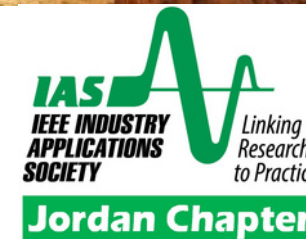


# 22nd International Conference on Research and Education in Mechatronics

## REM 2024

Dead Sea, Jordan

24th–26th September



### CALL FOR PAPERS

The International Conference on Research and Education in Mechatronics (REM) is the annual conference of the German Mechatronics Association (DGM) since 1999. REM is promoted by DGM and supported by the German University Consortium for International Cooperations (DHK) with the goal to stimulate the exchange of experiences in Mechatronics research and education.

The 22nd REM is hosted by the German Jordanian University (GJU) and will be held Tuesday through Thursday, September 24 – 26, 2024 in Dead Sea, Jordan at the King Hussein bin Talal Convention Centre managed by Hilton. The third day of REM 2024 will also include a social program for the participants to learn more about Jordan. All papers will be peer reviewed by at least three reviewers based on full paper submission. Accepted papers will be published in the conference proceedings, indexed in SCOPUS, and will be submitted for inclusion into IEEE Xplore Digital Library subject to meeting IEEE Xplore's scope and quality requirements.

### GENERAL CHAIR

Prof. Ala'aldeen Al-Halhoul, GJU President

### HONORARY COMMITTEE

Prof. Dr. Reiner Dudziak, Germany  
Prof. Dr. Rolf Biesenbach, Germany

### ORGANIZING COMMITTEE

Dr. Hisham ElMoqet, GJU, Conference Chair  
Dr. Mutaz Ryalat, GJU, Conference Co-Chair  
Prof. Rolf Biesenbach, DGM, Conference Co-Chair  
Prof. Rami Alazrai, GJU  
Prof. Tarek Tutunji, HTU  
Prof. Mohammad Salah, HU  
Dr. Ala' Khalifeh, GJU  
Dr. Samer Alabed, GJU  
Dr. Hani Muhsen, GJU  
Dr. Mariam Ibrahim, GJU  
Dr. Mohammad AlQudah, GJU  
Dr. Ghaith Al-Refai, GJU  
Dr. Sahar Qaadani, GJU  
Dr. Natheer Almtireen, GJU  
Eng. Ghaith Al-Shishani, GJU

### TRACKS AND TOPICS

- ✔ **Mechatronics Systems Design, Modeling, and Control**  
Design, Modeling, Simulation, and Control of Mechatronics Systems, Mechanisms, Control System Modeling and Simulation Techniques and Methodologies, Design and Optimization, Systems Engineering, Interfacing and Communication in Mechatronics Systems, Unconventional Electromechanical Devices and Drives.  
Track Chair: Prof. Mohamad Salah, HU
- ✔ **Sensors and Actuators**  
Mechatronics Measurement Systems and Sensors, Actuators, Servo-Systems, Motion Control, Sensor Design, Multi-Sensor Data Fusion Algorithms, Wireless Sensor Networks and Internet of Things (IoT), Applications of Micro and Nano Systems (MEMS/ NEMS), Material Engineering and Smart Materials, Energy Conversion.  
Track Chair: Prof. Tarek Younes, BAU
- ✔ **Robotics and Autonomous Systems**  
Robotics and their Applications, Teleoperation, Tele-Robotics, and Teleoperated Semi-Autonomous Systems, Perception, Navigation, Mapping and Localization, Robot Simulation and Visualization, Socially Intelligent Robots, Human-Robot Interaction, Humanoids, Mobile Robots, Unmanned Aerial Robots.  
Track Chair: Dr. Ahmad Alshorman, JUST
- ✔ **Artificial Intelligence, Machine Learning, and Machine Vision**  
Machine and Deep Learning, Intelligent Control, Neural and Fuzzy Control and their Applications, AI and Reinforcement Learning, System Identification, Computational Intelligence, Smart Devices and Products, Intelligent Systems and Buildings, AI of IoT, Human Activity Recognition, AI in Virtual Reality, Computer Vision Algorithms and Applications.  
Track Chair: Prof. Rami Alazrai, GJU
- ✔ **Industry 4.0, Smart Industry, and Smart Manufacturing**  
Digital Twins, Cyber-Physical Systems, Industrial Internet of Things (IIOT), Automation and Process Control, Rapid Prototyping and 3D Printing, Digital Manufacturing Systems, Process Automation, Laser Technology and Laser Processing, Technology for the Factory of Future, Cloud Manufacturing, Cybersecurity of Industrial Automation Systems.  
Track Chair: Prof. Mohammed Bani Younis, PU
- ✔ **Automotive and Transportation Systems**  
E-Mobility, Electrical Propulsion, Sustainability and Emissions, Advanced Powertrains, Vehicle Performance and Handling, Battery Energy Storage Systems, Vehicle Software and Hardware, Vehicle Infrastructure Integration, Advanced Driver Assistance Systems (ADAS), Vehicle Control, Automated Vehicles, Connected and Cooperative Vehicles.  
Track Chair: Prof. Mohammed Abu Mallouh, HU
- ✔ **Biomedical and Rehabilitation Systems**  
Bio-Mechatronics, Human Assistive Devices, Biomimetics, Haptics, Artificial Organs and Prosthesis, Rehabilitation and Therapeutic Systems, Biomedical Signal and Image Processing, Brain-Machine Interfaces, Medical Imaging, Neuroscience, Biomedical Instrumentation, Biomedical Monitoring, Biomedical and Health Informatics  
Track Chair: Dr. Samer Alabed, GJU
- ✔ **Education and Training in Mechatronics**  
Trends in the Engineering Education of Mechatronics, Engineering Education within the Framework of Conceive, Design, Implement, and Operate (CDIO Initiative), Lifelong Learning and Professional Development in Mechatronics, Training Testbeds for Mechatronics, Curriculum Design and Development in the Education of Engineering, Technology, and Computing.  
Track Chair: Dr. Musa Al-Yaman, JU

### IMPORTANT DATES

31th-March 28th-April 26th May 23th June 21th July 21th July 18th August  
Extended Submission Deadline Review Decision Notification Final Submission Deadline Author Registration Deadline Attendee Registration Deadline

