



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

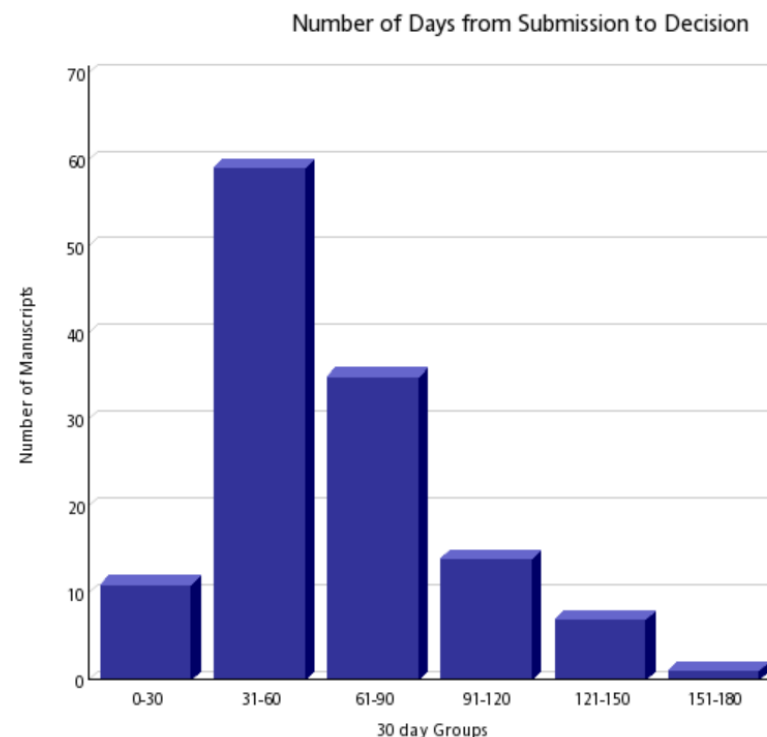
- Call to Order (Akshay Rathore)
- Introduction of the attendees
- Approval of 2022 Meeting Minutes
- Nagamori Award Presentation (Yasushi Nishimura)
- TCPRC Report – Ke Ma
- ECCE Activities 2023 – Eduard Muljadi
- IAS-RSECS Committee Co-Sponsored Conferences – Eduard Muljadi
- RSECS Committee Election 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

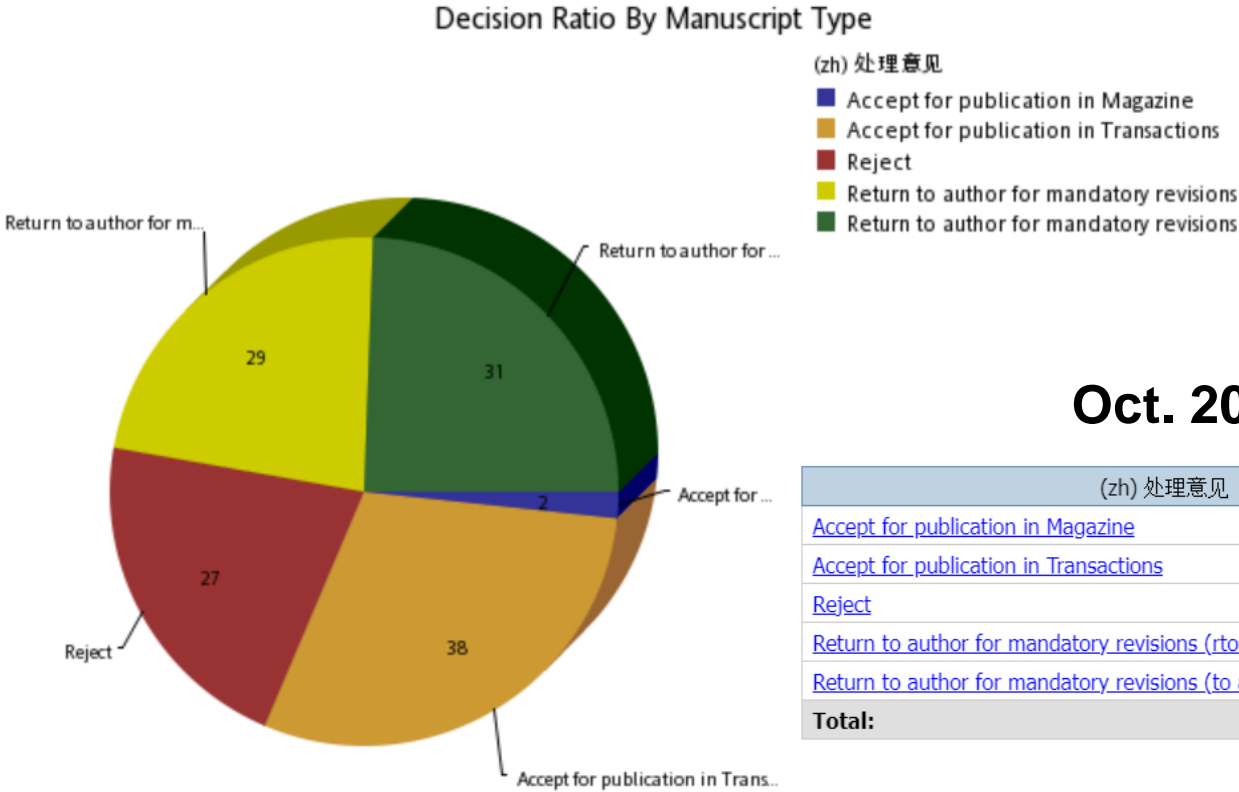
Oct. 2022 to Oct. 2023

(zh) 处理意见	# Manuscripts	Percentage
Reject	23	42.59%
Return to author for mandatory revisions (to address reviewer comments)	31	57.41%
Total:	54	100.00%

Decision for 1st submission papers

RSECS Decision Ratio – overall

Submission to Renewable and Sustainable Energy Conversion Systems Committee



Oct. 2022 to Oct. 2023

(zh) 处理意见	# Manuscripts	Percentage
Accept for publication in Magazine	2	1.57%
Accept for publication in Transactions	38	29.92%
Reject	27	21.26%
Return to author for mandatory revisions (rto address reviewer comments)	29	22.83%
Return to author for mandatory revisions (to address reviewer comments)	31	24.41%
Total:	127	100.00%

Decision for original and revised papers

Paper submission statistics by country and month

Country/Region of Submitting Author	# Manuscripts	Percentage
Australia	3	2.1 %
Bangladesh	1	0.7 %
Belgium	3	2.1 %
China	10	6.8 %
Denmark	2	1.4 %
Finland	2	1.4 %
Greece	6	4.1 %
India	62	42.5 %
Italy	4	2.7 %
Japan	1	0.7 %
Korea (the Republic of)	2	1.4 %
Mexico	3	2.1 %
Norway	4	2.7 %
Saudi Arabia	3	2.1 %
Spain	11	7.5 %
Sweden	1	0.7 %
United Arab Emirates	1	0.7 %
United States	24	16.4 %
Viet Nam	3	2.1 %
Summary	146	100.0 %

Submission Month	# Manuscripts	Percentage
October 2022	7	10.8 %
November 2022	7	10.8 %
December 2022	6	9.2 %
January 2023	4	6.2 %
February 2023	5	7.7 %
March 2023	3	4.6 %
April 2023	4	6.2 %
May 2023	6	9.2 %
June 2023	8	12.3 %
July 2023	3	4.6 %
August 2023	4	6.2 %
September 2023	3	4.6 %
October 2023	5	7.7 %
Summary	65	100.0 %

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

ECCE level

Admin

12 TPCs

Chairs

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

Topic Chairs (TCs)

Reviewers

Reviewers

Reviewers

42 Vice Chairs from IAS and PELS

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

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:

Subtrack	Topic	Papers submitted
A1	Wind energy applications	16
A2	Solar energy applications	18
A3	Power converters in renewable and sustainable energy application	63
A4	Energy storage and harvesting	27
A5	Hybrid renewable sources	5
A6	Power-to-heat applications	2
A7	Power-to-hydrogen technologies	11
A8	Other topics in renewable and sustainable energy applications	17

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

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”**

RSECS Committee Paper Awards- Transactions

Second Prize

Reza Emamalipour, John Lam

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

RSECS Committee Paper Awards- Transactions

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

RSECS Committee Paper Awards – ECCE 2022

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



ECCE 2024 Update

20-24 October 2024

Phoenix, AZ, USA



Expression of Interest

ECCE 2024

Topic Chair, Session Chair, Reviewer



Expression of Interest

Associate Editor

IEEE Transactions on Industry Applications



AOB

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Adjourn

Thank You