Session Program

10–13 Sept 2023

Computational Problems of Electrical Engineering 2023

Computational Intelligence in Engineering

Monday 11 September

10:00

Computational Intelligence in Engineering: Computational Intelligence in Engineering (4)
Session | **Location:** Chłodna 16, 33-330 Grybów | **Convener:** Oksana Hoholyuk

10:00–10:20
Relabeling the imperfect labeled data to improve recognition of face images using CNN

Speaker
Dr Robert Szmurło

10:20–10:40
Application of Mask R-CNN Algorithm for Apple Detection and Semantic Segmentation

Speaker
Mr Maciej Jurewicz

10:40–11:00
Implementation of Convolutional Neural Network for Artifact Removal from EEG Signals

Speaker
Marcin Jurczak

11:00–11:20
Monocular depth estimations for UAV and high voltage power lines inspection

Speaker
Katarzyna Sikorska-Łukasiewicz

11:20

11:40

Computational Intelligence in Engineering: Computational Intelligence in Engineering (4)
Session | **Location:** Chłodna 16, 33-330 Grybów | **Convener:** Pavel Karban

11:40–12:00
Comparative Analysis of Independent Component Analysis, Linear Regression and Adaptive Filtering for Artifact Removal in SSVEP Registration

Speaker
Marcin Jurczak

12:00–12:20
Impact of Signal Features on Machine Learning-Based Tool Condition Classification in the Milling Chipboard Process

Speaker
Prof. Jarosław Kurek

12:20–12:40
A Novel Approach using Vision Transformers (VIT) for Classification of Holes Drilled in Melamine Faced Chipboard

Speaker
Prof. Jarosław Kurek

12:40–13:00 **Teaching Maxwell Equations with LLM Assistance**

Speaker

Bartosz Sawicki

13:00

14:20

Computational Intelligence in Engineering: Computational Intelligence in Engineering (3)

Session | **Location:** Chłodna 16, 33-330 Grybów | **Convener:** Ladislav Janousek

14:20–14:40

Dynamics of the Learning Process of a Multilayer Neural Network when using the AdaDelta Optimization Method

Speaker

Dr Ivan Katerynchuk

14:40–15:00 **Specialized game computer system based on Arduino Uno**

Speakers

Halyna Klym, Mr Vladyslav Shevchuk

15:00–15:20

Smart indoor air quality monitoring system: implementation and analysis

Speakers

Mr Ivan Rudavskyi, Halyna Klym

15:20