation Materials

**T5** Electrical Drives

**T6** Diagnostics and Condition Monitoring

**T7** E-machines and Drives for Sustainable Transportation

**T8** E-machines and Drives for Renewable Energy

# TECHNICAL PROGRAM COMMITTEE



**General Chairs:** Gianmario Pellegrino and Aldo Boglietti

## Technical Program Chairs

Radu Bojoi

Antonio Cardoso

Giulio De Donato

Marko Hinkkanen

Shafigh Nategh

# INFORMATION



## Call for Tutorials

high-quality tutorials by recognized experts

## Call for Special Sessions

any candidate SS organizer, upon contacting the SS co-chairs, is asked to organize a **6-paper** Special Session

## Exhibition and Industry Forum

visit the booths of ICEM 2024 industrial sponsors. **Presentation-only sessions** dedicated to industry

## Student Forum

poster competition for students to present their work to industry and academia

## Social Events

Gala dinner at MAUTO, National Museum of Automobile, with visit included





<https://www.museoauto.com/en/>



## **DEADLINES**



### **Special Sessions Proposals**

Dec 1, 2023

### **Tutorials Proposals**

Feb 1, 2024

### **Full Paper Submission**

Feb 1, 2024

### **Full Paper Notification**

May 1, 2024

### **Final Paper Upload**

June 1, 2024





Politecnico  
di Torino

# ICEM

International Conference on Electrical Machines



Visit [www.icem.cc/2024](http://www.icem.cc/2024)

## Torino 2024



SEE YOU IN TORINO!  
SEPTEMBER 1-4, 2024

## 5. Closing Remarks & Motion to Adjourn

Motion for approval