

CALL FOR PAPERS

EUROGRESS
AACHEN
-
21.-23.03.2022

FLUID POWER: DIGITAL, RELIABLE, SUSTAINABLE

13TH INTERNATIONAL
FLUID POWER CONFERENCE
AACHEN

13iFK

FLUID POWER: DIGITAL, RELIABLE, SUSTAINABLE

INVITATION

The 13th International Conference on Fluid Power (IFK) will be held in Aachen from March 21 through 23, 2022 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 control systems.

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 two or 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 13th IFK will be held as a physical event in Eurogress Aachen convention center in 2022. If the international situation demands for a virtual conference or virtual presentations, a timely announcement will be published.

Fluid power provides reliable solutions for drive and automation technology in mobile and industrial applications. Due to the global awareness for the limited amount of resources and its' sustainable usage, the fluid power industry faces new and increasing challenges. In times of global phenomena like „Ecological footprints“, „Fridays for future“ and „Generation Z“, sustainability in fluid power needs to be addressed and challenges need to be discussed. These challenges are reflected by the motto of the 13th IFK:

“Fluid Power: Digital, Reliable, Sustainable”

CONFERENCE TOPICS

SUSTAINABILITY ASSESSMENT

- Methods & Concepts
- Sustainable Systems and Components
- Synthetic & Sustainable Fluids

DIGITAL TRANSFORMATION

- Cyber-physical Systems
- Interoperability
- Services and Digital Functionalities
- Sensors and Data Generation
- Intelligent Data Analysis (CM, PdM)
- Learning Control Algorithms
- Automated Engineering and Optimization Algorithms across the Product Lifecycle
- New ICTs (Embedded Systems, 5G, Edge & Cloud)
- UI/UX

EFFICIENT COMPONENTS

- Pumps & Motors
- Valves
- Actuators
- Accumulators
- Peripheral Devices
- Novel Components
- Design Methods
- Smart Field Devices
- Smart Sensors
- Noise Emission

TRIBOLOGY AND FLUIDS

- Synthetic & Tailor-Made-Fluids
- Fluid-Material Compatibility, Mixture Problems
- Aging & Prediction
- Environmentally Friendly Fluids
- Tribology & Rheology
- Surface Modifications: Materials, Coatings & Structures
- Lead Free Materials
- Sealing Technology
- Cavitation

SYSTEMS

- Networks
- Analysis & Control
- Digital Hydraulics
- Reliability, Robustness & Safety
- Smart Integration
- HiL-, SiL-, MiL-Tests
- EHA
- Electrification

MANUFACTURING

- Additive Manufacturing
- New Materials

PNEUMATICS

- Sustainable Systems
- Automation & Control Design
- Smart Devices

ENERGY MANAGEMENT

- Hybrids Drives
- Regeneration & Recuperation
- Storage Concepts
- Control Strategies
- Renewables
- Hydrogen Technology

MOBILE APPLICATIONS

- Mobile Hydraulics
- Smart Heavy Duty Machinery
- Electrification
- Aerospace
- Automotive
- Assistance Systems and Automation
- Collaboration and Communication of Machines

INDUSTRIAL APPLICATIONS

- Material Extraction
- Presses
- Moulding
- Testing

SPECIAL APPLICATIONS

- Medical
- Robotics
- Offshore Hydraulics
- Hydrogen Handling

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 **www.ifk2022.com** at the latest by April 30th, 2021: Please use the template on our website. Additionally, we encourage every author to submit an optional two-minute short video pitch presenting the motivation, approach and the results of the submissions.

SCIENTIFIC REVIEW PROCESS

The IFK offers the possibility of a review process for all papers submitted. Authors interested in a scientific review are requested to specify this in the abstract. The best 25 papers will be elected for publication in the journal 'Chemical Engineering & Technology' by Wiley, listed in web of science. Furthermore, all authors have the opportunity of an open-access publication. Papers declined by the reviewers will be published neither in the conference nor in the conference proceedings.

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 800 words
- Papers must be written in English

DETAILS REGARDING THE PRESENTATION

- Presentations should not exceed 15 minutes
- 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@ifk2022.com.

DATES

30 Deadline for
APR Abstract Submission

02 Notification of
JUL Acceptance

15 Draft Paper
OCT Submission

28 Final Manuscript
JAN Deadline



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