

4th International Workshop on OPEN SOURCE MODELLING AND SIMULATION OF ENERGY SYSTEMS

March 23-25, Karlsruhe, Germany

2026 @ KIT

Organizers



Scope

Simulation is an essential tool to manage the complexity of modern energy systems and to define effective solutions for planning, designing and operating energy systems. Energy systems are expected to include electricity, gas, and heat networks - to maximize the use of all available forms of energy - and to include storage capacity. The distributed nature of new resources (generation and storage) and the participation of loads in energy management require fast, reactive control and protection. In this context, it is expected that the monitoring and control of modern energy systems will be characterized by the distribution of functions. At the same time, a large use of communication media is envisioned.

The interactions between continuous dynamics and discrete events are becoming more relevant due to the increasing number of controllable devices (e.g., power electronic converters in power grids) and the use of networked control systems. In addition, power systems are increasingly driven by market competition, and the impact on system operation should also be considered. In this context, several research groups have developed modelling and simulation solutions to address these challenges, and they have disseminated their software using an open-source approach. The workshop will address all aspects related to the use and development of open source tools for power and energy systems modelling and simulation. The main objective of the workshop is to foster discussion on these topics among experts from academia, industry and utilities.

The main topics on which the workshop is intended to provide a qualified forum for contributions to the advancement of knowledge include those listed below.

Submission Guidelines

Authors must adhere to the IEEE conference written paper format (including paper title, authors and affiliations, figures, and references) and they must submit a full paper for review (up to 6 pages) before the due submission deadlines (see dates above). These are submitted through the EasyChair submission system (see link above). IEEE is very strict about the requirements for PDF files for inclusion in the [IEEE Xplore® Digital Library](#). We strongly recommend using the set of [templates in MS Word and LaTeX format provided by IEEE](#). A4 page size should be used. Please use them to create your paper, but don't modify the style or the format under any circumstances.

Submit only original work, not previously published or copyrighted. Prospective authors are expected to submit only their original works. The conference will be using the CrossCheck automated screening system to help verify the originality of papers. Submitted works may be compared to over 20 million articles in databases worldwide. Papers that violate IEEE's publication principles may be summarily rejected. If the violation is deemed severe, then disciplinary actions may also be taken by IEEE. For further details please have a look at the [Conference Authors @ IEEE Author Center](#).

Accepted and presented papers will be copyrighted to IEEE and published in conference proceedings, which will be eligible for inclusion in the [IEEE Xplore® Digital Library](#), once it meets the requirements of an IEEE quality review.

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... will be made available as soon as possible.

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- IEEE Industrial Electronics Society (IES)
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- IEEE IES Technical Committee on Smart Grids (TC-SG)
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Topics

- Electromagnetic transient simulation
- Dynamic phasor simulation
- Electromechanical transient simulation
- Load flow-based energy systems analysis
- Real-time simulation
- Co-simulation of energy system
- Equation-based modelling
- Data & AI/ML-based modelling
- Building simulation
- Gas and thermal grid simulation
- Open models & metamodeling
- Visualization & data/results representation
- Innovate energy system applications
- Data space applications
- Open energy architectures & frameworks

Templates

- [IEEE Conference Paper Template \(MS Word and LaTeX format\)](#)
- [IEEE Conference Paper Template \(Overleaf\)](#)
- [Tutorial Proposal Template \(MS Word\)](#)

Final Submission Guidelines

Submission Requirements

1. To have your paper published in the IEEE Xplore digital library, it is required that you present your paper. If you do not make your presentation for any reason, your paper will be excluded from Xplore.
2. Your full paper in PDF format must be submitted no later than February 27, 2026, via [EasyChair for OSMSES 2026](#) and it must comply with the specifications outlined here on the website. Due to publication deadlines, no time extensions will be granted.
3. As you prepare your final submission, make sure to carefully implement comments for improvements as suggested by reviewers. The Technical Program Committee cannot clarify further and you do not need to explicitly respond to them.
4. Please ensure that the final version of the paper clearly shows the open source/data aspect of the work as requested in the related Call for Papers on the conference website. Link(s) to open source/data should be included in the paper.
5. Your final paper will be submitted to the IEEE CrossCheck system for plagiarism checking.

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Registration Payment

Registration for the conference is required for you to present your work. To guarantee inclusion in the conference program one author must be registered per accepted paper by March 8, 2026.

An author can include an additional paper registration (i.e., max. two papers can be registered per author).

Presentation Instructions

Please address the following points when preparing your presentation:

1. For each paper in the program, a slot of around 17 minutes is foreseen. Therefore, the paper presentation should be up to around 14 minutes followed by 3 minutes discussion. Please prepare your presentation accordingly.
2. The form of the presentation is left free. We suggest you include the title of the paper, the authors, and a mention of OSMSES 2026 in the opening presentation slides.
3. You can use PowerPoint or any of the LaTeX packages for the presentation slides.
4. Please upload your presentation to the presentation PC before the session. This will enable swift handover.
5. Please make sure to keep the schedule for your presentation (incl. questions).

Event Location

The OSMSES 2026 will be held in the beautiful city of Karlsruhe, in Baden-Württemberg, Germany. Karlsruhe is at the core of Europe with a short distance from the main airports and train stations.

The conference will be held at Adolf-Würth-Building at Campus South of the Karlsruhe Institute of Technology.

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Building 11.30
Engelbert-Arnold-Straße 2
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