



### About the Keynote Speaker

- Dr Yubin Lan, Professor and Director, National Center for International Collaboration Research on Precision Agricultural Aviation Pesticide Spraying Technology, South China Agricultural University, Guangzhou, China .
- Agricultural Engineer in the USDA-ARS, USA.
- Adjunct professorship in Texas A&M University, USA.
- Dr. Yubin Lan first proposed the concept of “precision agricultural aviation” in the world (2005) and took the lead in research work on the combination of agricultural aerial remote sensing and precision aerial spraying in the world. Dr. Lan has long been engaged in the research and application of precision agricultural aviation, aerial spraying technology and airborne remote sensing technology, and more than 300 academic papers have been published. Dr. Lan was the recipient of “Young Professional Engineer” award from ASAE TX Section (1994), the Texas Section Engineer of the Year Award from the ASABE (2012), and the Distinguished Career Award (2013) and Outstanding Contribution Award (2014) from the AOCABFE, the Distinguished Service Award from USDA-ARS (2014); the “Outstanding Merit Awards” from USDA-ARS for 8 consecutive years from 2006 to 2013. Outstanding Contribution Awards of Agricultural Aviation from the Agricultural Aviation Working Group of the CSAE (2015); Scientific Chinese's Person of the Year (2015) and Industry-University -Research Institute Collaboration Award (2016); First Global UAV Contribution Award from Drone World Congress (2017); Contribution Awards for Agricultural Aviation Development in China from Technology Innovation Strategic Alliance for Agricultural Aviation (2018).

## Organizing Committee for the Management of Chinese Delegation Visit at PMAS-AAUR

### I. Patron-in- Chief of the Chinese Delegation Committee

Prof. Dr. Nadeem Akhtar Abbasi, Dean FC&FS

### II. Chairman, Chinese Delegation Committee

Prof. Dr. Fayyaz-ul Hassan, (Chairman, Department of Agronomy)

### III. Focal Person for Chinese delegation Committee

Dr. Muhammad Naveed Tahir, (Assistant Professor, Department of Agronomy)

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### IV. Invitation & Reception Committee Convener

Dr. Muhammad Rasheed, Associate Professor, Department of Agronomy

Dr. Asim Gulzar (Assistant Professor, Department of Entomology)

### V. Seminar room & Printing/Publication Committee Convener

Dr. Abdul Munaf (Assistant Professor, Department of Agronomy)

Dr. Mukhtar Ahmed (Assistant Professor, Department of Agronomy)

Dr. Ghulam Abbas Shah (Assistant Professor, Department of Agronomy)

### VI. Refreshment & Accommodation Committee Convener

Dr. Irfan Aziz (Associate Professor, Department of Agronomy)

Dr. Sadar Ali (Assistant Professor, Department of Agronomy)

### VII. MOU Committee Convener

Prof. Dr. Atta ul Mohsin (Chairman, Department of Entomology/Director External Linkages)

### VIII. Transportation Committee Convener

Mr. Shahid Ali Khan (Director P&D/Principal Transport Officer)

### IX. Media Committee Convener

Mr. Malik Nadeem (Director, PRP)

Mr. Musa Kalim, Public Relation Officer (PRP)

### X. Security Committee Convener

Dr. Amir Saleem (Assistant Professor, Department to Forestry and Wildlife/Principal Officer Estate Care & Security)

### XI. Knoot Farm Committee Convener

Dr. Shahzada Sohail (Associate Professor, Department of Soil Science/Director Koont Research Farm)



# International Seminar on UAV Based Precision Agricultural Spraying Technology and Field Demonstration 08-09 January 2019



**Jointly Organized by**  
**Department of Agronomy**  
**Pir Mehr Ali Shah**  
**Arid Agriculture University Rawalpindi**  
**&**  
**National Precision Agricultural Aviation Center,**  
**South China Agricultural University Guangzhou,**  
**China**



## Introduction



Advancement in low altitude remote sensing technologies such as Unmanned Aerial Vehicles (UAVs) providing low cost and real time monitoring solution for agricultur crops successfully. Recently developing UAVs for agricultural spraying becoming very popular due to several advantages over the tradition knapsack sprayer. UAV sprayer does not need a runway, they can take off and land vertically. UAV sprayer covers wide range of applications. Flying at low altitude of several meters above the crops. They are suitable for all kinds of complex terrain, crops and plantations of varying heights, has an ergonomic and innovative remote control, easily manages low altitudes flights and does not harm the crop. UAV sprayers has high efficiency for spaying per day (50-100 acres) which is 30 times more than the traditional knapsack sprayer.



The agriculture sprayer drones protect farmers from poisoning and also protect the environment, while spraying liquid pesticides, fertilizers and herbicides on agricultural land. UAV sprayers greatly saving the pesticides wastage (30%) due to high degree of atomization and as the chemical fog sprayed to all levels of the crop. Ag drone has a long productive lifespan, low maintenance cost, and its parts are easy to replace, as and when required.

## Objectives



This Seminar is joint effort between Department of Agronomy, PMAS-Arid Agriculture University Rawalpindi and National Center for International Collaboration Research on Precision Agricultural Aviation Pesticide Spraying Technology, South China Agricultural University, Guangzhou, China, under the Joint Project "GNSS-RTK based Precision Agricultural Aerial Remote Sensing Application".



The seminar will be consists of seminar session, discussion and field demonstration of UAV Spraying Technology. This activity will impart advance knowledge to the faculty, researchers and graduate students. This activity will also deepen our collaboration for further strengthening the research and future exchange program with the Chinese partner.

### List of the foreigners participants from South China Agricultural University, China

- ➡ Prof. Dr. Yubin Lan
- ➡ Prof. Dr. Jizhong Deng
- ➡ Prof. Dr. Yali Zhang
- ➡ Prof. Dr. Jiyu Li
- ➡ Prof. Dr. Shizhou Wang
- ➡ Prof. Dr. Fan Ouyang
- ➡ Prof. Dr. Zhiyan Zhou
- ➡ Prof. Dr. Yuxin Han
- ➡ Mr. Huasheng Huang



## Programme



| Day-1<br>08-01-2019 (Tuesday) |   |
|-------------------------------|---|
| Time                          | Activity  |
| 9:45AM - 10:00AM              | Recitation & Naat   |
| 10:00AM -10:10AM              | Welcome address by Prof. Dr. Nadeem Akhtar Abbasi (Dean FC & FS)  |
| 10:10AM -10: 20AM             | Presentation by Dr. M. Naveed Tahir (Introduction of the Joint Project)                                     |
| 10:20AM -10:45AM              | Presentation by Prof. Dr. Zhang Yali (Introduction of the NPAAC)  |
| 10:45AM -11:00AM              | Presentation by Dr. Hassan Munir (UAV Spraying Application in Pakistan)                                     |
| 11:00AM -11:30AM              | Keynote Speech on UAV Precision Agricultural Spraying Technology by Prof. Dr. Yubin Lan                     |
| 11:30AM -11:45AM              | Address by the worthy Vice Chancellor   |
| 11:45AM -12:00PM              | Vote of thanks by Prof. Dr. Fayyaz-ul Hassan (Chairman, Agronomy)   |
| 12:00PM -12:10PM              | Shield distribution   |
| 12:10PM -12:20PM              | Group photo at front of main admin block  |
| 12:20PM -12:35PM              | Refreshment   |
| 12:35PM - 01:00PM             | MOU Ceremony  |
| 01:00PM - 02:00PM             | Lunch & Prayer break  |
| 02:00PM - 03:30PM             | Discussion/Suggestion Session Chair by Dr. Fayyaz ul Hassan (Chairman, Agronomy) at Dean FC&FS meeting room |
| 03:30PM - 03:45PM             | Refreshment   |
| 04:00PM - 06:00PM             | Visit to Lok Virsa (Islamabad)  |
| 06:30PM - 08:30PM             | Dinner  |

| Day-2<br>09-01-2019 (Wednesday) |  |
|---------------------------------|--|
| Time                            | Activity   |
| 08:00AM                         | Departure from PMAS-AAUR to Koont Research Farm for UAV spraying activities                |
| 09:30AM - 09:45AM               | Arrival at Koont Research Farm and Refreshment   |
| 09:45AM - 12:00PM               | Field Demonstration of UAV Spraying Performance by Dr. Fahd Rasul & Dr. Hassan Munir (UAF) |
| 12:00PM - 01:00PM               | Lunch  |
| 01:00PM - 03:00PM               | Departure from Knoot Research Farm to University   |

*You are cordially invited to participate in the*  
**International Seminar on UAV Based Precision Agricultural  
Spraying Technology and Field Demonstration**

**08-09 January 2019**



**Jointly Organized by**

**Department of Agronomy, Pir Mehr Ali Shah Arid Agriculture University  
Rawalpindi**

**National Precision Agricultural Aviation Center, South China Agricultural  
University Guangzhou, China**

