

A workshop organized by Instrumentation & Control Research Group of ITB on
Resource-Aware, Attack-Resilient Control Strategies for Cyber-Physical Systems Design



Prof. Yul Yunazwin Nazaruddin, IPM

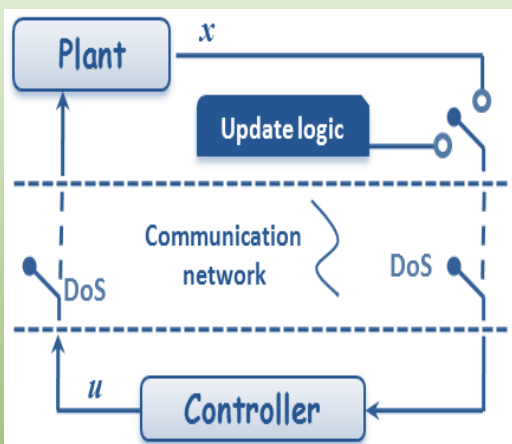


Tua Tamba, PhD



M. Syamsul Arifin

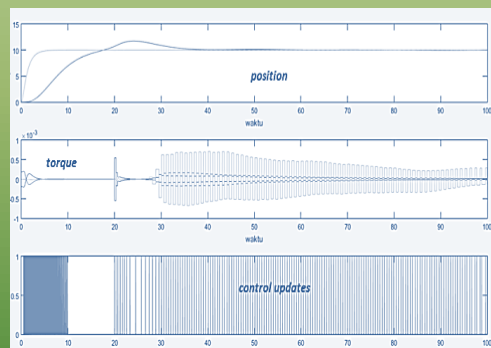
ABSTRACT



Rapid advances and developments of sensing, computational and communication technologies have given rise to a new framework for control systems design and implementation known as **Cyber-Physical Systems (CPS)**. In CPS, a network of computers and communication devices is utilized to automatically monitor and manage the exchange of data during the sensing-control-actuation tasks between the plants, sensors, controllers and actuators elements within the CPS. The tight interactions between these physical, computational and communication processes inevitably pose new challenges in the design of CPS in terms of (i) the efficiency of the CPS' resources utilization and (ii) the resiliency of the CPS to undesirable events such as cyber attacks in the form of denial-of-serve (DoS).

This workshop aims to discuss the control paradigm in CPS and the implementation challenges that may occur in terms of the efficiency of their computational/communication resource utilization as well as their resiliency in the presence of cyber attacks. Main topics to be covered in the workshop include :

- Overview and challenges in the analysis, design and control of CPS
- Event-triggered strategies for resource-aware scheduling of stabilizing control tasks
- Practical implementation of event-triggered strategies in unmanned aerial vehicles control
- Event-triggered resilient control of CPS under cyber attacks



The workshop is particularly dedicated to researchers and graduate students in the area of Systems and Control Theory & Application. Final year undergraduate students are also encouraged to attend this workshop

SCHEDULE & LOCATION

Thursday, 29 March 2018 (09:00 – 16:00)

Ruang Seminar Teknik Fisika lantai 2, Gedung
 TP. Rachmat , ITB. Jl. Ganesha 10, Bandung

REGISTRATION FEE 50K (incl. Certificate & snack)

REGISTRATION VIA EMAIL IS DUE ON
 TUESDAY, 27 MARCH 2018