



**Call for Papers**  
**11<sup>th</sup> International Conference**  
**Energy Efficiency in Motor Driven Systems**  
**EEMODS'19**  
**Tokyo (Japan)**  
**September 17-19, 2019**

Following the success of the previous EEMODS Conferences (Lisbon (1996), London (1999), Treviso (2002), Heidelberg (2005), Beijing (2007), Nantes (2009), Washington D.C. (2011), Rio de Janeiro (2013), Helsinki (2015), Rome (2017)) the **Japan Electrical Manufacturers' Association**, with the scientific and technical support of the **European Commission Joint Research Centre**, is organizing the

**11<sup>th</sup> International Conference on Energy Efficiency in Motor Driven Systems**  
**(EEMODS'19).**

The Conference will be held in **Tokyo (Japan) on September 17 - 19, 2019.**

Previous EEMODS events have been very successful in attracting distinguished and international presenters and attendees. The wide variety of stakeholders included professionals involved in manufacturing, marketing, and promotion of energy efficient motors and motor driven systems (pumps, compressors, fans, etc.), policy makers and researcher. Participants come from manufacturing, academia, research, utilities, and public policy.

EEMODS'19 will provide a forum to discuss and debate the latest developments in the impacts of electrical motor systems on energy and the environment, the energy efficiency policies and programmes, standards (including ISO 50.001) and programmes adopted and planned, and the technical and commercial advances made in the dissemination and penetration of energy-efficient motor systems.

The three-day conference will include plenary sessions where key representatives of governments and international organizations, manufacturers, program managers and experts will present their views and programmes to advance energy efficiency in motor systems, for example, through international co-operation on efficiency requirements. Parallel sessions on specific themes and topics will allow in-depth discussions among participants.

The conference is very international by nature, and aims to attract high quality and innovative papers and participants from every corner of the world.

To contribute to the success of the conference and to facilitate the development of new technologies, policies and strategies to increase energy efficiency, we **invite you** to participate in the conference and **to submit papers** on the below topics.

**Call for Paper Topics**

## **Technologies, Research and Innovation (including case studies)**

### **1. Electric Motors**

Life cycle costing, test methods and measurements, induction motors with emphasis on higher efficiency (technology and design), permanent magnet motors, DC brushless motors, motors with frequency inverters, motor repair, maintenance and operation, evaluation tools, 3D printing. Motor monitoring sensors for IoT systems and artificial intelligence/machine learning-based systems applied to electric motors in order to detect and prevent failures and save energy.

### **2. Emerging Motor Technologies**

Switched reluctance, permanent magnet, electronically commutated and other line-start permanent magnet motors, Super-Premium Motor Technologies (e.g. synchronous reluctance, amorphous metals), new motor designs.

### **3. Power Electronics and Drives**

New solutions in drives in relation to energy efficiency, measurement of drive efficiency, successful application of drives, advanced integrated motor and drives, application-oriented optimization of drives (motion control tasks), power quality issues. Emerging Motor-driven system and Drive Technologies. Wide bandgap power electronics, advanced motor-drive packaged systems, advanced fluid system packages. Motor driven unit related harmonics.

### **4. Pump Systems**

Life cycle costing, energy efficiency improvements in pumps, pumps classification, maintenance and operation of pumps and pumping systems, on-site assessment of pump efficiency, efficiency test methods, energy-saving tools, market assessments, system design and optimization, pumps energy-saving programmes, efficient methods to control the flow and pumps working as turbines. This topic 4 covers industrial, water supply and treatment and irrigation pumps, and water pumps in buildings.

### **5. Compressed Air Systems**

Maintenance and operation of compressed air systems and compressors, advanced compressor design to optimize efficiency, energy efficiency improvements in air compressors and controls, life cycle costing, compressor energy-saving programmes, energy-saving tools, market assessments, system design and optimization, air compressor/compressor system efficiency test methods, efficient methods to control flow/pressure, methods to detect leak, efficiency assessment regarding temperature, pressures, leaks, compressor types, coupling etc..

### **6. Fans / Exhauster Systems**

Life cycle costing, energy efficiency improvements, maintenance operation, efficiency test standards, energy-saving tools, market assessments, efficient methods to control flow, system design and optimization, drive belts, energy saving programmes, classification and labelling schemes. This topic covers industrial and buildings fans, ventilation or exhaust systems.

### **7. Refrigeration Systems**

Maintenance and operation, life cycle costing, new refrigerants, system optimization, load management, VSD, efficiency testing, energy-saving potentials, industrial applications, compressor design, heat recovery, cycle optimization, software tools. This topic covers display cabinets and cold storage rooms

### **8. Mechanical Power Transmission**

Coupling between electrical motors and mechanical machines (pumps, compressors, fans, exhaust fans, etc.); efficiency of different couplings; flat belts, V belts, timing belts, gearboxes/gearings, pulleys, conveyor belts.

#### **9. Motors in Household Appliances and HVAC**

Improved and innovative motors; optimized designs, motor control, system optimization, energy labelling, databases, energy consumption, reliability. This topic covers motors for residential and commercial equipment (refrigerators, washing machines, air conditioners, etc).

#### **10. Motors and Drives for Transportation and other Applications**

Electric and hybrid cars and scooters, mixers, lifts, escalators, elevators, trains, light rail, vessels, aerospace and other transport systems using electric motors and drives.

### **Policies, Programmes Regulation and International Standards**

#### **12. Industrial Management Policies**

Energy management, role of energy manager, energy management standards (ISO 50001), contract energy management, winning company approval for energy efficiency projects, staff, training and qualification, M&V, ESCOs.

#### **13. Motor System Audit and Programmes**

Motor challenge programmes, utilities programmes for motor and motor systems, audit schemes, standards (ISO 50002), advances in energy measurement techniques, software tools for auditors, monitoring and verification, audit case studies, national audit programmes.

#### **14. Policies, Programmes and Financing**

Analysis of motor system energy use & greenhouse gas emissions and estimates or scenarios of reduction potentials; life-cycle costing; testing procedures, efficiency classes, marking schemes, and labels; comprehensive market transformation strategies & programmes; minimum energy performance standards; voluntary agreements; procurement programmes; promotion of efficient systems via ESCOs, incentive programmes, financing facilities, carbon markets, white certificates, and other mechanisms; information and training; motor promotion campaigns, motor databases, motor rebate programmes, motors and VSD promotion campaigns and rebates, motor and VSD promotion policies. Motor user behavior and investment decisions. This topic includes also policy and programme evaluation. Policies and programmes for e-vehicles and related charging infrastructure.

#### **15. Global Test Standards**

Harmonization of global test standards for motor efficiency requirements, for motor system components and for motor systems; effective comparison of existing standards; routes to improve definitions and the applicability of standards into regulations and for market surveillance.

#### **16. System Efficiency**

Methods and policies for system efficiency (extended products policies for pump, compressor, fan, blower and mining equipment, lift equipment systems); comparison among the different systems and methods; special focus on measurement methods accuracy and reproducibility.

#### **17. Utility Programmes**

Utilities DSM programmes including incentives and rebates; program design and evaluation; market transformation programmes: white certificates. This topic includes also policy and program evaluation.

**18. Market surveillance and enforcement mechanisms**

Products sold as separate items and embedded in machinery shall perform as advertised or labelled and shall meet current MEPS. Means for ensuring compliance and the consequences of non-compliance, both for mandatory programmes like MEPS, but also compliance with voluntary market transformation programmes such as Energy Star.

### **Instructions for Authors**

Authors interested in submitting papers for oral presentation at the conference are kindly requested to submit a one-page abstract **in English** which should not exceed 400 words, including the relevant topic number (1-18 in the list of topics).

The papers presented are to be technical and scientific in nature. All papers shall address new and original developments, in particular on the session on technologies only papers focusing on new advanced solutions will be considered. In addition papers shall not be of commercial nature. Both the written and oral presentations are to be free of commercialism.

Manuscripts should be as short as the nature of the subject will permit without detracting from interest or omitting vital information. Papers will have a maximum length of 14 pages.

Each paper should start with an abstract. It should be one paragraph, no more than 400 words so that it can be printed in the conference records or used for advance publicity. An abstract should be a concise clear presentation of the paper. It should convey to a reader the purpose of the paper and the results obtained without a great deal of intermediate detail. The abstract should summarize the contents of the paper, indicating its objective, starting point and original contribution.

Abstracts will be selected by the International Program Committee. Selected authors should submit their paper in Word format, using the EEMODS paper template. The papers will be peer reviewed, and comments will be sent back to authors.

Final papers will be accepted only when the peer reviewers' comments have been satisfactorily addressed. The final paper in electronic form will be included in the conference proceedings. The conference Proceedings will be published and the papers will be indexed in major scientific indexing systems.

Confirmation of abstract reception will be mailed back.

Abstracts will be selected by the scientific committee based on the following criteria:

- Relevance to the focus of the conference
- Clarity of thought and presentation
- Presentation of new material
- Likelihood of stimulating a debate and paradigm shift.

**Instructions for Authors for abstract submission procedure:**

1. Access the EEMODS'19 conference page in EasyChair  
<https://easychair.org/conferences/?conf=eemods19>
2. Login to Easy Chair (<https://easychair.org/conferences/?conf=eemods19>) or register first if you don't have an account.
3. Insert the Abstract text into the field provided by EasyChair, without name or affiliation, include topic (from the list above) and keywords in the required field. Please do not attach any document!

### Conference Calendar:

**February 22, 2019:** Abstracts are due to the conference secretariat (via EasyChair)

**March 8, 2019:** Authors will be notified as to whether their abstracts have been accepted or rejected. Instructions for the preparation of final papers will be sent with the notice of acceptance.

**April 26, 2019:** Authors have to submit draft papers

**June 17, 2019:** Authors will receive comments to draft papers

**July 31, 2019:** Final papers have to be ready and submitted for inclusion in the conference proceedings.

**September 17-19, 2019:** EEMODS'19 takes place in Tokyo

### Contacts:

Website: <https://eemods19.org/index.html>

email: [secretariat@eemods19.org](mailto:secretariat@eemods19.org)

(to be used for registration and other logistic information)

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### Venue

Conference will be held in **Tokyo**, capital of **Japan**, one of the most beautiful cities in the world and superb place to receive high quality events. The city can be easily reached by planes or high speed trains

The Conference will take place in the sola city Conference Center, 2F Ochanomizu sola city, 4-6 kandasurugadai, Chiyoda-ku, Tokyo, JAPAN

The Conference venue is located in a strategic district of the city featuring a metro and train station with different accommodation solutions.

Hotels options and local transportation information are published in the conference website.

## **EEMODS'19 International Programme Committee**

1. Emmanuel Agamloh, Advanced Energy/NCSU, USA
2. Kirk Anderson, NEMA, US
3. Pierre Angers, Hydro-Quebec IREQ, Canada
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5. Paolo Bertoldi, European Commission, EU
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