

### Ph.D. Program in Electronics, Computer Science and Electrical Engineering

## Seminar series UAVs and sensors for precision agriculture

# Prof. Melba Crawford

Purdue University, West Lafayette (IN)

11:00-13:00 Feb. 26<sup>th</sup>, 2024: UAV systems, platforms, and sensors 14:00-16:00 Feb. 26<sup>th</sup>, 2024: Precision agriculture in row crops 11:00-13:00 Feb. 27<sup>th</sup>, 2024: Mission planning & data acquisition for UAVs 11:00-13:00 Feb. 28<sup>th</sup>, 2024: Introduction to hyperspectral and LiDAR sensing 14:00-16:00 Feb. 28<sup>th</sup>, 2024: Applications of multi/hyperspectral/LiDAR data in row crop agriculture 11:00-13:00 Feb. 29<sup>th</sup>, 2024: Classical applications 14:00-16:00 Feb. 29<sup>th</sup>, 2024: Neural network applications

#### Abstract

Unmanned Aerial Vehicles (UAVs) are increasingly used for agricultural applications. This lecture series will focus on row crops and aims at teaching how to process and analyze remotely sensed data acquired by these platforms. The students will learn about the components of integrated platforms, sensors, data that are acquired, and the analysis that is conducted for classical agricultural applications, including plant breeding and management practices.

#### **Biography**

Melba Crawford received the Ph.D. degree in systems engineering from The Ohio State University, Columbus, OH, USA, in 1981. She is currently the "Nancy Uridil and Francis Bossu" Professor of Civil Engineering with Purdue University, West Lafayette, IN, USA, where she is also a Professor with the School of Electrical and Computer Engineering and the Department of Agronomy. Her research interests include the development of machine learning-based algorithms for classification and prediction, and applications of these methods to hyperspectral and LIDAR remotely sensed data. Prof. Crawford was the recipient of the GRSS Outstanding Service Award in 2020 and the IEEE GRSS David Landgrebe Research Award in 2021.

Organizer Prof. P. Gamba Ph.D. Coordinator Prof. I. Cristiani

#### Seminars in English delivered at Collegio Borromeo

For more information about the seminar schedule and how to attend, please refer to Prof.Paolo Gamba - paolo.gamba@unipv.it