

CALL FOR PAPERS



IEEE International Conference on Intelligent Design and Control of Automation and Drive Systems (IDCD 2026)

Chicago, Illinois
April 23 - 24, 2026

We are thrilled to announce that in Spring 2026, the IEEE International Conference on Intelligent Design and Control of Automation and Drive Systems (IDCD), the first IEEE PELS Technical Committee on Electrical Machines, Drives, and Automation Flagship Conference, will be launched as a pilot event.

The topics of interest include, but are not limited to:

Intelligent Control of Electric Drives:

- AI-based Advanced Control Strategies for Sensored and Sensorless Drives
- Learning-based Model Predictive and Adaptive Control Techniques
- AI-enhanced Efficiency, Reliability, and Fault-tolerant Operation
- Data-driven Parameter Estimation and Online Identification

Intelligent Design of Inverter-Fed Electrical Machines

- AI-driven Design and Optimization of Machines and Power Converters
- Digital Twin and Data-driven Design Frameworks
- AI-assisted Multiphysics (Electromagnetic–Thermal–Acoustic) Optimization
- Impact of Wide-Bandgap Power Electronics on Machine Design and Performance

AI-Supported Automation and Coordination of Multi-Drive Systems

- AI-driven Coordinated and Collaborative Control Strategies for Multi-drive Systems
- Distributed and Decentralized AI-based Control Architectures
- AI-enabled System-level Optimization and Energy Management
- AI-based Diagnostic Tools for Multi-drive Systems

Robotic actuators and Controls

- Actuator Design: Electrical, Pneumatic, Hydraulic, Bio-inspired, or Others
- Drive-actuator-control Co-design
- AI-assisted Actuator Controls, Sensing, Learning, and Estimation
- Application-specific Designs and Demonstrations

Organizing Committee

General Chair:

- Ali Bazzi, University of Connecticut, USA

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- Emre Gurpinar, Sikorsky Aircraft Corporation, USA

IMPORTANT DATES:

Dec. 5, 2025: Submission Opening

Jan. 18, 2026: Digest Submission deadline

Mar. 1, 2026: Acceptance Notification

Mar. 22, 2026: Final Submission Deadline



 www.ieee-idcd.org

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