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14th International Fluid Power Conference (14. IFK)

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Description:

International Fluid Power Conference Proceedings contain the peer-reviewed and non-peer-reviewed articles from the contributions presented during the International Fluid Power Conference (IFK) taking place from March 19 – 21, 2024. The IFK was organized by the Chair of Fluid-Mechatronic Systems, Technische Universität Dresden, Germany, the Mechanical Engineering Industry Association (VDMA), the Society for Knowledge and Technology Transfer (GWT) as well as the Dresdner Verein zur Förderung der Fluidtechnik e.V. It focuses on the newest developments in fluid-mechatronic systems.

IFK 2024 took place under the motto: “Fluid Power: Sustainable Productivity”. With this motto the organizers addressed two important aspects, which are already significantly shaping the direction of the fuid power industry and will continue to do so in the future. On the one side, sustainability is a key enabler for today’s technology, whereby restrictions from politics and demands of society for sustainable products play important roles. On the other side, productivity plays a key role, as fast and better production helps to claim market shares and reduces production costs in the face of rising electricity prices. In these proceedings some insights are offered regarding new technologies and methodologies in fluid power.

IFK 2024 was aimed to bring together international researchers, academics and experts from industry in a single platform to exchange the latest innovations and ideas on sustainable productivity and related topics on fluid-mechatronic systems.

This book presents technological developments in fluid-mechatronic systems. It covers topics from component developments like pumps or valves towards system applications for mobile, industrial or pneumatic applications. Here material developments, layouts as well as software integration is discussed. With benefits that emerge from digitalization fluid mechatronic products become more powerful.

Keywords: Hydraulics, Pneumatics, mobile applications, industrial applications, hydraulic components, digitalization, simulation, efficiency, sustainability, control systems