

**The 43rd Annual Conference of the IEEE Industrial Electronics Society
China National Convention Center, Beijing, China
October 29 - November 1, 2017**

**Special Session on
“Recent Developments in Sliding Mode Control: Theory and Industrial Applications”
organized and co-chaired by:**

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Call for Papers

Outline of the Session

Sliding mode control (SMC) is recognized as one of the most efficient control methods to reject system perturbations and disturbances. The main technical operation of an SMC is to force the system state trajectories onto some predefined sliding mode surfaces (e.g., linear sliding mode surfaces, higher-order sliding mode surfaces or terminal sliding mode surfaces) by utilizing a discontinuous control, such that the state trajectory will move along the sliding mode surfaces and achieve a desired performance such as stability, tracking ability and disturbance rejection capability. Due to such nice features, SMC theory has become a general control design method and SMC technique has been widely applied in practical systems, such as electric drives and mechatronic systems, power electronic systems, manipulators, vehicles, and spacecraft. Moreover, several combined SMC methods have also been developed, such as adaptive SMC, backstepping SMC and disturbance observer based SMC, for a wide kind of systems including nonlinear, time-varying, discrete-time, stochastic, and distributed systems. Thus, it is meaningful and challenging to develop novel SMC theories and methods for nonlinear systems due to its broad application potentials in modern society. In this context, we wish to propose a special session for the IECON 2017 entitled **Recent Developments in Sliding Mode Control: Theory and Industrial Applications**

Topics of the Session

- SMC theory and methodology
- Higher-order SMC
- Terminal SMC
- Adaptive SMC
- Discrete-time SMC
- SMC for stochastic or hybrid systems
- Chattering analysis for SMC
- Sliding mode observers
- Applications of advanced SMC approaches for dynamic systems: electric drives and mechatronic systems, power electronic systems, robotics, automotive industry, hydraulic/pneumatic actuators, aerial/aerospace vehicles, etc.

Author's schedule:	Deadline for submission of special session papers	April 17, 2017
	Notification of acceptance	July 3, 2017
	Deadline for submission of final manuscripts	August 15, 2017

All the instructions for paper submission are included in the conference website: www.iecon2017.com