

**CALL FOR PAPERS**

EUROGRESS  
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# FLUID POWER: ENABLING FUTURE TECHNOLOGIES

15TH INTERNATIONAL  
FLUID POWER CONFERENCE  
AACHEN

**15iFK**

# FLUID POWER:

## Enabling Future Technologies

### INVITATION

The 15<sup>th</sup> International Conference on Fluid Power (IFK) will be held in Aachen from March 9<sup>th</sup> through 11<sup>th</sup>, 2026 as an in-person event. It is one of the world's largest scientific conferences on fluid power and offers users, manufacturers, and scientists an international forum to exchange experiences in the area of hydraulic and pneumatic drives and controls.

The symposium, on the first day, provides a framework for presentations and demonstrations of fundamentals. The following two days of the conference cover a wide variety of application and technology orientated topics in three parallel sessions. The conference is followed by a two-day excursion to companies and places of technical interest.

Always being an event connecting people and encouraging scientific exchange, the 15<sup>th</sup> IFK will be held as a physical event in the Eurogress Aachen convention center in 2026. This will be accompanied by an exhibition at which various manufacturers will present their latest innovations.

Fluid power is due to its advantages the central drive and automation technology in many mobile and industrial applications. Although the energy transition is leading to a change in prime movers, fluid power is still indispensable as drive technology. With its key advantages like robustness and power density in addition to an increased focus on sustainability, digitalization and AI, fluid power can enable future key technologies. Thus it supports the global net-zero emissions target and the transformation of our society.

This leads to the 15<sup>th</sup> IFK motto:

"Fluid Power: Enabling Future Technologies"

### CONFERENCE TOPICS

#### EFFICIENT COMPONENTS

- Novel Components
- Component Efficiency & Sustainability
- Noise and Vibration
- Pumps & Motors
- Valves
- Actuators
- Accumulators
- Peripheral Devices

#### SYSTEMS & ENERGY MANAGEMENT

- Electrification & Electro Hydraulics
- Hybrid Drives
- Smart Integration
- Reliability, Robustness & Safety
- Regeneration & Recuperation
- Digital Hydraulics
- Storage Concepts
- HiL-, SiL-, MiL- Tests

#### TRIBOLOGY & FLUIDS

- Sustainable, Synthetic & Tailor-Made Fluids
- Surface Modifications: Materials, Coatings & Structures
- Lead free Materials
- PFAS free Components
- Fluid-Material Compatibility, Mixture Problems
- Aging & Prediction
- Sealing Technology
- Water Hydraulics
- Cavitation

#### PNEUMATICS

- Sustainable Systems
- Automation & Control Design
- Smart Devices

#### MOBILE APPLICATIONS

- Mobile Hydraulics
- Aerospace, Space
- Construction, Mining, Agriculture, Automotive
- Smart Heavy-Duty Machines
- Assistance Systems and Automation
- Collaboration and Communication of Machines

#### DIGITAL TRANSFORMATION

- Industry 4.0
- Services and Digital Functionalities, UI/ UX
- Smart/Soft-Sensors and Data Generation
- Asset Administration Shell
- Intelligent Data Analysis
- New ICTs (Edge & Cloud, Embedded Systems, 5G)
- Networks

#### ARTIFICIAL INTELLIGENCE

- Learning Control Algorithms
- Automated Engineering
- Optimization Algorithms across Product Lifecycle
- Condition Monitoring
- Accelerated Simulation

#### NET-ZERO IN HYDRAULICS

- Methods and Concepts
- Energy Monitoring
- Cross Industry CO<sub>2</sub> Balancing
- Circular Economy
- Sustainable Processes and Manufacturing

#### INTELLIGENT CONTROLS

- Control Strategies
- AI-driven Control
- Smart Energy Management
- Testing

#### FUTURE TECHNOLOGIES & SPECIAL APPLICATIONS

- Renewable Energies
- Offshore Hydraulics, Wind Power
- Hydrogen Handling
- Additive Manufacturing
- Medical and Welfare Equipment
- Robotics
- Micro/Nano Machines
- Novel Applications

#### INDUSTRIAL APPLICATIONS

- Manufacturing Machines
- Presses, Automation
- Injection Molding

## INFORMATION

The conference topics serve as a guideline with regard to contents. Unconventional contributions are explicitly welcomed!

Authors interested in contributing a paper to the conference are requested to upload an abstract in English to <https://ifk-aachen.de> at the latest by May 4<sup>th</sup>, 2025. Please use the template on our website.

## SCIENTIFIC REVIEW PROCESS

The IFK offers the possibility of a review process for the submitted papers. Authors interested in a scientific review are requested to specify this in the abstract. All papers with review will be published by River Publishers in a symposium proceedings volume with individual paper DOIs. These papers will also be listed in Web of Science and Scopus. Papers without review will be published in a separate conference proceedings volume, also with individual DOIs. Furthermore, all published papers will be available via open access.

## REQUIRED INFORMATION

- Preliminary title of the paper with reference to a conference topic
- Request for participation on the review-process
- Name, address, e-mail, phone and fax of the authors and organisation

## IMPORTANT DETAILS

- The abstract must clearly depict the technical innovation. Abstracts should not exceed 700 words
- Papers must be written in English

## DETAILS REGARDING THE PRESENTATION

- Presentations should not exceed 15 minutes followed by a 5-minute discussion
- The conference language of the IFK is English. Presentations and slides need to be composed in English

An exhibition is part of the conference. Those interested in taking part are asked to request a copy of the exhibition guidelines at the address below.

Also, we are looking for speakers introducing the sessions with an overview presentation. If you are interested in giving a 30-minute presentation to a specific conference topic, feel free to contact us under [papers@ifk-aachen.de](mailto:papers@ifk-aachen.de).

## DATES

**04** Deadline for  
MAY Abstract Submission

**09** Notification of  
JUL Acceptance

**12** Draft Paper  
OCT Submission

**25** Final Manuscript  
JAN Deadline



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