

Workshop on LoRaWAN and Its Applications for IoT

Organizer: Assistant Prof. Dr. Rardchawadee Silapunt



Abstract

The aim of the workshop is to share basic principles of the Long Range Wide Area Network (LoRaWAN) and its applications for Internet of Things (IoT). Important LoRaWAN features such as signal modulation, encryption, data transmission format, and network regulations will be briefly explained. During the hands-on session, the participants will learn how to create a simple IoT application with sensor node, gateway, and network and application cloud servers and also learn how to create a simple dashboard for visualization.

Biography

Rardchawadee Silapunt was born in Bangkok, Thailand, in 1975. She received the B.E. degree in electrical engineering from Chulalongkorn University, Thailand, in 1996, and the M.S. and Ph.D. degrees in electrical and computer engineering from University of Wisconsin-Madison, USA, in 1998 and 2004, respectively.

In 2004, she joined the Department of Electronic and Telecommunication Engineering, King Mongkut's University of Technology Thonburi (KMUTT), Thailand, as a lecturer. She received her assistant and associate professorships in 2007 and 2012, respectively. Her current research interests include Internet of Things, low power wider area network, transmission lines and applications, and antennas. She is currently the head of KMUTT Internet of Things cluster at KMUTT.

Dr. Rardchawadee is a member of IEEE and Innovative Electromagnetics Academy of Thailand (iEMAT). She was the general chair of the Thailand-Japan Microwave Conference (TJMW 2017) held in Bangkok. She was the recipient of the outstanding paper award from International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC) in 2009 in the area of microwave applications. Since the beginning of her career, she has received several research grants from government funding agencies and private sectors.

Workshop: ROS for mobile robot applications

Organizer: Assistant Prof. Dr. Thavida Maneewarn



Invited speakers: IEEE-RAS Chapter, Thai Robotics Society and Institute of Field Robotics

Abstract

Robot Operating System (ROS) is an open source system that includes a collection of tools, libraries and conventions to provide a flexible framework for writing robot software. ROS provides many libraries for simultaneous localization and mapping (SLAM) and navigation which help accelerating mobile robot development. This workshop will present various case studies of ROS in mobile robot applications including an autonomous tour-guide robots, multi-floor navigation of a wheeled mobile robot and a surveillance robot.

Biography

Dr.Thavida Maneewarn is the Director and Executive Manager of Yannix(Thailand) co.ltd. since November 2018. Dr.Thavida received a Ph.D. in Electrical Engineering specialized in control & robotics from University of Washington, Seattle, USA in 2000. She began her career as a researcher at Institute of Field Robotics, King Mongkut's University of Technology Thonburi Thailand, where she got promoted to be the Deputy Director of Research since 2003-2014. She was also formerly the President of Thai Robotics Society and currently the IEEE RAS-Thailand Chapter Chair which has the mission to promote knowledge and interests in automation and robotics to young generation in Thailand. Her research projects include the boiler tubes inspection robot, public relation semi-humanoid robots, agricultural robotics and autonomous driving system for unmanned ground vehicle and indoor mobile robots.