

MHRD Scheme on Global Initiative of Academic Networks (GIAN)

Mechatronics: Synergic Integration of Mechanics, Electronics, and Information Technology

Mechatronics engineering, which is a synergic integration of mechanisms, electronics, and information technology, becomes an important and popular program nowadays. Several engineering schools offer this interdisciplinary program both in undergraduate and graduate degrees. The students who graduate from this program are expected to have an overview picture of Mechatronics systems, e.g.; robots, machines, etc. As a system integrator, Mechatronics engineer should be able to design the system architecture, select suitable sensors and actuators, and program both low and high levels of the system.

The primary objectives of the course are as follows:

1. To provide an understanding of the principle and design of sensors and actuators which are the building boxes for Mechatronics systems.
2. To provide an understanding of classical control, digital control, state-space control, and optimal control theory.
3. To introduce the students to computer control for Mechatronics system using machine intelligence technologies, including Neural Networks, Fuzzy Theory, Genetic Algorithm, Simulated Annealing, Particle Swarm Optimization, and Artificial Intelligence.

Modules	Topic-Mechatronics: Synergic Integration Of Mechanics, Electronics and Information Technology Duration- July 11- July 17, 2016 Number of participants for the course will be limited to Fifty.
You should attend if.....	<ul style="list-style-type: none"> • Students at all levels (B.E./B.Tech/MSc/M.E./M.Tech/Ph.D) or Faculty from reputed academic institutions and technical institutions, person from Industry.
Fees	Course Fee The participation fees for the course are as follows: <ol style="list-style-type: none"> 1. UG and PG student: Rs. 1000/- 2. M. Phil./ Ph. D. Student of Shivaji University- without fellowship: Rs. 1000/-; with fellowship: Rs. 2500/- 3. M. Phil./ Ph. D. Student of other University- without fellowship: Rs. 1000/-; with fellowship: Rs. 3000/- 4. Teacher: Rs. 5000/- 5. Person from Industry/ Institute: Rs. 10,000/- 6. Foreign student: \$300/-

TheFaculty



Dr. Manukid Parnichkun is an associate professor in Mechatronics field of study, School of Engineering and Technology, Asian Institute of Technology, Thailand. He obtained B.Eng. in Mechanical Engineering from Chulalongkorn University, Bangkok, Thailand in 1991, M.Eng and Ph.D in Precision Machinery Engineering from the University of Tokyo in 1993 and 1996 respectively.

He published 6 books, 35 articles in refereed international journals, 6 articles in national journals, and 96 articles in conference proceedings. From SCOPUS, He has received 342 citations (excluding self-citation) from his 56 articles with H-index of 10. He conducted 28 sponsor researches with total value about 39 million Baht.

His specialization is in Mechatronics and Robotics area. He founded the Thai Robotics Society in 2000. He has initiated several robotics related activities in Thailand including launching of the journal of Thai Robotics Society in 2001, organization of Partner Robot Contest in 2001, organization of Thailand Intelligent Vehicle Thailand Championship in 2006-2009, organization of BicyRobo Thailand Championship in 2010-2012. He has been appointed as the chairman of academic committee of TPA Robot Contest organized by Technology Promotion Association since 2007, and the chairman of academic committee of ABU Robot Contest organized by MCOT since 2014. He was recognized as national key inventor honored by KrungthepThurakij (Bangkok Business) Newspaper on 1 January 2007 and received an Honor Award in Recognition of Contribution to Thai Robotics Society in 2011 TRS Conference on Robotics and Industrial Technology. He has been invited as visiting professor to teach courses for Erasmus Mundus's European Master Program in Advanced Robotics (EMARO) at Ecole Centrale de Nantes, France in December 2008, 2009, and 2010 and at Warsaw University of Technology, Poland in December 2012, 2013, 2014 and 2015.

Course Coordinators

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