

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

## Special Session on

## Sliding mode-based fixed-time intelligent control and its application in aerospace unmanned systems

### Organized by

Jun Song (jun\_song@ahu.edu.cn)  
Anhui University, China

Zhiqiang Ma (zhiqiangma@nwpu.edu.cn)  
Northwestern Polytechnical University, China

Ganghui Shen (shenganghui@nwpu.edu.cn)  
Northwestern Polytechnical University, China

### Call for Papers

#### Theme:

With the development of aerospace engineering and intelligent technology, the control problem of aerospace unmanned systems evolves into a research spot in the academic and engineering circles. Among the varied control goals of aerospace unmanned systems, the foremost one is to achieve precisely control in fixed time. Due to the strong insensitivity, fast transient response and fixed-time convergence, sliding mode control (SMC) (such as nonsingular terminal SMC and homogeneity based-SMC) has been an effective method to address the fixed-time control problem for aerospace unmanned systems. This session focuses on the scientific problems in sliding mode-based fixed-time intelligent control design and its application in aerospace unmanned systems under complex space environment and tasks.

#### Topics of interest include, but are not limited to:

1	New and sliding mode-based fixed-time stability theory and control system
2	Fixed-time intelligent control of nonlinear system
3	Chattering alleviation technique
4	Applications in space unmanned systems including spacecraft/ unmanned aircraft system/ unmanned aerial vehicle system/ tethered space robot system/ Space teleoperation systems /space unmanned system/ multiple spacecraft system

Sponsoring IES Technical Committee(s):

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

IEEE IES Technical Committee on **Standards** <https://standards-tc.ieee-ies.org/>

**Submissions Procedure:**

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

**Deadlines:**

Full paper submission:	Extended to May 08, 2022
Paper acceptance notification:	June 17, 2022
Camera-ready paper submission:	July 29, 2022