



# Global Wireless Summit -2018 Wireless Personal Multimedia Communications- 2018



A Celebration on the Occasion of  
the 20<sup>th</sup> Anniversary of  
Mac Fah Luang University

**November 25 – 28, 2018 – Chiang Rai, Thailand**

## **Special Session proposal**

### **Signal processing, wireless communication, and measurement technologies for agriculture**

#### **Special Session Organizers**

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#### **Aim:**

With the advent of digital and wireless technology; a new era, internet of things; will be in reality. Sensor chips with modern wireless communication (5G, LoRa, RFID) and power processing features have been researching. Certainly these kinds of sensors will be shortly delivered to the global electronics industry. Soon, devices integrating with these sensors will find new applications and available in the consumer market.

Precision agriculture has gained much interest from researchers for several decades. Yet it is one of the research areas being far-reaching stage. In the past, the area was researched by some specific research groups which are able to access expensive tools such as satellite, hyperspectral camera, multispectral camera, to name a few. With the maturity of digital and wireless technology, cost of several key technologies needed in precision agriculture becomes substantially lower. Prices of drone, cameras and sensor have been continuously dropped and currently to be affordable. Integrating the devices with internet and computing technology to make them communicable and thinkable in agriculture value chain will offer farmers to manage their resource efficiently as well as promise high crop yield. The trend of applying digital and wireless technology for precise management in the supply chain; from land mapping, land preparation, cultivating thru harvesting; is evident and becomes materializing. Numerous researchers in both academic and industry sectors put their aims to realize precision agriculture to be utilized in any deployment scales.

This special session will be focusing on (but not limited to) the following topics:

- Signal processing for modern agriculture
- Wireless communication for agricultural applications.
- Big data analytic for agriculture
- New sensor, instrumentation and measurement technologies for determining agriculture product quality

#### **Name of the Track the Special Session fits in:**

- Technology Supporting Sustainability.
- Intelligent Systems, Sustainable Energy, eHealth, and Big Data