

# 2024 IEEE 65<sup>th</sup> International Scientific Conference

on Power and Electrical Engineering of Riga Technical University (RTUCON)





**IEEE Latvia IAS-IES-PELS Joint Chapter** 

#### JCON2024 Cal R apers

2024 IEEE 65th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) invites scientists, engineers and manufacturers as well as to doctoral students from all over the world to meet and discuss recent results in the area of power and electrical engineering.

### General Chairman: Ilya Galkin (RTU, Latvia).

Honorary Board: Leonids Ribickis , Antans Sauhats (RTU, Latvia).

**TT1 Electrical Engineering:** (1.1) Theory, Analysis and Design of Electrical Equipment; (1.2) Safety and Reliability of Electrical Equipment; (1.3) Electrical Materials; (1.4) Electromagnetic Compatibility of Electrical Equipment; (1.5) Transformers, Relays and Other Electrical Units; (1.6) Environmental Aspects of Lifecycle of Electrical Equipment. **Chairperson:** Ilya Galkin (RTU, Latvia). **Scientific Committee:** Oleksandr Bondarenko (Igor Sikorsky Kyiv Polytechnic Institute, Ukraine); Pavlo Safronov (Odessa National Polytechnic University, Ukraine); Pylyp Hovorov (O. M. Beketov National University of Urban Economy in Kharkiv, Ukraine), Mariusz Stepien (Silesian University of Technology, Poland); Peteris Apse-Apsitis, Rodions Saltanovs, Ansis Avotins, Kristaps Vitols, Olegs Tetervenoks (RTU, Latvia) et al. **TT2 Electrical Machines, Drives and Vehicles:** (2.1) Theory and Analysis of EM&ED. (2.2) Design and Maintenance of EM&ED. (2.4)

Tetervenoks (RTU, Latvia) et al. TT2 Electrical Machines, Drives and Vehicles: (2.1) Theory and Analysis of EM&ED, (2.2) Design and Maintenance of EM&ED, (2.4) Mechatronics and Robotic Systems; (2.4) Reliability and Lifetime Analysis of Electrical Machines and Apparatus; (2.5) Electric Vehicles and Transportation Electrification. Chairperson: Payam Shams Ghahfarokhi (TalTech, Estonia). Scientific Committee: Andrei Podgornov, Maris Gailis (RTU, Latvia); Toomas Vaimann, Ants Kallaste, Hans Tiismus, Anton Rassõlkin, Bilal Asad, Hadi Ashraf Raja (TalTech, Estonia); Mariusz Stepien (Silesian University of Technology, Poland); Vanja Ambrozic, Mitja Nemec (University of Ljubljana, Slovenia); Levon Gevorkov (Catalonia Institute for Energy Research, Spain); Antti Lehikoinen, Anouar Belahcen (Aalto University, Finland) et al. TT3 Power Electronics: (3.1) New Topologies and Topological Improvements of Power Converters; (3.2) Power Converters Applications; (3.3) Design Issues of Power Converters; (3.4) Implementation, Protection and Thermal Design of Power Semiconductor Switches. Chairperson: Dmitri Vinnikov (TalTech, Estonia). Scientific Committee: Oleksandr Bondarenko (Igor Sikorsky Kyiv Polytechnic Institute, Ukraine); Serhii Stepenko (Chernihiv Polytechnic National University, Kristaps Vitols, Olegs Tetervenoks, Ingars Steiks (RTU, Latvia); Satish Naik, Little Pradhanet, Aditya Pogulaguntla, Venkata Raghavendra I (Indian Institute of Technology Dharwad, India); Enrique Romero-Cadaval, Carlos Roncero-Clemente (University Venkata Raghavendra I (Indian Institute of Technology Dharwad, India); Enrique Romero-Cadaval, Carlos Roncero-Clemente (University of Extremadura, Spain), Joao Martins (Universida MOVA de Lisboa, Portugal), Luigi Piegari (Politecnico di Milano, Italy), Omar Abdel-Rahim (Texas A&M University, Qatar) et al. TT4 Power and Energy Systems: (4.1) Power System Control, Automation, Stability and Protection; (4.2) Power Quality and

Rahim (Texas A&M University, Qatar) et al.
TT4 Power and Energy Systems: (4.1) Power System Control, Automation, Stability and Protection; (4.2) Power Quality and Reliability; (4.3) Power Plants, Renewable and Distributed Energy Systems; (4.4) Power System Planning, Management and Economic Evaluation; (4.5) Power System Risk Assessment and Management; (4.6) Electricity Market.
Chairperson: Tatjana Lomane (RTU, Latvia).
Scientific Committee: Sergej Denisiuk, Julia Yamnenko (Igor Sikorsky Kyiv Polytechnic Institute, Ukraine); Lauri Kütt, Argo Rosin, Jelena Shuvalova (TalTech, Estonia); Karlis Baltputnis, Zane Broka, Aleksandrs Dolgicers, Sergey Kovalenko, Jevgenijs Kozadajevs, Roman Petrichenko, Lubov Petrichenko, Sergejs Rubcovs, Josifs Survilo, Andrejs Utans, Ivars Zalitis, Inga Zicmane, Olegs Borscevskis (RTU, Latvia); Renata Varfolomejeva (AS Latvenergo, Latvia); Anna Mutule (Institute of Physical Energetics, Latvia); Aleksandrs Gora, Poland); Jacek Rabkowski (Warsaw University of Technology, Poland); Robertas Kersys (Kaunas University of Technology, Lithuania); Svetlana Beryozkina (American University of the Middle East, Kuwait); Angelo L'Abbate (RSE SpA, Italy); Muhammad M.A.S. Mahmoud (Independent Researcher, Egypt); Michael Negnevitsky (University of Tasmania, Australia) et al.

**TTS Smart Grids and Microgrids:** (5.1) Energy Management in Buildings; (5.2) SG for Energy Economy and Financial Management; (5.3) Intelligent Energy Measurement and Monitoring; (5.4) SG and Plug-In Vehicles; (5.5) Power Converters and Control for SG. **Chairperson:** Artjoms Obushevs (Zurich University of Applied Sciences, Switzerland). **Scientific Committee:** Jako Kilter (Tallinn University of Technology, Estonia); Angelo L'Abbate (RSE SpA, Italy); Antons Kutjuns, Aleksandrs Lvovs, Laila Zemite (RTU, Latvia); Viktorija Bobinaitė, Arturas Klementavicius (Lithuanian Energy Institute, Lithuania); Miguel Gonzalez (Zurich University of Applied Sciences, Switzerland) et al.

**TTG Information Technologies in Electrical and Power Engineering:** (6.1) Information Technologies in Electrical Engineering; (6.2) Information Technologies in Power Engineering; (6.3) Intellectual Transport Systems; (6.4) Electronics and ICT for Biology and Medicine; (6.5) Electronics and ICT for Sensor Networks; (6.6) Tools of Human-to-Machine and Machine-to-Machine Interaction. **Chairperson:** Mikhail Gorobetz (RTU, Latvia). **Scientific Committee:** Ojars Krumins (D& Corporation, Latvia); Sergii Denysiuk (Igor Sikorsky Kyiv Polytechnic Institute, Ukraine); Robertas Kersys (Kaunas University of Technology, Lithuania); Aleksandrs Gasparjans (Latvian Maritime Academy, Latvia); Ivars Alps, Jelena Caiko, Antons Patlins, Andrejs Potapovs (RTU, Latvia) et al.

TT7 Electrical and Power Engineering Education: (7.1) Methodology of Electrical and Power Engineering Education; (7.2) Tools of Electrical and Power Engineering Education: (7.3) Distance Education in Electrical and Power Engineering. Chairperson: Nadezhda Kunicina (RTU, Latvia). Scientific Committee: Dejan Blagojevic (College of applied technical sciences Nis, Serbia); Kinga Korniejenko (Cracow University of Technology, Poland); Shchasiana Arhun (Kharkiv National Automobile and Highway University, Ukraine); Yelena Chaiko, Igors Utesevs, Anastasija Ziravecka (RTU, Latvia); Hemlal Bhattarai (Royal University of Bhutan, Bhutan); Zoja Raud, Valery Vodovozov (Tallinn University of Technology, Estonia); Christos Manasis (Technological Educational Institute of Sterea Ellada, Greece); Ines Bula (University Education for Business and Technology, Kosovo); Ratko Ivković (University of Pristina, Serbia); Ivana Bilic (University of Split, Croatia).

#### About

#### **Important Info**

All accepted papers will be submitted for inclusion into IEEE Xplore (subject to meet IEEE scope/quality requirements) as well as to SCOPUS and TRwoS.

Best accepted papers will be recommended for publishing in IEEE IAS journals.

Best papers/reviewers/participants will be awarded.

Participation Fee (tentative) Paper 1 to 6 pages – 200...300EUR, 30EUR per each page >6, catering 150EUR, attending – free. Contacts

Postal: Organizational RTUCON2024, Committee of RTU, Faculty of Computer Science, Information Technology and Energy, Azenes street 12k1, Riga, LV-1048, Latvia. web: http://www.conference.rtu.lv/rtucon/

e-mail: power2024@conference.rtu.lv subject of e-mail: RTUCON2024

**Conference Venue and Weather Conditions** The venue is the new building of RTU's Faculty of Computer Science, Information Technology and Energy (Latvia, Riga, Azenes street 12k1). Riga, the capital of Latvia has a lot to offer both in terms of history, culture and social life. The climate of Riga is humid continental. Temperature in October is 7-10°C, precipitation – 75mm.



#### **Important Dates:**

2024-04-19 Deadline for drafts 2024-06-14 Notification of decision 2024-06-17 Availability of schedule 2024-09-06 Deadline for final papers 2024-09-06 Deadline for fee transfer 2024-09-09 Availability of program 2024-10-10...12 Conference event

#### For Authors

Main Rules: Working language – English only for papers and presentations, Presentation kind – lecture only, Presence kind – in person only, Pages (drafts) – 4 pages, Pages (final papers) – 4...10 pages, Text – IEEE conference format

(mostly 2 columns, Time New Roman, 10pt etc.).

## Links:

Submissions https://www.easychair.org/ conferences/?conf=rtucon2024 Template -

http://www.conference.rtu.lv/ rtuvcon/docs/

04 msw a4 format.doo IEEE Taxonomy (keywords) – https://www.ieee.org/content/dam/ ieee-org/ieee/web/org/pubs/ieeetaxonomy.pdf