

Annual Conference of the IEEE Industrial Electronics Society (IECON 2022)

Special Session on

“Recent Advances in Sliding Mode Control for AC motor systems”

Organized by

Minghao Zhou (zhouminghao@hrbust.edu.cn)
Harbin University of Science and Technology, China

Yong Feng (yfeng@hit.edu.cn)
Harbin Institute of Technology, China

Wei Xu (weixu@hust.edu.cn)
Huazhong University of Science and Technology, China

Chaoxu Mu (cxmu@tju.edu.cn)
Tianjin University, China

Call for Papers

Theme:

The AC motors, such as permanent magnet synchronous motor, induction motor, linear motor, etc., are extensively applied in the electric vehicle, rail traffic, and power generation. Complex structures with high nonlinearity characterize the AC motor control systems and dynamic solid couplings, whereas operating under extreme environments complicates the control strategy. Over the last several decades, the sliding mode control (SMC) theory has evolved as a powerful strategy for AC motor control systems due to its strong robustness to the disturbance and parameter variation. Extensive efforts have been made for the SMC to obtain better dynamic performance, higher control accuracy, and lower chattering. Thus, this special session aims to show the up-to-date improvement of the SMC-based method for AC motor control systems.

Topics of interest include, but are not limited to:

1	Sliding mode control-based AC motor systems.
2	Sensorless control for AC motors in extreme speed range.
3	Parameter identification with high precision for AC motors.
4	Discrete-time control systems of AC motors.
5	Data-driven based control for AC motors.
6	Deep learning based control for AC motors.
7	Advanced control methods for AC motors.
8	Electrical vehicle and rail transport.
9	New energy generation.
10	Advanced sliding mode based control methods.

Submissions Procedure:

All the instructions for paper submission are included in the conference website: <https://iecon2022.org/>

Sponsoring IES Technical Committee(s):

IEEE IES Technical Committee on Control, Robotics, and Mechatronics <https://crm.ieee-ies.org/>

1 Good quality papers may be considered for publication in the IEEE Trans. on Industrial Electronics, subject to further rounds of review.

Deadlines:

Full paper submission:	April 15, 2022
Paper acceptance notification:	June 17, 2022
Camera-ready paper submission:	July. 29, 2022