## **Important Dates**

Last date for receipt of applications	: November 10, 2022
Intimation to selected candidates	: November 12, 2022
Confirmation by selected candidates	s : November 15, 2022

# **How to Apply ?**

The applicants may see the guidelines available at the website for the winter school at https://cbp.icar.gov.in/ Data/ Announcements/ Guidelines %20of%20Summer%20Winter%20School.pdf As per the ICAR instructions, the interested candidates should register and apply online through 'Capacity Building Programme' (CBP) Vortal as follows:

- 1. Visit the website <u>https://cbp.icar.gov.in/</u>or click onCapacity Building Programme link under <a href="http://www.icar.org.in/">http://www.icar.org.in/</a>
- 2. Login using your user ID and Password. To create user ID use "Create New Account" link.
- 3. After login, click on "Participate in Training" link and fill the proforma.
- 4. Take a printout and send duly signed copy through proper channel to the Course Director, Winter School on 'Technological advances in Processing Value Addition and Biomass Utilization of Natural Fibres', ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata-700040 by post along with registration fee as per the address and contact details given overleaf. The advance scanned copy of the nomination may be sent by e-mail (ninfet.winterschool.2022@gmail.com). Please feel free to contact the Course Director for any assistance.

Note : The participants are required to pay a sum of Rs. 50/- (Rupees Fifty only) as a registration fee (Nonrefundable) along with the completed application in the form of Demand Draft/ Indian Postal Order drawn in favour of 'ICAR UNIT-NINFET Kolkata' payable at Kolkata. Payment may be made through online in the account of "ICAR NINFET" KOLKATA. Bank: State Bank of India, A/C No. 11129265097, Branch Name: Tollygunge; IFSC Code: SBIN0001719; MICR Code: 700002103. In such a case the transaction details need to be sent along with the application form.



# Contacts

### **Course Director**

## **Dr. Deb Prasad Ray**

Principal Scientist and In-Charge HRD Cell Mobile: 7439626004 Email: ninfet.winterschool.2022@gmail.com

### **Course Co- Directors**

## Dr. Santanu Basak

Senior Scientist, Mechanical Processing Division Mobile: 9643297075 Email: ninfet.winterschool.2022@gmail.com

# **Er. Prateek Shrivastava**

Scientist, Research and Development Unit Mobile: 9734045443 Email: ninfet.winterschool.2022@gmail.com





# **ICAR Sponsored Winter School**





# Announcement-cum-Information **Brochure**

# On

Technological advances in Processing, Value Addition, and Biomass Utilization of Natural Fibres December 01-21, 2022



Organized by

भाकृअनुप-राष्ट्रीय प्राकृतिक रेशा अभियांत्रिकी एवं प्रौद्योगिकी संस्थान

ICAR-National Institute of Natural Fibre Engineering and Technology (पूर्व भाकुअन्प-निरजैफ्ट Erstwhile ICAR-NIRJAFT) (Indian Council of Agricultural Research) 12, Regent Park, Kolkata- 700 040

## **Host Institute**

ICAR-National Institute of Natural Fibre Engineering and Technology is a premier institute under Indian Council of Agricultural Research, New Delhi and dedicated to the cause of natural fibres leading to the diversified use and industrial growth. It was inaugurated by the Viceroy and Governor General of India, Lord Linlithgow on 3rd January, 1939. During the long period of eight decades, the institute has flourished with multifarious disciplines and carved a niche as a center of excellence on research of Jute and Allied Fibre Technology catering to the farmers, entrepreneurs and industry. The institute is adequately equipped with the state-of-the-art laboratories having sophisticated instruments, equipments, machinery, business incubation, workshop, library, pilot plant along with guest house on the adjoining campus of staff quarters. Since 2019, this institute is dealing with all natural fibres and renamed as National Institute of Natural Fibre Engineering & Technology

## **Information on Winter School**

Jute and allied fibres constitute a diverse group of plant fibres catering to the various requirements of the people in the country apart from creating large employment opportunities and contributing significantly to the national exchequer through export. This sector occupies an important place in the national economy especially in the eastern and north eastern region as it supports nearly four million farm families. Besides, industry provides direct employment to more than two lakhs industrial workers and extend livelihood to another 1.5 lakh people in the tertiary and allied sector.

Besides jute, other natural fibres like banana, sisal, flax, ramie, sunhemp, coconut, pineapple leaf fibre, etc. have separate characteristic with immense potentialities along with jute for creating a healthy, sustainable and environment-friendly choice of livelihood for the people. But the fibres are scarcely used as these are not available in plenty due to lack of awareness and non-availability of appropriate extraction technology. The potentialities for utilization of the residual biomass after extraction of these fibres for conversion to value added products may be exploited to make the whole process commercially viable and attractive. Production and processing of jute and allied natural fibres for value addition and utilization of fibre agro-residues will help in sustainable livelihood and empowerment of the poor in the rural sector.



With this background the present training programme on "Technological advances in Processing, Value Addition, and Biomass Utilization of Natural Fibres" is being organized with an aim to explore the recent advances on processes and technologies pertaining to development of value-added products from jute and allied fibres. This training program will help to enrich the technical knowledge of the participants on potential value addition processes on jute and allied fibres through product diversification from its biomass and its waste. This program will also explore the possibilities and opportunities to promote the natural fibres for the replacement of synthetic fibres in order to sustain the environment.

## **Objectives**

The major objective of this course is the technical development of assistant professor, scientist, subject matter specialist in the field of different natural fibres. The technological advances like extraction process, retting, fibre to yarn and fabric preparation, testing, quality determination, grading, by product utilization, chemical processing, technical textiles, high-value products from natural fibres will be covered under the curriculum. Training will also deliver the knowledge and information of sensors and automation, artificial intelligence, internet of things, intellectual properties, copyright, entrepreneurship development so that way it will be very much useful for the stakeholders.

## Subject matter covered

The training curriculam is largely based on the various aspects of the natural fibres. Following points represent the tentative subject matter will be covered in the winter school:

- Technological advances for the sustainability of the natural fibre. ?
- ? Present Status and Future Perspectives of Natural Fibres.
- ? Extraction and improved retting technologies for different natural fibres.
- Application of Sensor, Instrumentation, Artificial Intelligence, ? Machine Learning, Internet of Things and other advance technologies in the field of natural fibres.
- ? Mechanical processing of natural fibres for industrial application
- Natural fibres in agrotextiles, geotextiles and composite ? development.
- Chemical processing of natural fibres coloration, value-added ? finishing, paper production etc.
- ? Mechanical extractors for extraction of ribbon/bast/fibres for various natural fibres.
- Practical knowledge on sophisticated instrument for ? characterization of natural fibres.
- ? Utilization of natural fibre biomass for value added production development.
- ? IPR, Technology Management, Business Planning and Development

Free lodging and boarding will be provided to the participants as per the approved ICAR norms. The Institute has a well-furnished guesthouse/ hostel with dining, recreation and medical facilities in the campus. Please note that, strictly no accommodation in the guest house will be provided to the family members or guests of the participants.

Participants will be paid travel fare to and fro through the shortest route from their respective institution to ICAR-NINFET, Kolkata by Rail or bus or other means of transport. The payment will be made as per their entitlement but restricted to the maximum of AC-II tier train fair. If any participant chooses to travel by air, he/she may do so, but their claim shall be restricted to AC-II tier train fair. TA to be paid on production of a certificate or tickets by the participant.

Kolkata is well connected by flight, rail and road. The campus is located at 26 km from Netaji Subhash Chandra Bose International Airport, Kolkata and 15 km from Howrah Railway Station/ bus station. Pre-paid taxi and bus can be availed at airport/railway station/bus stand to reach ICAR-NINFET, Kolkata campus. Kolkata will be comfortable during the month of December and light woollen are preferred during nights.



# **Eligibility**

The training programme is open to Scientists/Teachers/Subject Matter Specialists/ Professionals of ICAR Institutes / CAU / SAUs /KVKs involved in research, development, training, testing and extension programmes.

The applicant should be working in a position **not below the rank** of Scientist / Assistant Professor/Lecturer/Subject Matter

Specialists or Equivalentwith specialization of Agricultural Engineering/Renewable Energy Engineering/Agricultureand Allied

Discipline /Textile Manufacturing and Technology/Fashion Technology/Home Science.

A maximum of 25 participants will be selected based on their qualification, experience and area of work.

# **Boarding and Lodging**

## Travel

# **How to Reach NINFET**

http://www.nirjaft.res.in/ContactUs