

*Distinguished Speakers'*



# UEE Seminar Series

*Hosted by School of Urban & Environmental Engineering*

## **Spectral imaging technologies for nondestructive food safety and agricultural applications**

**Speaker: Kim, Moon Sung**  
**United States Department of Agriculture**  
**Agricultural Research Service**

Spectral imaging technologies for food safety is critical to detect and characterize microbial, chemical, and biological contaminants in food.

Hyperspectral imaging system and illumination system were developed for fluorescence, reflectance, and raman chemical imaging. In-line whole-surface inspection of fresh produce was developed for whole-surface safety and quality inspection on fast-moving processing line. Low-cost handheld fluorescence-based imaging device was developed to detect contaminants on food. Especially, adulterant detection and ingredient authentication was implemented by utilizing developed near-infrared hyperspectral imaging and Raman hyperspectral chemical imaging. In addition, automatic water sampling and hyperspectral imaging platform was developed to design and implement modeling and monitoring for evaluating microbial quality of surface water sources used for irrigation.



- **When** : 2018.11.29.(Thu) 3 p.m.
- **Where**: Bldg.110(EB4), Room.1007
- **Host** : Prof. Cho, Kyunghwa  
ext. 2829, [khcho@unist.ac.kr](mailto:khcho@unist.ac.kr)