



The 25th International Conference on Hydraulics and Pneumatics

Conference Programme

Prague, Czech Republic
8-9 June 2022,

organized by

VŠB-Technical University of Ostrava
Faculty of Mechanical Engineering
Department of Automatic Control and Instrumentation

Czech Mechanical Engineering Society
Section Czech Association for Hydraulics and Pneumatics

<http://ichp.vsb.cz>



The 25th International Conference on Hydraulics and Pneumatics

Section programme and session chairmen

9:15-10:30

Section **Hydraulic components and systems- session 1**

Chairmen: **prof. Ing. Petr Noskievič, CSc.**

11:00-12:20

Section **Modelling and simulation of fluid power systems**

Section **Pneumatic components and systems**

Chairmen: **Dr. Ing. Ursula Warzyńska**

13:30-15:00

Section **Hydraulic components and systems- session 2**

Chairmen: **doc. Ing. Petr Heřmánek, Ph.D.**

15:30-17:00

Section **Application of hydraulic drives in machines and mobile equipments**

Chairmen: **prof. Ing. Petr Noskievič, CSc.**

Conference venue:

Hall No 319

Building of the Czech Mechanical Engineering Society (Česká strojnická společnost)

Novotného lávka 5

110 00 Praha 1

Czech Republic

Programme

8th June 2022, Wednesday	
18:00-19:00	Registration at Klub Lávka, Novotného lávka 1, Praha 1
19:00-21:00	Welcome party and conference dinner at Klub Lávka, Novotného lávka 1, Praha 1

	9th June 2022, Thursday	
8:00 - 9:00	Registration, Česká strojnická společnost, Novotného Lávk 5, Praha 1	
9:00 – 9:10	Opening of the 25th ICHP 2022 – Welcome address	
9:10-10:10	Section Hydraulic components and systems- session 1	
	Chairmen: prof. Ing. Petr Noskievič, CSc.	
	<i>Rudolf Scheidl and Daniel Wöss</i>	
	A combined multi-pressure switched inertance hydraulic control concept of a differential cylinder	
	<i>Swarnava Mukherjee, Shanmukh Sarode, Chinmayee Ashish Mujumdar, Lizhi Shang and Andrea Vacca</i>	
	Effect of dynamic coupling on the performance of piston pump lubricating interfaces	
	<i>Juraj Bittner and Miroslav Chmatil</i>	
	Hydraulic pressure amplifiers integrated into the hydraulic linear actuators	
10:10-10:30	Presentation of the Fluid Power Company Trelleborg	
10:30-11:00	Coffee break	
11:00-12:00	Section Modelling and simulation of fluid power systems	
	Chairmen: Dr. Ing. Ursula Warzyńska	
	<i>Petr Noskievič and Dominik Walica</i>	
	Development and Application of the Digital Twin of the Hydraulic Control Valve	
	<i>Marian Bojko, Sylva Drábková, Lukáš Hertl, Rostislav Zapletal and Josef Veselý</i>	
	The Problem of Extrusion of High-Viscosity Non-Newtonian Substances in a Twin-Screw Pump	
	Section Pneumatic components and systems	
	<i>Filip Dýrr, Lukáš Dvořák, Kamil Fojtásek, Petr Brzezina, Lumír Hružík and Adam Bureček</i>	
	Experimental Analysis of Fluidic Muscle	
12:00-12:20	Presentation of the Fluid Power Company Poclain	
12:20-13:30	Lunch	
13:30-14:30	Section Hydraulic components and systems- session 2	
	Chairmen: doc. Ing. Petr Heřmánek, Ph.D.	
	<i>Tomasz Siwulski, Urszula Warzyńska, Katarzyna Panowska and Mateusz Wolter</i>	
	Improving the efficiency of a rock breaker hydraulic working system by changing the structure of a hydraulic system	
	<i>Jakub Milan Hradecký</i>	
	Pressure Intensifier Based on the Concept of a Rotary Flow Divider	
	<i>Jean-Charles Maré and Paulina Iljaszewicz</i>	
	Representation of Power Flows for the Conceptual Design of Hydromechanical Drives	
14:30-14:50	Presentation of the Fluid Power Company Jihostroj	
14:50-15:20	Coffee break	
15:20-16:20	Section Application of hydraulic drives in machines and mobile equipments	
	Chairmen: prof. Ing. Petr Noskievič, CSc.	
	<i>Josef Nevrlý, Martin Fichta, Miroslav Jurik, Zdenek Nemec, Petr Prochazka, Daniel Koutny and Radovan Petrovic</i>	
	New Systems of Recovery and Electric-Hydraulic Battery Mobile Drive	
	<i>Ufuk Alemdaroglu, Zeynep Guler, Fikret Dalkiran and Garip Genc</i>	
	An Industrial Application: Improving Performance of an Old Forging Press	
	<i>Michal Jůza and Petr Heřmánek</i>	
	Study of the Energy Efficiency of the UDS 214 Excavator Hydraulic System	
16:20-16:40	Presentation of the Fluid Power Company Hydac, OCHI Inženýring	
16:40-17:00	Closing of the ICHP 2022	
17:15	Guided sightseeing walk through historical Prague – for free for registered participants, registration is possible by the conference registration	

