

IMSmC 2024

Topic packages

Recommended but **not limited**

- Conventional Mechatronic Systems
 - Mechatronics in Industry
 - Mechatronics in Manufacturing
 - Mechatronics Education (V, and W –teaching models)
 - Mechatronic System Design and Modelling
 - Mechatronics in Forestry and Agriculture
 - Sensors, Drivers and Actuators used in Mechatronic Systems
 - Industrial Wired- and Wireless Communication in Mechatronic Systems
 - Industry 4.0 (Cloud Technology, IoT, PLC Networks)
- Mechatronics in vehicle engineering
 - EV, HEV Vehicles (architectures, principles of operations, classifications, control)
 - Most Modern Sensors and Actuators Used in Field Vehicles (ECU, ABS, TCR, ... modules used in vehicles)
 - Vehicle Communication's Networks and Methods (V2V, ..., V2X)
 - Mechatronics in Logistics
 - Mechatronics in Aeronautics
 - Mechatronics of Maritime and River Vehicles (e.g.: most modern navigation's methods)
 - Mechatronics in Vehicle Engineering, regarding BUS systems used in Car Engineering (CAN Bus,
- Bio-, Micro-, and Nano-mechatronic Systems
 - Biometric sensors used in vehicle engineering
 - Bionics, embodied robotics
 - Brain interfaces
 - EMG Controlled Bionic Prosthesis
 - Micro-Mechatronic Systems
 - Nano-Mechatronic Systems
 - Micro- and Nano-mechatronic Systems used in Health Industry
- Intelligent mechatronic Systems
 - Fuzzy Based Control Systems in Mechatronic
 - Neural Network Based Control Systems (CNN, RNN)
 - Neuro-Fuzzy Systems Used in Mechatronics (FCM, BIOFAM)
 - GA used Mechatronic Systems
- Measurement, Signal Processing, Mechatronic Control Systems & Modelling
 - Controlled Mechanical Systems
 - Embedded Control Systems
 - Control Devices used in Mechatronic Systems
 - Advanced Control Systems used in Mechatronics
 - Physical Systems Modelling, most modern Simulation's Systems
- Mechatronics for Environmental Sustainability
- Material Science for Mechatronic Systems
 - Smart Materials used in Mechatronic Systems (Piezo-, Shape memory-, Magnetorheological-, Photoactive-, Chromo-active materials, .etc)