APPLICATION FORM

ICAR Winter School

On

Solar photovoltaic and thermal applications for energy-water-food security in agriculture

(September 19 to October 9, 2018)

1. Full Name (in capital letters):……...
2. Designation:……
3. Employer address:……..
……
……
4. Postal address (with Email and mobile no.)……
……
……
……
5. Date of birth: ……
6. Sex (male/female):……...

Academic record	Examination passed	Subject	Year	University/ Institute	Class/ Rank
Bachelor's					
Master's					
Ph.D.					
Others					

7. Marital status: ……..
8. Educational qualification:
9. Whether accommodation is required (Yes/No):……...
10. Mention, if you have participated in training, during previous years on similar theme:……
11. Level of computer application: ……..
12. Research/Teaching/Professional experiences:……
……...
13. Payment details of ₹ 50/- as registration fee……..

Date……

Place…… Signature of the applicant

Recommendations of forwarding Institute:

Certificate

It is certified that the information furnished above has been verified and found to be correct.

How to apply

Interested candidate may apply online via the website http://iasri.res.in/cbp. Necessary rules and guidelines are available in the website. For any query write mail to the course director or cbp@icar.gov.in. Please ensure to upload the scanned copy of the application form approved by the Director or Head of Organization

Eligibility

Participants should be from ICAR institutes/ State AUs/CAU/Agricultural faculty of AMU, BHU, Vishwa Bharati and Nagaland University in the cadre of Assistant Professor or equivalent or above.

Selection based on short listing of applications and preference will be given to those who have not undertaken similar training anywhere. Decision of Course Director shall be final.

Number of seats : 25

Important dates

Last date of application:	July 31, 2018
Intimation of selection:	Aug. 15, 2018
Confirmation by participants:	Aug. 31, 2018
Course commencement:	Sept. 19, 2018
Course completion:	Oct. 9, 2018

Address for Correspondence

Dr. Priyabrata Santra (Course Director)
Principal Scientist
Division of Agricultural Engineering and Renewable Energy
ICAR-Central Arid Zone Research Institute
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Updates are available at www.cazri.res.in

Announcement

ICAR Winter School

Solar photovoltaic and thermal applications for energy-water-food security in agriculture

September 19 - October 9, 2018

Organized by

ICAR-Central Arid Zone Research Institute

Jodhpur, Rajasthan, India 342003

Sponsored by

Indian Council of Agricultural Research

Background

Energy is the basic necessity to meet human needs. Demand for daily energy creates pressure on finite source of fossil fuel based energy, which is dwindling rapidly. Therefore, there exists a need to reduce our dependency on fossil fuel based energy and this need can be fulfilled by increasing the share of energy use from renewable sources e.g. solar, wind, biomass etc. Agriculture sector consumes about 7-8% of total energy consumption of India. Pumping of irrigation water, use of machineries for different farm operations, processing and value addition of farm produces etc. are major activities consuming energy in agriculture sector. With mechanization, groundwater irrigation and protected cultivation of food production system from agrarian to a futuristic technology-driven system, there has been rapid increase in energy use in agriculture. It is estimated that energy use in agriculture needs to be increased from 1.6 kW ha^{-1} to 2.5 kW ha^{-1} to meet the production target of next 20 years. The rise in energy use has increased burning of fossil fuels and emitting greenhouse gasses is contributing to climate change and increased frequency of extreme weather events. In this context, there is a need to harness and use more renewable forms of energy from solar, wind and biomass sources, all of which are plentiful in the country.

Considering the potential of solar energy in future, few avenues of its utilization in agriculture are as follows: **(i) agri-voltaic system, (ii) Solar PV operated water lifting / pumping system (ii) Solar PV operated equipments (iii) Solar thermal devices for processing and value addition of agricultural produces and (iv) Solar PV hybrid devices**

Course content

The aim of this course is to provide exposure to the participants with the recent developments in solar energy applications including solar thermal and solar PV technologies, different novel solar devices and systems for agriculture, measurement and analysis of solar radiation etc. Specifically, following modules will be covered in the short course:

- Principles and theory of solar PV and thermal technologies
- Thermal energy storage using phase change material
- Agri-voltaic system
- Solar PV pumping system for irrigation
- Post harvest processing through solar devices
- Techno economics of solar PV and thermal technologies

Course Director

Dr. Priyabrata Santra, Principal Scientist
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Course Co-Directors

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About CAZRI

Central Arid Zone Research Institute, Jodhpur is a Premier Organisation of the Indian Council of Agricultural Research (ICAR), Department of Agricultural Research and Education, Ministry of Agriculture, Government of India. The Institute is working constantly for more than fifty years towards understanding arid environments so far as to achieve higher productivity through sustainable management of natural resources. Its state of art laboratories, strong international linkages and relentless efforts of its staff has brought the Institute in the forefront as an emerging Leader in the area of Arid Zone Research.

Weather at Jodhpur

In the month of September, weather is generally comfortable with the mean maximum temperature 30 ˚C and mean minimum of 15 ˚C making it the most pleasant and suitable time for such an activity.

How to reach Jodhpur

Jodhpur is well connected through Rail and Bus transport and has links with all the major cities of India. The institute can be reached by hired or personal vehicle by road. Distance from major terminals of the city is:

From Railway Station: 6 km

From State Roadways Bus Stand: 8 km

Jodhpur is known as the "Sun City" because of its bright and sunny weather throughout the year. Named after Rao Jodha, who established in 1459 it rose to be the second largest city of Rajasthan and is a very popular tourist destination.

Boarding and Lodging

Participants will be paid travel fare of to and fro journey by rail or bus as per the entitlement, restricted to the maximum of AC II tier of the shortest route. TA will be paid on the production of original tickets. Free boarding will be provided during this training program. Free lodging shall be provided on first come first serve basis.