



7th Workshop on Innovative Engineering for Fluid Power and Electrification

Venue: Federal University of Santa Catarina, Mechanical Engineering Department, Florianópolis, Brazil

November 21 and 22, 2024

laship.ufsc.br/site/wiefp2024/

Organization



Supporter



CENTRO DE
PESQUISA E INOVAÇÃO
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PROGRAM

Thursday, Nov 21

08:30:00	-	08:40:00	Welcome			
08:40:00	-	10:10:00	Session 1 - Aviation and Aerospace Systems - Chairperson: Marcos Paulo Nostrani			
08:40:00	-	09:00:00	Digital Hydraulic Solutions for Aviation and their Size	Tulio Burgos	Master Student	LASHIP/UFSC
09:00:00	-	09:20:00	Force Control System Applied in Test Bench for Digital Hydraulic Actuators	Vanderlei Marafon	Master Student	LASHIP/UFSC
09:20:00	-	09:40:00	Modelling and Analysis of a Bootstrap Reservoir	Henrique/Pedro	Undergraduate Student	LASHIP/UFSC
09:40:00	-	10:00:00	Development of new Brazilian Thrust Vector Control TVC Applied to Controlled Sounding Rockets and Microsatellite Launcher	Euler G. Barbosa	Senior Technologist	CTA/IAE
10:00:00	-	10:10:00	Discussion			
10:10:00	-	10:30:00	Coffee Break			
10:30:00	-	12:20:00	Session 2 - Hydrogen and Electrification - Chairperson: Vinicius Vigolo			
10:30:00	-	10:50:00	Challenges with Advanced Materials in Hydrogen-Powered and Electrified Hydraulic Systems	Svjjetlana Stekovic	Professor	KMAT/LIU
10:50:00	-	11:10:00	Hydrogen Fuel Cell Aircraft for the Nordic Market	Christian Svensson	PHD Student	CHALMERS
11:10:00	-	11:30:00	Porous Electrode Modelling for Hydrogen Applications	Paulo V. de Faria	PHD Student	LabCel/UFSC
11:30:00	-	11:50:00	The Role of Engineering Design for Sustainability and Resilience	Anna Öhrwall Rönnbäck	Professor	LTU
11:50:00	-	12:10:00	Hydraulic Features in Brazilian Agricultural Applications	Sávio Alencar	Design Engineer	AGCO
12:10:00	-	12:20:00	Discussion			
12:20:00	-	14:00:00	Lunch Interval			
14:00:00	-	15:10:00	Session 3 - Pumps - Chairperson: Petter Krus			
14:00:00	-	14:20:00	Challenges for Multi-Quadrant Hydraulic Piston Machines	Thomas Heeger	PHD Student	FLUMES/LIU
14:20:00	-	14:40:00	The Beauty of Multiple Pumps	Samuel Kärmel	Postdoc	FLUMES/LIU
14:40:00	-	15:00:00	New integrated valves solution for fan drive application	Paulo L. Teixeira	Senior Product Engineer	BOSCH/Rexroth
15:00:00	-	15:10:00	Discussion			
15:10:00	-	15:30:00	Coffee Break			
15:30:00	-	16:40:00	Session 4 - Hydraulic and Pneumatic Systems - Chairperson: Samuel Kärmel			
15:30:00	-	15:50:00	Real-Time Monitoring and Optimization of Pneumatic Drives	Vinicius Vigolo	PHD Student	LASHIP/UFSC
15:50:00	-	16:10:00	Exploring the Development of a Digital Hydrostatic Transmission within the Context of Frugal Mechatronic Design	Ruben D. S. Botoafos	PHD Student	LHW/UFSC
16:10:00	-	16:30:00	Using AI for Fluid Power System Generation	Petter Krus	Professor	FLUMES/LIU
16:30:00	-	16:40:00	Discussion			
16:40:00	-	16:50:00	Event Closing			