IEEE AMC2018
(THE 15TH INTERNATIONAL WORKSHOP ON ADVANCED MOTION CONTROL)

9 - 11 MARCH 2018, TOKYO, JAPAN

Special Session on

Disturbance Observer-based Robust Control and Its Applications

Organized by

Emre Sariyildiz, emre@uow.edu.au, University of Wollongong, NSW, Australia.

Takahiro Nozaki, nozaki@sd.keio.ac.jp, Keio University, Yokohama, Japan.

Tomoyuki Shimono, shimono-tomoyuki-hc@ynu.ac.jp, Yokohama National University, Yokohama, Japan.

Call for Papers

Disturbance Observer (DOb) has been one of the most popular robust control methods thanks to its simplicity and practical efficiency after it was first proposed by Prof. Ohnishi in the first IPEC at Tokyo in 1983. In the last three decades, it has been applied to many robust control applications, such as motion control, process control and power electronics, and has been widely used to estimate unknown/ unmeasured signals such as exogenous torques/forces in force control of robots. Besides its applications, a significant effort has been paid by researchers to improve the theoretical framework of DOb based estimation and robust control methods. Several analysis and design tools have been proposed for different applications such as linear and nonlinear DOb-based control methods. In the thirty fifth year of DOb, we would like to organize a special session on "Disturbance Observer-based Robust Control and Its Applications" to gather researchers who focus on theoretical and practical aspects of DOb-based control and estimation and provide a site for discussion. In particular, the Special Session will focus on, but is not limited to, the following topics of interest.

Topics of the Session

- o Disturbance Estimation
- o Disturbance Observer-based Robust Control
- o Analysis and Design of Disturbance Observer

o Disturbance Observer Applications

▪ **IES Technical Committee Sponsoring the Special Session (if any):**