REV2022 Special Session
Call for Papers

Title
AI and Design in Engineering

Acronym
AIDE

Overview

Continuously increasing technical complexity of manufacturing systems and processes driven by consumers' demand for more comprehensive products and services critically requires implementation and advanced use of artificial intelligent methods for process-system modelling, monitoring, diagnostics, prediction, optimization, classification and control. The focus of this Special Session is to demonstrate recent developments in a wide range of applications of AI in advanced manufacturing, automation, robotics, and control to increase precision, productivity, flexibility, and reliability; to demonstrate recent developments and Methods of machine, deep, and reinforcement learning. Also, to demonstrate the advances of all above mentioned methods and tools in online engineering collaboration and education.

Topics

- AI in advanced manufacturing systems
- AI-based modelling, optimization, and control
- Digitization, cyber-physical systems, and digital twins
- Digital manufacturing, assembly, integration
- Augmented reality and virtual manufacturing
- AI in advanced manufacturing processes and technologies
- AI-based modelling, prediction, classification, optimization, and control
- AI-based system design and reconfiguration
- Material additive, subtractive, relocation processes and technologies
- AI in electrical and computer engineering
- Methods of machine, deep, and reinforcement learning
- AI in online engineering collaboration
- AI in online engineering education

Program Committee

Chair(s)

Dr. Islam Taj-Eddin, Faculty of Computers and Information, Assiut University, Egypt, itajeddin@aun.edu.eg
Prof. Samir Elseoud, Faculty of Informatics and Computer Science, The British University in Egypt, Samir.Elseoud@bue.edu.eg

Members

Prof. Khaled Hussain, Faculty of Computers and Information, Assiut University, Egypt, khussain@aun.edu.eg

Prof. Abdel-Rahman Hedar, Faculty of Computers and Information, Assiut University, Egypt, hedar@aun.edu.eg

Dr. Abeer Hamdy, *Faculty of Informatics and Computer Science, The British University in Egypt,* abeer.hamdy@bue.edu.eg

Dr. Mostafa Salama, *Faculty of Informatics and Computer Science, The British University in Egypt,* *Mostafa.Salama@Bue.edu.eg*

Dr. Ann Nosseir, *Faculty of Informatics and Computer Science, The British University in Egypt*, ann.nosseir@bue.edu.eg

Dr. Ahmad Mostafa, *Faculty of Informatics and Computer Science, The British University in Egypt,* ahmad.mostafa@bue.edu.eg

Dr. Mohamed Darwish, Faculty of Computers and Information, Assiut University, Egypt, mohamed_darwish@aun.edu.eg

Dr. Ibrahim Elsemman, Faculty of Computers and Information, Assiut University, Egypt, elsemman@aun.edu.eg

Dr. Saddam Bekhet, Faculty of Commerce, South Valley University, Egypt, saddam.bekhet@svu.edu.eg

Dr. Mohammed Farghally, Virginia Tech, Blacksburg, VA, USA, mfseddik@vt.edu