

Transportation Systems Committee (TSC) Annual Meeting

October 31, 2023
3:00-4:00PM CDT, Room 204

TSC Chair: Mohammad Anwar, Ph.D.
General Motors

Agenda

A. TSC Business Report

1. Introduction
2. 2022-2023 Committee Officers
3. Committee Activities
4. Transactions Paper Review
5. Prize Papers, ECCE 2022
6. Conference Activities
7. 2023-2024 Committee Officer Updates

B. TSC Related Conferences

1. APEC-2024
2. ITEC-2024
3. ECCE-2024
4. ICEM-2024
5. ICEMS-2023

C. Nagamori Award Program

D. Adjourn

Committee Officers – 2022-2023

Chair

Dr. Mohammad Anwar
General Motors

Vice Chair (Papers)

Dr. John Kisacikoglu
National Renewable Energy Laboratory

Vice Chair (Conferences)

Dr. Rakib Islam
American Axle & Manufacturing

Secretary

Dr. JiangBiao He
University of Kentucky

Past Chair

Dr. Bulent Sarlioglu
University of Wisconsin-Madison

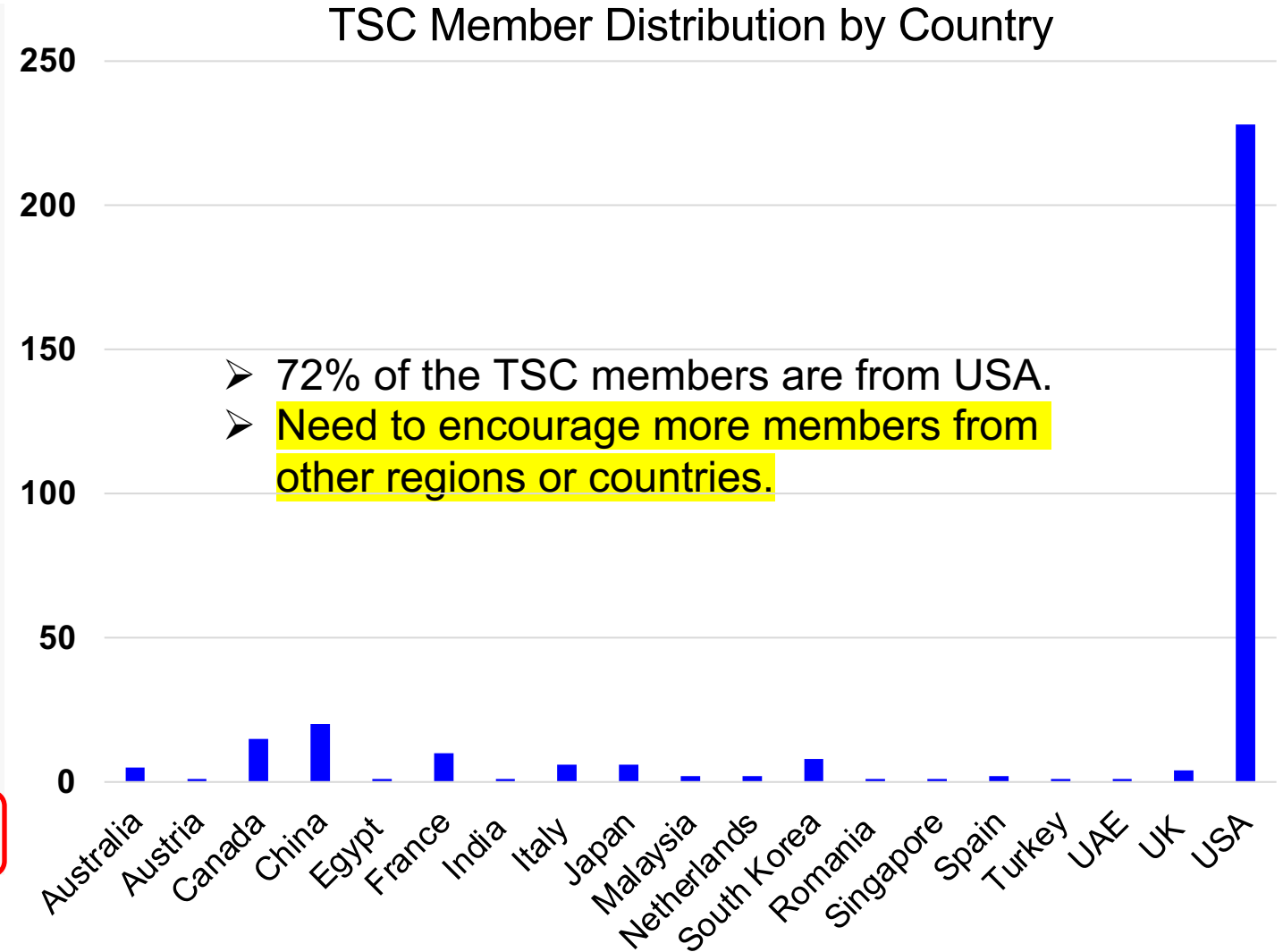
JiangBiao He, Ph.D.
University of Kentucky
Secretary

Committee Membership Updates

- IEEE IAS TSC has an active website at - <http://sites.ieee.org/ias-tcs/>
- Total members as of Sept. 22 2023 is **315** (*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
 - 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
- 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?

* Country	TSC members
* -----	
* Australia	5
* Austria	1
* Canada	15
* China	18
* Egypt	1
* France	10
* Hong Kong	2
* India	1
* Italy	6
* Japan	6
* Malaysia	2
* Netherlands	2
* Republic of Korea	8
* Romania	1
* Singapore	1
* Spain	2
* Turkey	1
* United Arab Emirates	1
* United Kingdom	4
* United States	228
* Total number of users subscribed to the list:	315
* Total number of countries represented:	20



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 regions
- Stay engaged with regional IAS activities

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@ieee.org or indicate this in the provided link.

Call for TSC Volunteers

- Please scan the QR code to update your affiliation and contact info, as well as mark your volunteer interest to serve for TSC at various positions.



Call for TSC Volunteers

IAS TSC Roster Sheet

IAS TSC Roster Sheet

[Sign in to Google](#) to save your progress.
[Learn more](#)

* Indicates required question

Name *

Your answer

Email *

Your answer

IEEE Membership *

Your answer

Affiliation *

IAS TSC Roster Sheet

Affiliation *

Your answer

Country *

Your answer

What's your research area? *

Your answer

Would you like to serve as a TSC Session Chair for ECCE-2024? *

Your answer

Would you like to serve as a TSC Topic Chair for ECCE-2024? *

Your answer

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

IAS Transaction Paper Review

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.

IAS Transaction Paper Review

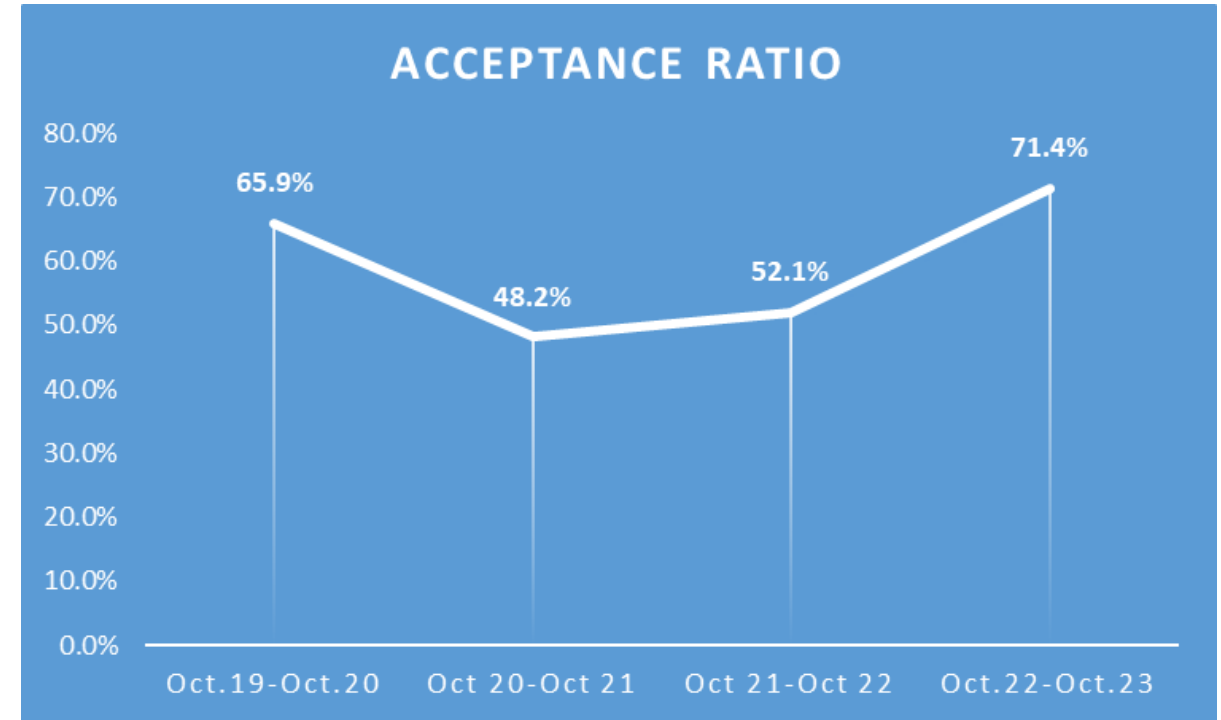
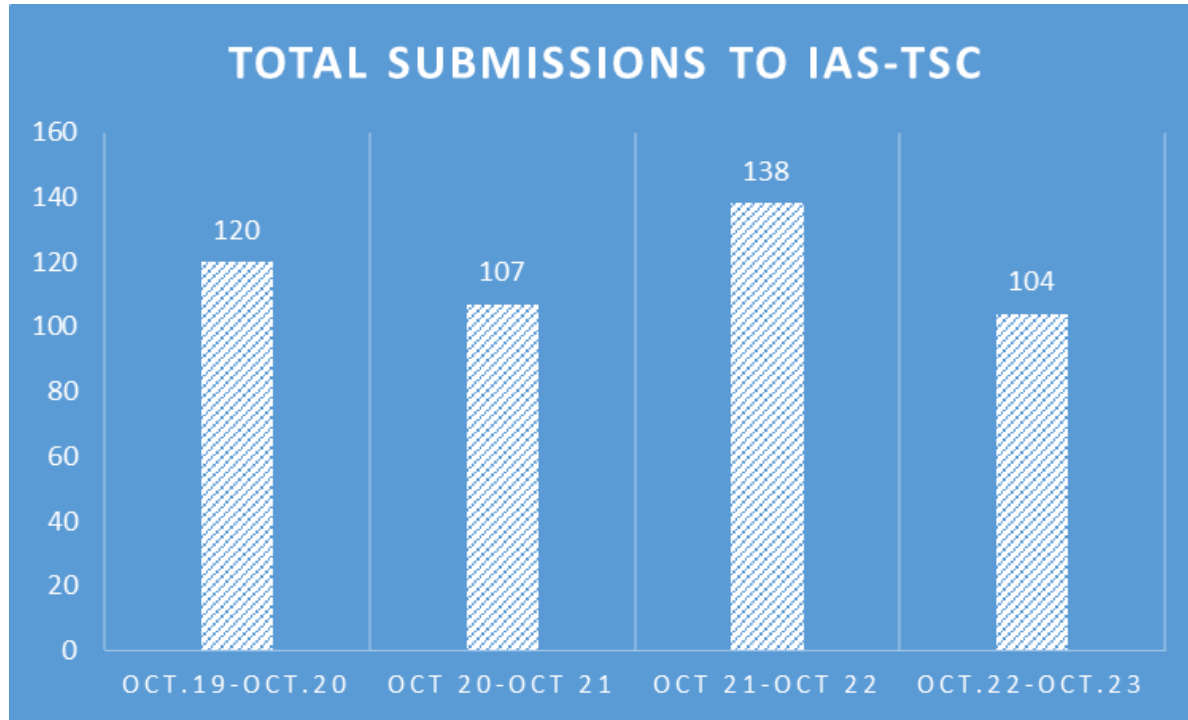
- TSC started reviewing papers for IA transactions/magazines since 2012
- **TCPRC:** Dr. John Kisacikoglu– Vice Chair (Papers)
- **Associate Editors**
 1. Prof. Mehdi Farasat, Louisiana State University, LA (2023-present)
 2. Dr. Zhaocai Liu, National Renewable Energy Laboratory, CO (2023-present)
 3. Prof. Di Zhang, Naval Postgraduate School, CA (2023-present)
 4. Prof. Hua Zhang, Rowan University, NJ (2023-present)
 5. Prof. Yue Cao, Oregon State University, OR (2022-present)
 6. Prof. Woongkul (Matt) Lee, Michigan State University, MI (2022-present)
 7. Dr. Jianlin Li, Argonne National Laboratory, IL (2022-present)
 8. Prof. Deepak Ronanki, Indian Institute of Technology Roorkee, India (2022-present)
 9. Prof. Xiaofeng Yang, Beijing Jiatong University, China (2022-present)
 10. Prof. Jin Ye, University of Georgia, GA (2022-present)
 11. Dr. Subrata Saha, Aisin Corporation, Japan (2020-present)
- Official term is two years with possible extension based on performance

*If you are interested in being a reviewer or **associate editor** for TSC, please scan the QR code and fill out the info*

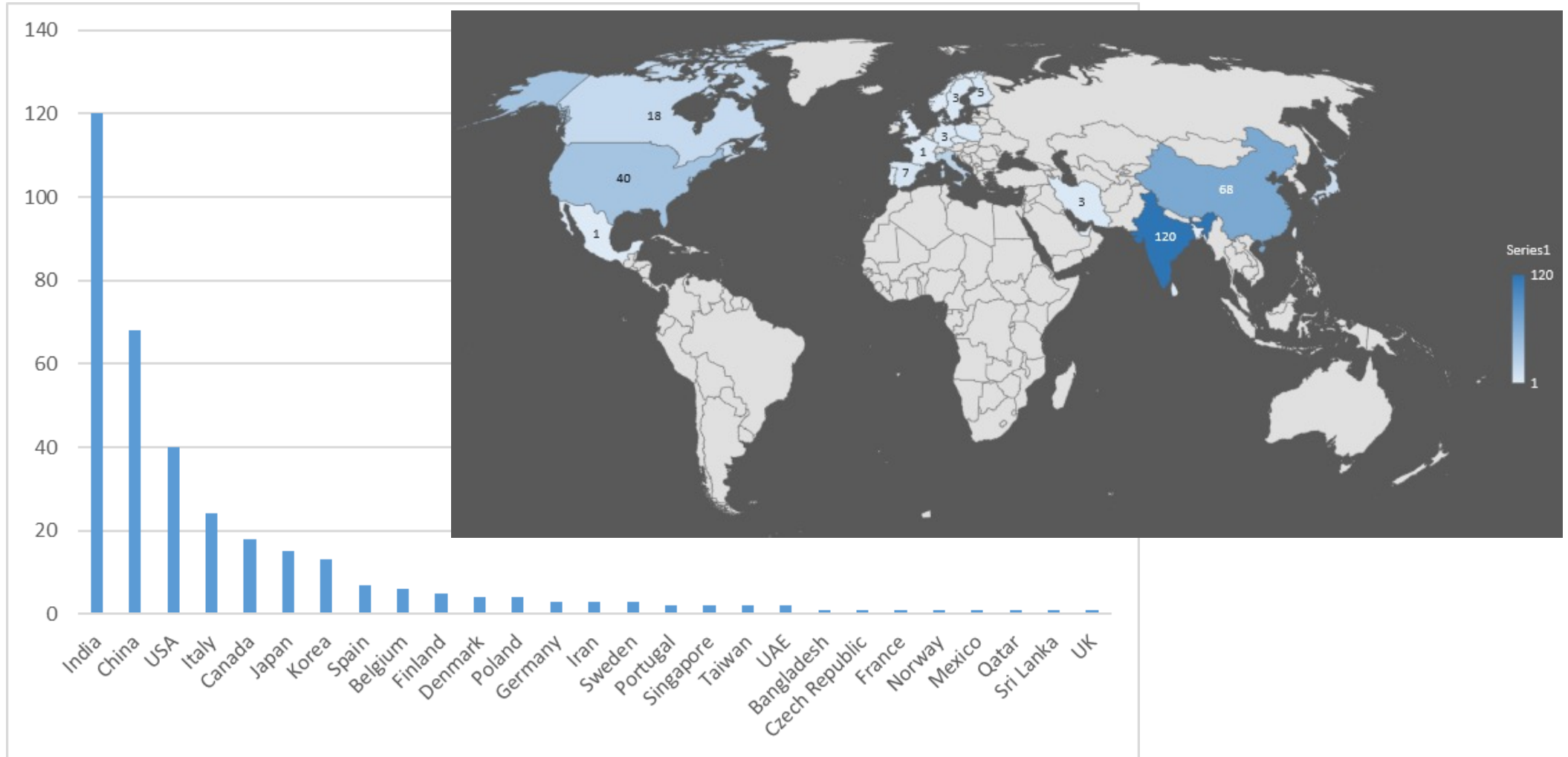


We appreciate our Associate Editors for their kind voluntary work

Transaction Paper Review: Manuscript Status (Last Four Years)



Transaction Paper Submission per Country (Last Three Years)



TSC Prize Paper Award Types

What is a prize paper? How many awards are available?

ECCE Paper awards:

- Papers sponsored by TSC presented at previous year ECCE becomes eligible for the award.
- 7-10 papers are selected based on the reviewer score they receive from ECCE.
- Award subcommittee reviews papers based on (i) novelty of the idea, (ii) feasibility of the proposed approach, and (iii) supporting evidence for experimental work.
- Three papers are selected for the award

IAS Transaction paper awards

- Any paper sponsored by TSC published in IAS Transactions the previous year becomes eligible.
- It is not required that the paper was presented at ECCE.
- Manuscript central M-scores are used to down-select the papers to be evaluated for awards.
- Three papers will be awarded under this category.
- **2023 is the first year we are awarding papers under this category.**

2023 TSC Awards

Dong Cao,
Ph.D.

University of Dayton
Chair

Khorshed Alam,
Ph.D.

General Motors
Vice Chair

Award Subcommittee

TSC ECCE Prize Paper Award - 2023

Award Committee

Chair – Dr. Dong Cao

Vice Chair – Dr. Khorshed Alam

Committee Members:

Name	Affiliation
Dr. Fei Lu	Drexel University
Dr. Anup Anurag	Delta Electronics
Dr. Arshan Khan	CNH Industrial
Dr. Woongkul (Matt) Lee	Michigan State University
Dr. Akm Arafat	Drive System Design



Fei Lu



Anup Anurag



Arshan Khan



Woongkul Lee



Akm Arafat

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.

TSC ECCE Prize Paper Award - 2023

Award Winners: First Prize

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
ZJU-Hangzhou Global Scientific and
Technological Innovation Center
Hangzhou, China
zhaowending@zju.edu.cn

Tianlin Huang
College of Electrical Engineering
Zhejiang University
Hangzhou, China
ZJU-Hangzhou Global Scientific and
Technological Innovation Center
Hangzhou, China
tlh@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




TSC ECCE Prize Paper Award - 2023

Award Winners: Second Prize


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

Asier Garcia-Bediaga
Power Electronics Area

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Ander Avila

Power Electronics Area

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Itziar Alzuguren

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Alejandro Rujas

Power Electronics Area

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Miroslav Vasic

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0000-0001-9597-6409 



ikerlan
MEMBER OF BASQUE RESEARCH
& TECHNOLOGY ALLIANCE



TSC ECCE Prize Paper Award - 2023

Award Winners: Third Prize

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



Ranya Badawi
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Mehrdad Teimorzadeh
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Mohammad Anwar
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Development
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mohammad.anwar@gm.com



TSC ECCE Prize Paper Award - 2023



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

Wending Zhao
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Hangzhou, China
ZJU-Hangzhou Global Scientific and
Technological Innovation Center
Hangzhou, China
zhaowending@zju.edu.cn

Tianlin Huang
College of Electrical Engineering
Zhejiang University
Hangzhou, China
ZJU-Hangzhou Global Scientific and
Technological Innovation Center
Hangzhou, China
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Xinke Wu
College of Electrical Engineering
Zhejiang University
Hangzhou, China
ZJU-Hangzhou Global Scientific and
Technological Innovation Center
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Active Filter Circuit in the HF AC-link of a Bidirectional Wireless Battery Charger for EV

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Ander Avila
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Itziar Alzuguren
Power Electronics Area
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Alejandro Rujas
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Miroslav Vasic
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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

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Mohammad Anwar
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mohammad.anwar@gm.com



TSC Transaction Prize Paper Award - 2023

Award Committee

Chair – Dr. Dong Cao

Vice Chair – Dr. Khorshed Alam



Yue Cao



Jin Ye



Mehdi Farasat



Hua Zhang



Subrata Saha



Deepak Ronanki



Woongkul Lee

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.

Committee Members:

Name	Affiliation
Dr. Yue Cao	Oregon State University
Dr. Jin Ye	University of Georgia
Dr. Mehdi Farasat	Louisiana State University
Dr. Hua Zhang	Rowan University
Dr. Subrata Saha	Aisin Corporation
Dr. Deepak Ronanki	Indian Institute of Technology Madras
Dr. Matt Lee	Michigan State University





TSC Prize Paper Award for IEEE Transactions on Industry Applications - 2022

Award Winners: First Prize

2400

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

upna

Universidad Pública de Navarra
Nafarroako Unibertsitate Publikoa



TSC Prize Paper Award for IEEE Transactions on Industry Applications - 2022

Award Winners: Second Prize

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

2421

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 



Università
degli Studi
di Palermo



TSC Prize Paper Award for IEEE Transactions on Industry Applications - 2022

Award Winners: Third Prize

5248

IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, VOL. 58, NO. 4, JULY/AUGUST 2022

Analytical Derivation of Phase-Current Waveform for Elimination of Torque and Input-Current Ripples of Switched Reluctance Motor Operating Under Magnetic Saturation

Takayuki Kusumi , *Member, IEEE*, Kosuke Kobayashi, Kazuhiro Umetani , *Member, IEEE*,
and Eiji Hiraki , *Member, IEEE*



岡山大学
OKAYAMA UNIVERSITY







TSC Prize Paper Award for IEEE Transactions on Industry Applications - 2022

2400

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

Noninvasive Aging Analysis of Lithium-Ion Batteries in Extreme Cold Temperatures

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Takayuki Kusumi , *Member, IEEE*, Kosuke Kobayashi, Kazuhiro Umetani , *Member, IEEE*,
and Eiji Hiraki , *Member, IEEE*



Dr. Rakib Islam
American Axle & Manufacturing
Vice Chair - Conferences

ECCE 2023 – Transportation Electrification Applications

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

Name	Affiliation
Xiaofeng Yang	Beijing Jiaotong University
Yuhua Du	Northwestern Polytechnical University
Woongkul Lee	Michigan State University
Mehdi Zadeh	NTNU, Norway
Arnaud Gaillard	University of Technology of Belfort-Montbeliard
Ehsan Jamshidpour	University of Lorraine
Catherine Jones	University of Strathclyde
Dianxun Xiao	The Hong Kong University of Science and Technology
Niloofer Torabi	Smart Wires
Lavanya Vadamodala	altair



	Oral	Poster	Withdrawn	Rejected	Total	Acceptance Rate
ECCE2019	25	32	7	23	87	65.50%
ECCE2020	34	33	10	37	114	58.80%
ECCE2021		44	3	21	68	64.70%
ECCE2022	46	9	4	19	78	70.50%
ECCE2023	40	56	3	41	137	70.10%

ECCE 2023 – Transportation Electrification Applications

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)

ITEC Global Series

- **ITEC North America (60% PELS, 20% IAS, 20% PES)**
 - ITEC'20: June 19-21, 2020, Virtual
 - ITEC'21: June 23-25, 2021, Virtual
 - ITEC+'22: June 15-17, Anaheim, CA
 - ITEC+'23: June 20-23, Downtown Detroit, MI
 - ITEC+'24: June 19-21, Rosemont, IL, USA
- **ITEC Asia & Pacific (36% IAS, 12% PELS, 12% PES, 40% Others) – Led by IAS**
 - May 8-11, 2019, Seogwipo-si, Jeju, Korea
 - 2020: Cancelled.
 - 2021: Cancelled
 - Oct 28-31, 2022: Zhejiang University International Campus, Haining, China
 - Nov 28-Dec 1, 2023: Chiang-Mai, Thailand
- **ITEC India & Middle East – Led by IAS in Partnership with SAEINDIA**
 - August 27 – 29, 2015, Chennai, India
 - December 13-15, 2017, Pune, India
 - December 17-19, 2019, Bangalore, India
 - December 16-18, 2021: Gurugram, India
 - December 13-15, 2023: Chennai Trade Center, India
- **ESARS-ITEC Europe**
 - November 2-4, 2016, Toulouse, France
 - November 7-9, 2018, Nottingham, UK
 - 2020 conference is cancelled
 - March 29-31, 2023, Venice, Italy
 - November 26-29, 2024, Naples, Italy

Other Future Conferences

TSC will be involved in various conferences in 2023 & 2024 at various capacities:

- ICEMs 2023, November 5-8, Zhuhai, China
- APEC 2024, Feb 25-29, Long Beach, CA, USA
 - Final accepted paper submission date: Nov 3, 2023
- ICEM 2024, Sept 1-4, Turin, Italy
- ECCE 2024, October 20-24, Phoenix, AZ, USA
 - Digest submission date: Mar 8, 2024

2023-2024 TSC Committee Officer Updates

Chair

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General Motors

Vice Chair (Papers)

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National Renewable Energy Laboratory

Vice Chair (Conferences)

Dr. Rakib Islam
American Axle & Manufacturing

Secretary

Dr. JiangBiao He
University of Kentucky

Past Chair

Dr. Bulent Sarlioglu
University of Wisconsin-Madison

2022-2023 Committee

Operating Guideline:

- ✓ As per the operating guidelines every position has a 2 years tenure
- ✓ As per this, I will become Immediate Past Chair and we need to nominate a new Secretary

2023-2024 TSC Committee Officer Updates

Chair

Dr. John Kisacikoglu
National Renewable Energy Laboratory

Vice Chair (Papers)

Dr. Rakib Islam
American Axle & Manufacturing

Vice Chair (Conferences)

Dr. JiangBiao He
University of Kentucky

Secretary

TBD

Past Chair

Dr. Mohammad Anwar
General Motors

Operating Guideline:

- ✓ Committe officers reviewed and shared opinions on interested candidates for the Secretary position
- ✓ We have a Nomination and need your vote to finalize it

TSC Secretary Nomination

IAS TSC nominates **Dr. Khorshed Alam** as our new secretary

Experience

2022 - Present: Technical Specialist, Advanced Power Electronics System Design & Integration, General Motors

2019 - 2022: Senior Engineer, Power Electronics Design and Analysis, General Motors

2015 - 2019: Power Electronics Development Core Engineer, Ford Motor Company

2011 - 2014: Research Assistant, University of Utah, Salt Lake City

Education

Ph.D., University of Utah, 2014

M.Sc., University of Utah, 2013

B.Sc., Bangladesh University of Engineering and Technology, 2009

Dr. Alam is Vice-Chair of TSC's Awards sub-committee and has been served regularly as Topic and Session Chairs at IEEE ECCE and APEC for past years.

2023-2024 TSC Committee Officer Updates

Chair

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National Renewable Energy Laboratory

Vice Chair (Papers)

Dr. Rakib Islam
American Axle & Manufacturing

Vice Chair (Conferences)

Dr. JiangBiao He
University of Kentucky

Secretary

Dr. Khorshed Alam
General Motors

Past Chair

Dr. Mohammad Anwar
General Motors

Introduction of APEC-2024

Jin Wang

*APEC2024 Assistant
Program Chair*

Recovering from Covid

- **APEC'22 was held in person in Houston, TX. Attendance was about 60% of pre-Covid numbers**
- **APEC'23 held in Orlando, FL, with around 4.8k attendees and record surplus**
 - **Student job fair and childcare introduced**
- **APEC'24 to be held February 25-29 in Long Beach, CA, chaired by Tim McDonald**

APEC'24 Update

- Transitioned to MMS (new professional conf organizer)
- Program is complete
 - 564 technical papers accepted; 66% acceptance rate (64% for APEC '23)
 - 86 Industry Session presentations; 55% acceptance rate (59% for APEC'23)
 - 18 seminars; 48% acceptance rate (41% for APEC'23)
- 286 Exhibitors; floor plan sold out!
- Budgeting for 15% increase in attendance compared to APEC 2023 since the conference is on the West Coast
- Still identifying plenary speakers

Future APECs

Year	Dates	Site	Contact (Chair)	Status
2024	Feb 25-29	Long Beach, CA	Tim McDonald	Fully contracted
2025	March 9-13	Atlanta, GA	Tony O’Gorman	Partially contracted
2026	March 20-26	San Antonio, TX	Jin Wang	Partially contracted
2027	March 7-11	New Orleans, LA	TBD	Partially contracted
2028	March 3-9	Phoenix, AZ	TBD	Fully Contracted

- RFP for APEC 2029 and APEC 2030 sent out
 - Expect to do site visits in 1H24
 - Goal is to contract space by the end of 3Q24

Volunteers are always needed!

- Long range planning subcommittee
 - Discussing options to restructure APEC schedule
 - Identifying growth areas for the conference

Introduction of ITEC-2024

*Fei Gao, PhD, Professor
(General Chair, ITEC-2024)*

ITEC 2024

2024 IEEE

Transportation Electrification Conference and Expo

www.itec-conf.com

Fei Gao – general chair ITEC 2024 Chicago

General information

ITEC 2024 Chicago

- IEEE OUs financial co-sponsorship (current status)
 - 60% IEEE Power Electronics Society
 - 20% IEEE Power & Energy Society
 - 20% IEEE Industry Application Society
- Conference site
 - Donald E Stevens Convention Center, Rosemont, Illinois (next to O'Hare Airport)
- Conference date
 - June 19 (Wed.) to 21 (Fri.), with Hall G at Level 2, adjacent rooms at Level 2
- Conference & Exhibition Coordinator
 - RNA Associates, USA

Leadership

ITEC 2024 Chicago

- **General Chair:** Fei Gao, University of Technology of Belfort-Montbéliard, France
- **General co-Chair:** Hong Yang, Oshkosh, USA
- **Program Chair:** Liang Du, Temple University, USA
- **Program Co-Chair:** Jennifer Bauman, McMaster University, Canada
- **Finance Chair and Treasurer:** Jennifer Bauman, McMaster University, Canada
- **Publication Chairs:** Fei Lu, Drexel University, USA, and Yan Li, Pennsylvania State University, USA
- **Conference Coordinator:** Rebecca Krishnamurthy, RNA Associates, USA

Introduction of ECCE-2024



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

ECCE 2023 Steering Committee Meeting

General Chair, Rolando Burgos (rburgos@ieee.org)
General Co-Chairs, Sudip Mazumder & Pedro Rodriguez



October 31, 2023



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**



Oct. 31, 2023



Introduction of ICEM-2024



Politecnico
di Torino

ICEEM

International Conference on Electrical Machines



Torino 2024

General Chairs: Gianmario Pellegrino and Aldo Boglietti

SEPTEMBER 1-4, 2024

POLITECNICO DI TORINO, TURIN,
ITALY

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

Introduction of ICEMs-2023

26th International Conference on Electrical Machines and Systems

ICEMS 2023

General Chair
Prof. Ronghai Qu

Huazhong University of Science and Technology

Zhuhai, China | November 5-8, 2023

1025 Papers Accepted, Over 1000 Scholars Attended

Website: www.icems2023.com



Program at a Glance

	November 5	November 6	November 7	November 8
AM	Registration (10:00-12:00)	Opening Ceremony (09:00-09:40)	Oral Session I (08:30-10:10)	Oral Session V (08:30-10:10)
		Keynote Speech (10:00-12:00)	Oral Session II (10:20-12:00)	Oral Session VI (10:20-12:00)
Special Session I (09:00-11:30)				
Special Session III (09:00-11:30)				
Closing Ceremony (12:00-12:30)				
Buffet Lunch (12:00-13:00)				
PM	Registration (13:00-21:00)		Oral Session III (13:30-15:10)	
	Tutorial (14:00-17:00)		Oral Session IV (15:20-17:00)	
		Keynote Speech (13:30-16:30)		Special Session II (14:00-16:30)
				Technical Tour (13:30-16:30)
		Poster Session I (17:00-18:00)	Poster Session II (17:00-18:00)	
	Welcome Reception (18:00-20:00)	Buffet Dinner (18:00-19:00)	Banquet (18:30-20:30)	Buffet Dinner (17:30-18:30)

Conference Topics

I. Electric Machines and Field Analysis

1. PM Machines and Generators
2. Flux Modulation Machines
3. AC/DC Machines
4. Reluctance Machines
5. Multiphase Machines
6. Linear Drives
7. Superconducting Machine
8. Special Machines and Actuators
9. Other Areas in Electric

II. Motor Control, Drives, and Power Electronics

1. Motor Control and Drives
2. Motion Control and Servo Systems
3. Sensorless Control
4. Automotive Power Electronics, EV Chargers, V2G and Infrastructure
5. Power Converters
6. Power Electronic Devices (Si and Wide Band Gap) and Applications

III. Energy Systems, E-Mobility and AI Convergence

1. Renewable Energy Systems
2. Energy Storage System, Batteries Modeling and Management
3. Smart Grids, FACTS, Microgrids
4. Hybrid/Electric Vehicles and Electric Propulsion Systems
5. Other Areas in Energy

IV. Special Session

1. Linear Motors and Planar Motors
2. Advanced Electrical Machines in Electrified Transportation
3. Novel Reluctance Motors and Drives
4. Emerging Multi-Port Electrical Machines and Systems
5. Research on Spherical Motors
6. Wireless Power Transfer for Robotics

5. Other Areas in Energy Systems and E-Mobility

Introduction of ECCE-2024

Nagamori Award Program

Yasushi Nishimura

*Nagamori Foundation
Secretary General*

Our Mission: Nagamori Foundation

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 10th 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. <u>Entry to mid-career – normally defined as no more than 30 years of research after obtaining the Bachelor’s degree.</u>
Application method	Self-nomination or nomination from academic institution are accepted. <u>A recommendation letter</u> 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 10th Nagamori Awards

Application period	November 01, 2023 - January 31, 2024 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 5 million yen , and each of the Nagamori Award winners will receive 2 million yen .

*The 10th Nagamori Awards Ceremony will be held on September 8, 2024, **in Kyoto, Japan**



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

Industrial Power Conversion Systems Department

Winners of the 9th Nagamori Awards



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

It is an exciting time for transportation electrification! Please join us!

