

May 29, 2024

Session I

MECHATRONIC SYSTEMS

Committee: **Ing. Igor BélaI, PhD. – chairperson**
Ing. Juraj Paulech, PhD.
Ing. Mária Hypiúsová, PhD.

09:00 - 11:00

- 1. Comparison of bearing capacity and flexibility of 3D resin printing with and without UV post-processing**
Kamil Kušnirák, Ondrej Kolimár, Oto Haffner and Erik Kučera
- 2. Higher-order and fractional-order PID controllers**
Igor BélaI
- 3. On the verge of human-centric digital twin**
Michal Balla
- 4. Proposal of New Petri Net editor and simulator based on Python for mechatronic systems control**
Ondrej Kolimár, Kamil Kušnirák, Erik Kučera and Oto Haffner
- 5. Testing of the educational platform MotoShield**
Matej Hanzalík
- 6. Testing of different approaches for 3D reconstructions**
Martin Michalovič and Oto Haffner
- 7. A neural network controller for DC motor**
Richard Schwarz
- 8. Exploratory study on dimensioning techniques for DC Motor measurement stations**
Ján Briežnik
- 9. MPC of Vehicle Dynamics**
Juraj Račkay, Daniel Pácek and Dávid Mikle
- 10. Development of LVP H^∞ Control for Active Suspension Systems**
Daniel Pácek and Juraj Račkay

14:00

Announcement of award-winning papers (lecture hall BC-150)