Special Talk
International College, KMITL

Topic: The Invention "*www.worldmeteorology.com and the mobile application WMApp provide high-detailed weather forecasts for Asia and Europe, satellite retrievals of global precipitation, tropical cyclone forecasts, and earthquake reports*"

Speaker: Chinnawat Surussavadee, *Senior Member, IEEE*

Time: Wed 2 November 2016, 16.30 – 17.30

Venue: Room IC04, 55th-Anniversary Bldg, Floor 8

Abstract

This talk presents the invention "www.worldmeteorology.com and the mobile application WMApp" that provides unprecedented accurate and high-detailed 24-28 hour weather forecasts for SE Asia, accurate 5-6 day weather and cyclone forecasts for Asia and Europe, accurate global precipitation estimated from satellite observations using the AMSU MIT Precipitation Retrieval algorithm (AMP) and the JAMI PSU Precipitation Retrieval algorithm (JPP), and global earthquake reports, and related research. The invention is the first in SE Asia to provide detailed weather forecasts for each administrative division, and can specify area, location, time precipitation will fall. The data and information presented in the invention are produced by computer models and algorithms developed by research published in 11 papers in several famous international journals of Chinnawat Surussavadee and his coauthors. Weather forecasts include precipitation, temperature, humidity, wind speed and direction, and wave height. AMP version 3 (AMP-3) is the first to successfully estimate precipitation over icy surfaces. AMP-5 is the state of the art for satellite passive millimeter-wave precipitation retrieval algorithms. The development of "www.worldmeteorology.com and WMApp" is for public benefits. WMApp is available for both Android and iOS devices. Users can use the invention for free. WMApp has more than 87,000 downloads with the average users' score of 4.24 from the total of 5.0. www.worldmeteorology.com has more than 339,000 page views. Weather forecasts and precipitation data from the invention were used in the weather forecasting TV program "TNN Weather" in the TNN24 channel.

Brief Biography

Chinnawat Surussavadee received the B.Eng. degree in electrical engineering from the King Mongkut's Institute of Technology Ladkrabang (KMITL), Bangkok, Thailand, in 1999, the M.S. degree in electric power engineering from the Rensselaer Polytechnic Institute, Troy, NY, in 2001, and the Ph.D. degree in electrical engineering from the Massachusetts Institute of Technology (MIT), Cambridge, MA, in 2007.

From 2004 to 2006, he was a Research Assistant with the Remote Sensing and Estimation Group, Research Laboratory of Electronics (RLE), MIT. Since 2006, he has been a Research Affiliate with RLE. From 2006 to 2007, he was a Lecturer with the Phuket Rajabhat University, Phuket, Thailand. From 2007 to 2016, he was an Assistant Professor of electrical engineering, the Director of the Interdisciplinary Graduate School of Earth System Science and Andaman Natural Disaster Management, and the Director of the Andaman Environment and Natural Disaster Research Center at the Prince of Songkla University (PSU), Phuket Campus, Phuket, Thailand. Since 2016, he has been an Assistant Professor of electrical engineering at KMITL.

Dr. Surussavadee is the recipient of several research and invention awards, e.g., the Gold Medal with the congratulations of the jury and the Award of Excellent Achievement at the 43rd International Exhibition of Inventions of Geneva in Switzerland; the Gold Medal and the Leading Innovation Award at the 8th International Exhibition of Inventions (Kunshan) in Kunshan, China; the 2012 Thailand Young Technologist Award presented by the Foundation for the Promotion of Science and Technology under the Patronage of His Majesty the King; the 2013 Outstanding Research Award, the 2007 Excellent Doctoral Thesis Award, and the 2016 Very Good Invention Award presented by the National Research Council of Thailand (NRCT), and the IEEE GRSS Second Prize in the Student Paper Competition of the 2005 IEEE International Geoscience and Remote Sensing Symposium.