Special Sessions 1.5. Intelligent Control of Robotics and Power Systems

Saturday 28 November 18:00-21:00

SESSION ORGANIZER: Dr. Umar Farooq

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18:00-18:10 Welcome message from session chair, Prof. Dr. Khurram Karim Qureshi

18:10-18:25 Neuro-Inspired Artificial Intelligence, Dr. Asim Iqbal

18:25-18:40 Strategies and Opportunities of Power Management in Fully Integrated Platforms,
Dr. Muhammad Abrar Akram

18:40-18:55 Introducing Intelligent Systems Laboratory & Automation Facility (ISLAF), Dr. Umar
Farooq

19:00-19:20 [Paper 1] Disturbance Observer Supported Fuzzy Model Based Controller with
Application to Bilateral Teleoperation Systems

Presenter: Muhammad Usman Asad

Authors: *Muhammad Usman Asad, Jason Gu, Umar Farooq, Valentina E. Balas, Zheng Chen,
Ghulam Abbas*

19:20-19:40 [Paper 2] Enhanced Functionality of Footing Machine Through Deep Learning

Presenter: Amnah Haroon

Authors: *Amnah Haroon, , Areesha Rahim, Umar Farooq , Jason Gu, Hareem Siddique, Iqra Marryam, Muhammad Usman Asad, Khurram Karim Qureshi*

19:40-20:00 **[Paper 3]** On Simplifying Boolean Expressions in Real Time

Presenter: Umair Butt

Authors: *Umair Butt, Umar Farooq, Dawood Imtiaz Jutt, Muhammad Hasin Butt, Jason Gu, Muhammad Usman Asad, Barna Cornel*

20:00-20:20 **[Paper 4]** An Algorithm for Fault Classification in Power Systems

Presenter: Muhammad Sabih

Authors: *Muhammad Umer, Muhammad Sabih, Umar Farooq, Jason Gu, Adeel, Hamza Moazzam Muhammad Usman Asad, Marius Balas, Khurram Karim Qureshi*

20:20-20:40 **[Paper 5]** Robot Identification Using Modern Pattern Recognition Techniques

Presenter: Koceila Cherfouh

Authors: *Koceila Cherfouh, E. W. Handerson, Jason Gu, Erik Scheme, Muhammad Usman Asad, Umar Farooq*

20:40-21:00 **[Paper 6]** Control of Robotic Manipulator Using Optimized Neural Networks

Presenter: Koceila Cherfouh

Authors: *Koceila Cherfouh, Jason Gu, Muhammad Usman Asad, Umar Farooq, Khurram Karim Qureshi*

21:00-21:10 Closing Remarks by session chair