International Conference FT 2017
Fluid Power 2017

Conference Programme

Congress Centre Habakuk
Conference programme:

Thursday, 14th September 2017 - Hall Mlinařík

08:00  Arrival and Registration
09:00  Opening ceremony
09:30  OPENING SESSION - Invited lectures
11:30  Coffee break
12:00  Session I
13:00 – 14:30  Main break - Lunch
14:30  Session II
15:30  Coffee break
16:00  Session III
17:00  Round table – discussion
08:00 – 18:00  Poster session, Exhibition
18:00  Social evening

Friday, 15th September 2017 - Hall Mlinařík

08:00  Registration, information
09:00  Session IV
10:15  Coffee break
10:45  Session V
11:45  Coffee break
12:15  Session VI
08:00 – 14:00  Poster session, Exhibition

all papers will be presented and printed in English language
Opening Session – Invited Lectures
Thursday, 14.9.2017 | 9:30 – 11:30 | Hall Mlinařík

Fluid systems and cyberphysical systems - some thoughts on a symbiotic relationship
Rudolf Scheidl
Johannes Kepler University, Linz, Austria

Digital pneumatics
App-driven pneumatics for Industry 4.0
Markus Miklas
Festo Ges.m.b.H. Vienna, Austria

Fluid power drives in robotic systems
Željko Šitum
Faculty of Mechanical Engineering and Naval Architecture, Zagreb, Croatia
Session I:
IoT Technologies and Signals
Thursday, 14.9.2017 | 12:00 – 13:00 | Hall Mlinařik

Voice of the Machine -
Parker’s complete Internet of Things (IoT) platform
Igor Magel, Miha Šteger
Parker Hannifin Ges.m.b.H., Wiener Neustadt, Austria

With HYDAC on the way to Industrie 4.0
Industrie 4.0 based predictive maintenance
Dejan Glavač
Hydac d.o.o., Slovenia

Global Analysis of an RC-Filter for a Switched Hydraulic Drive
Evgeny Lukachev, Rudolf Scheidl
Johannes Kepler University, Linz, Austria
Session II: Control Technologies
Thursday, 14.9.2017 | 14:30 – 15:30 | Hall Mlinařik

Precise force control for hydraulic and pneumatic press system
Juraj Benič, Nikola Rajčić, Željko Šitum
Faculty of Mechanical Engineering and Naval Architecture, Zagreb, Croatia

Nonlinear position control of electrohydraulic servo systems
Edvard Detiček, Mitja Kastrevc
University of Maribor, Slovenia

Modern control system for servo hydraulic linear drive
Matevž Štefane¹, Darko Lovrec²
¹La&Co d.o.o., Maribor, Slovenia, ²University of Maribor, Slovenia

Impact of hydraulic network on operation of linear servo drive
Tadej Jurgec, Vito Tič
University of Maribor, Slovenia

FT2017
A selection of the latest specifications and performance requirements for environmentally considerate hydraulic fluids
Martin Ruch, Patrick Laemmle
Panolin International Inc, Madetswil, Switzerland

Application of hydraulic and gear oils in the food processing industry
Mitar Jocanović¹, Velibor Karanović¹, Vito Tič², Marko Orošnjak¹, Dragan Selinić³
¹University of Novi Sad, Serbia, ²University of Maribor, Slovenia, ³OLMA, Serbia

Inspection of technical cleanliness with extraction units
Detlef Meurer¹, Amela Mrak²
¹Hydac Filter Systems GmbH, Sulzbach/Saar, Germany, ²Hydac d.o.o, Slovenia

MPC-Test: An introduction and examples of test results
Manja Moder, Urška Cafuta
Petrol d.d., Ljubljana, Slovenia

Hydraulic pump pulsation using ionic liquid (poster)
Bernhard Manhartsgruber¹, Vito Tič²
¹Johannes Kepler University, Linz, Austria, ²University of Maribor, Slovenia

Round Table – Discussion
Industrial Internet of Things and Fluid Power
Thursday, 14.9.2017 | 17:00 | Hall Mlinařík

Impact of IoT on Fluid Power Systems:
How are hydraulic and pneumatic devices being modernized with IoT?
What are the current technology trends? Benefits? Disadvantages?
Security and risks?
Session IV:
Modeling and Simulation
Friday, 15.9.2017 | 09:00 – 10:15 | Hall Mlinařík

Mathematical modeling and experimental research of characteristic parameters of aviation hydraulic piston pump
Radovan Petrović\textsuperscript{1}, Huayong Yang\textsuperscript{2}, Maja Andjelković\textsuperscript{1}, Radoje Cvejić\textsuperscript{1}
\textsuperscript{1}University “Union - Nikola Tesla” of Belgrade, Serbia,
\textsuperscript{2}Zhejiang University, Hangzhou, China

Mathematical modeling and experimental research of characteristic parameters barrel-valve plate of aviation hydraulic piston pumps
Radovan Petrović\textsuperscript{1}, Shaoping Wang\textsuperscript{2}, Maja Andjelković\textsuperscript{1}, Radoje Cvejić\textsuperscript{1}
\textsuperscript{1}University “Union - Nikola Tesla” of Belgrade, Serbia,
\textsuperscript{2}Beihang University, Beijing, China

The nonlinear mathematical model of electrohydraulic position servo system
Mitja Kastrevc, Edvard Detiček
University of Maribor, Slovenia

Verification of a simulation-model to predict the transmission-behavior of hydrostatic bearings on machine tools
Jörg Edler, Matthias Steffan, Georg Mörwald
Graz University of Technology, Austria
Design challenges of modern hydraulic power packs
Tadej Tašner, Peter Hace, Kristian Les
HAWE Hidravlika d.o.o., Petrovče, Slovenia

Hydrostatic transmission design – closed-loop trailer assist drive
Luka Jelovčan, Aleš Novak
Poclain Hydraulics d.o.o., Žiri, Slovenia

Piezo actuators for the use in hydraulic and pneumatic valves
Marko Simic, Niko Herakovic
Faculty of Mechanical Engineering, Ljubljana, Slovenia

Development of the heavy-duty flow divider (FD-H2) for mobile applications
Anže Čelik, Luka Peternel
Poclain Hydraulics d.o.o., Žiri, Slovenia

Influence of the hydrodynamic bearing on the flow characteristics of a dynamically operated displacement meter (poster)
Othmar Bernhard
AVL List, Graz, Austria
Session VI:
Testing of components
Friday, 15.9.2017 | 12:15 – 13:30 | Hall Mlinařik

The analysis of the gerotor orbital hydraulic motor
Ervin Strmčnik, Franc Majdič
University of Ljubljana, Slovenia

Tribological research of different material pairs for
water hydraulic seat type of valve
Andreja Poljšak, Franc Majdič, Mitjan Kalin
University of Ljubljana, Slovenia

Test stand for determining the performance characteristics of
hydraulic directional control valves
Rok Pahič\(^1\), Vito Tič\(^2\), Darko Lovrec\(^2\)
\(^1\)IJS, Slovenia, \(^2\)University of Maribor, Slovenia

Problems while testing new hydraulic fluids
Milan Kambič\(^1\), Darko Lovrec\(^2\)
\(^1\)OLMA d.o.o., Ljubljana, Slovenia, \(^2\)University of Maribor, Slovenia
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Social evening, organized at the end of the first day of the conference, is a great opportunity to relax at the end of the day, and to chat with others in a relaxed atmosphere, make new contacts and acquaintances, or exchanged some point of views.

This year's social evening will be held in the Hotel Habakuk. Throughout the evening we will be entertained by trio Platin, which mostly performs outside our borders. They will make sure that we will remember most of the 80's and 90's hits, which will be performed live.

In the "SHOW ACTS" program, we will be visited by Marilyn Monroe, Tina Turner, Elvis Preslay, Amy Winehouse, Lady Gaga, Cher, Johnny Cash, Vanessa Mae, Shirley Bassey, Sister Act, Acapella, Marlene Dietrich, etc...

The sponsor of social evening is **HAWE Hidravlika d.o.o., Slovenia.**
Location:

**Congress centre Habakuk *****

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