



*National Program for Demonstration and Dissemination of select Technologies  
of Unnat Bharat Abhiyan Institutions*

# MAHOTSAV & EXPO "UNNATI"

*Unnat Bharat Abhiyan Networking for National Atmanirbhar Technological Intervention*

ORGANISED BY

## उन्नत भारत अभियान

NATIONAL COORDINATING INSTITUTE, IIT DELHI

*Dates: 17th & 18th March 2023*

*Venue: Dogra Hall, IIT Delhi*



**Dr. Subhas Sarkar**

*Hon'ble Minister of State for Education, GoI*



**Shri Harsh Chouhan**

*Chairman,  
National Commission for Scheduled Tribes*



**Dr. Gajanan Dange**

*President, YOJAK Centre for Research &  
Strategic Planning for Sustainable Development*

## Theme Wise List of Technologies invited to UNNATI Mahotsav & Expo

Theme	No.
Rural Energy Systems	14
Artisan, Industries & Livelihood	12
Water Resource Management	14
Sanitation	6
Basic amenities (Infra, School Education & services)	19
Sustainable Agriculture Systems	17

<b>17 March 2023, 1:45 PM – 2:55 PM</b>	<b>Discussion/Presentation on Technologies demonstrated in Expo (Artisan and Livelihood theme)</b>
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Sr. No.	Time Slot	Participant & Institution	Title of Technology	Theme
1	1:45 – 1:50 PM	Brave Safety And Fire Academy	Papad Making Machine	Artisan, Industries & Livelihood
2	1:50 – 1:55 PM	Dr. Rafiq Zakaria College For Women, Aurangabad	Essential Oil Training Program for Farmers	Artisan, Industries & Livelihood
3	1:55 – 2:00 PM	HITAM,	A Natural and Renewable Resource Cleaning Machine	Artisan, Industries & Livelihood
4	2:00 – 2:05 PM	Jawaharlal Darda Institute of Engineering and Technology, Yavatmal	Cow urine distillation plant for villagers	Artisan, Industries & Livelihood
5	2:05 – 2:10 PM	Dr. Gulshan Kumar, Career Point University, Hamirpur, Himachal Pradesh-176041	Demonstration and Commercialization of Traditional Patal Making Handicraft through Patal Making Machine	Artisan, Industries & Livelihood
6	2:10 – 2:15 PM	RuTAG, IIT Delhi	Sheep hair shearing device	Artisan, Industries & Livelihood
7	2:15 – 2:20 PM	RuTAG, IIT Delhi	AC Motor Powered Tulsi Mala Bead Making Device	Artisan, Industries & Livelihood
8	2:20 – 2:25 PM	Maulana Azad National Urdu University Polytechnic Kadapa Satellite Campus,	Natural Products for Artisans, Industries and Livelihood: Manuu Souvenir Shop	Artisan, Industries & Livelihood
9	2:25 – 2:30 PM	National Institute of Technology, Srinagar,	Farmer/Artisan to Consumer based Track and Trace system for Saffron and Handicrafts in Kashmir using IoT and Block chain	Artisan, Industries & Livelihood
10	2:30 – 2:35 PM	RuTAG Cell IIT Kharagpur, email id: rintuin@gmail.com mobile no. 9434014609	Sal Leaves Plate Making Machine (electric)	Artisan, Industries & Livelihood
11	2:35 – 2:40 PM	Pachaiyappa's College for Men, Kanchipuram	Successful implementation of cow dung products making technology in adopted villages	Artisan, Industries & Livelihood
12	2:40 – 2:45 PM	Dr. Thaneswer Patel Associate Professor (NERIST), Dept. of Agriculture Engineering	Ergonomics Intervention on Sherpa Mode of Load Carriage	Artisan, Industries & Livelihood
13	2:45 – 2:50 PM	IIT Delhi	Process Protocol for Development of Bakery Products from Wild Yam Tuber	Artisan, Industries & Livelihood

14	2:50 -2:55 PM	Vimal Jyothi Engineering College	Low cost Egg Hatchery Unit	Basic amenities (Infra, School Education & services)
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<b>17 March 2023, 2:55 PM – 4:15 PM</b>	<b>Discussion/Presentation on Technologies demonstrated in Expo (Rural Energy Theme)</b>
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Sr. No.	Time Slot	Participant & Institution	Title of Technology	Theme
1	2:55 – 3:00 PM	Maulana Azad College of Arts, Science & Commerce Aurangabad	Solar Energy for rural village	Rural Energy Systems
2	3:00 – 3:05 PM	Mr. Anubhab Pal Assistant Professor (NERIST), Dept. of Agriculture Engineering	Solar Operated Paddy Thresher	Rural Energy Systems
3	3:05 – 3:10 PM	Dr Ashutosh S Werulkar, co-Coordinator:- Dr Hema Kale	Design and Development of Smart Solar street Light in the UBA adopted village named Khatmari	Rural Energy Systems
4	3:10 – 3:15 PM	St. Vincent Pallotti College of Engineering and Technology, Nagpur	Design and Development of Low cost Converted E Bicycle for Unnat Bharat Abhiyan adopted village named "panjari Lodhi".	Rural Energy Systems
5	3:15 – 3:20 PM	Prof. Naveen Tiwari, Prof. Kallol Mondal, Prof. Sandeep Sangal, IIT Kanpur	A solar dryer that runs without electricity to dry agri products like Amla, and vegetables	Rural Energy Systems
6	3:20 – 3:25 PM	NIT Raipur	SOLAR POWERED SUGARCANE JUICER	Rural Energy Systems
7	3:25 – 3:30 PM	Government Engineering College, Valsad	Solar dryer	rural Energy Systems
8	3:30 – 3:35 PM	CRDT, IIT Delhi	Compressed Biogas Operated Two Wheeler	Rural Energy Systems
9	3:35 – 3:40 PM	Indira Gandhi University Meerpur, Rewari Haryana	Domestic Bio Gas Plant	Rural Energy Systems
10	3:40 – 3: 45 PM	IIT Delhi	Small-Scale Low-Cost Biogas Enrichment and Storage Technology	Rural Energy Systems
11	3:45 – 3: 50 PM	IIT Delhi	Thermoelectric Generator Cookstoves	Rural Energy Systems
12	3:50 – 3:55 PM	IIT Delhi	Biomass Pellet Based Clean Combustion Device for Cooking and Heating Applications	Rural Energy Systems
13	3:55 – 4:00 PM	SPMVV SOCIETY FOR INNOVATION INCUBATION AND ENTREPRENEURSHIP - TECHNOLOGY BUSINESS INCUBATOR.	NOVEL MOBILE CHARGER with Security approved Power Bank: Flexi Tube light and Solar Charging Panel	Rural Energy Systems
14	4:00 – 4:05 PM	Shri Ram College of Engineering and Management, Palwal	Rural Energy Systems (Solar Cooler development)	Rural Energy Systems
	<b>4:05-4:15 PM</b>	<b>Discussion with experts</b>		

**17 March 2023,****4:35 PM – 6:10 PM****Discussion/Presentation on Technologies demonstrated in Expo (Agriculture theme)**

<b>Sr. No.</b>	<b>Time Slot</b>	<b>Participant &amp; Institution</b>	<b>Title of Technology</b>	<b>Theme</b>
1	4:35 – 4:40 PM	IIT Delhi	Refiner Mechanical Pulping of Rice Straw	Sustainable Agriculture Systems
2	4:40 – 4:45 PM	Dr. V. T. Joy	Solar dryer for farmers	Sustainable Agriculture Systems
3	4:45 – 4:50 PM	Ajay Basil	ufarms – IoF Agri Automation	Sustainable Agriculture Systems
4	4:50 – 4:55 PM	Mr.P. Perumal Student Team Members: 1) Ms. Madhangi.S 2) Mr.Jeeva.B 3) Mr.Bharani.J 4) Mr.l'ariharapandiyan.B	Portable Grain Dryer for Adverse Weather Conditions	Sustainable Agriculture Systems
5	4:55 – 5:00 PM	National Institute of Technology, Srinagar,	Agricultural water management using IoT	Sustainable Agriculture Systems
6	5:00 – 5:05 PM	National Institute of Technology, Srinagar,	IoT enabled Hydroponics system	Sustainable Agriculture Systems
7	5:05 – 5:10 PM	Department of Biotechnology, Brainware University (U-0846)	Mushroom Cultivation Technology7	Sustainable Agriculture Systems
8	5:10 – 5:15 PM	JAIN INSTITUTE OF TECHNOLOGY DAVANGERE	NANOCARBON-CONTAINING BIOFERTILIZER COMPOSITION AND PREPARATION METHOD THEREOF	Sustainable Agriculture Systems
9	5:15 – 5:20 PM	IIT Guwahati	paddy weeder suitable for wetland cultivation.	Sustainable Agriculture Systems
10	5:20 – 5:25 PM	IIT Guwahati	Modified Jeevamrutha Liquid Bio-Fertilizer formulations	Sustainable Agriculture Systems
11	5:25 – 5:30 PM	KPRIET, Coimbatore	Robotic Predators to control Crop eating birds	Sustainable Agriculture Systems
12	5:30 – 5:35 PM	PKR Arts College for WomenMr. C. Sanmugasundaram, Chittode, Erode. (Banana and IFS farmer)	Valai Vanam (Banana Forest)	Sustainable Agriculture Systems
13	5:35 – 5:40 PM	Bengal Institute of Technology and Management Birbhum	Smart Irrigation	Sustainable Agriculture Systems
14	5:40 – 5:45 PM	Government Engineering College, Sreekrishnapuram, Palakkad	Hydrosense	Sustainable Agriculture Systems
15	5:45 – 5:50 PM	Babasaheb Bhimrao Ambedkar University, Lucknow	Bioremediation of Saline Soil using Bioinoculant	Sustainable Agriculture Systems
16	5:50 – 5:55 PM	CSM Dgree College Chitrakoot UP	Zero Budget, Natural Farming	Sustainable Agriculture Systems
17	5:55 – 6:00 PM	Dr. Mahesh Tripathi, Eternal University, Baru Sahib, Himachal Pradesh-173101	“A Subsurface drip irrigation system and Conservation Agriculture for small land holder farmers in mountainous areas”	Sustainable Agriculture Systems
	6:00 – 6:10 PM	<b>Discussion with experts</b>		

**18 March 2013****09:00 AM – 11:00 AM****Discussion/Presentation on Technologies demonstrated in Expo (Water and Sanitation theme)**

Sr. No.	Time Slot	Participant & Institution	Title of Technology	Theme
1	9:00-9:05 AM	CSM, Hyderabad Institute of Technology and Management	Octacleaner: Underwater Robot	Water Resource Management
2	9:05-9:10 AM	College of fisheries and Engineering, Nagapattinam,	Pocket size Device for Water quality testing in Aqua Culture	Water Resource Management
3	9:10-9:15 AM	Govt. PG. College Baran, Rajasthan	Smart water tap	Water Resource Management
4	9:15-9:20 AM	Sreepathy Institute of Management And Technology	Real-time Water Level Monitoring for Dams and Rivers	Water Resource Management
5	9:20-9:25 AM	RuTAG, IIT Delhi	Groun5dwater Measurement Device6	Water Resource Management
6	9:25-9:30 AM	Indian Institute of Technology Tirupati,	Capaciti7ve deionization	Water Resource Management
7	9:30-9:35 AM	Dr.K.T.Loganathan Team Leader: Mr.P.Perumal, Student Team Mernbers: (1) Mr.Benilin.B.A (2) Mr.Jeffrey.l (3) Mr. Parameshwaran.s	Smart Wa8ter Suppll, System for 9Wild Lives of Kundrakkudi Village	Water Resource Management
8	9:35-9:40 AM	BUDDHA INSTITUTE OF TECHNOLOGY	SWACHH ALGAE WATER PURIFIER TILES	Water Resource Management
9	9:40-9:45 AM	BUDDHA INSTITUTE OF TECHNOLOGY	SWACHH LOW COST HOUSEHOLD BIO-FILTER USING HERBAL TECHNIQUE	Water Resource Management
10	9:45-9:50 AM	Manipur Technical University	Hydraulic Ram pump	Water Resource Management
11	9:50-9:55 AM	Maj. Dr. Ashlesha Ashok Tawde	Small scale drinking water purification plant	Water Resource Management
12	9:55-10:00 AM	Dr. Rahul Kumar Das	Mercury ion sensor	Water Resource Management
13	10:00 -10:05 AM	Rao Bahadur Y. Mahabaleswarappa Engineering College	IOT Based Automatic Tank Cleaner for Drinking Water	Water Resource Management
14	10:05 -10:10 AM		Mini hydro power project	Water Resource Management
15	10:10 -10:15 AM	Mr. Kondepudi Sai Preetham,	Smart Hand Wash Dispensers using IOT and Dashboard	Sanitation
16	10:15 -10:20 AM	H.V.P.M's College of Engg. & Technology, Amravati	'Sanitation and solid-liquid waste management from individual usage through toilets/bathrooms in rural areas'	Sanitation
17	10:20 -10:25 AM	Govt. PG. College Baran, Rajasthan	Smart Dusbin	sanitation
18	10:25 -10:30 AM		DESIGN AND FABRICATION OF U V SANITIZING ROBOT	Sanitation
19	10:30 -10:35 AM	Team I-eader: Ms.V. Gunasundari Student Team Members: I) Ms.S. Veera lakshmi	Digitalized Waste Separator	Sanitation
20	10:35 -10:40 AM	Sonal Sharma	Waste to Valuable: Used Flowers in religious Shrines	Sanitation
	<b>10:40- 11:00 AM</b>	<b>Discussion with Experts</b>		

**18 March 2023,**  
**11:15 AM – 1:15 PM**

**Discussion/Presentation on Technologies demonstrated in Expo (Basic Amenities theme)**

Sr. No.		Participating Institution	Title of Technology	Theme	Sub Themes
1	11:15-11:20 AM	College Of Engineering & Management, Badnera	Digital Classroom/Smart Classroom	Basic amenities (Infra, School Education & services)	Education
2	11:20-11:25 AM	College of Engineering & Technology, Akola	Low Cost Techniques in Building Construction	Basic amenities (Infra, School Education & services)	Infrastructure
3	11:25-11:30 AM	Vision College, Chittorgarh	LPG Leekage Detecting system	Basic amenities (Infra, School Education & services)	others
4	11:30-11:35 AM	Bengal Institute of Technology and Management, Birbhum	Baby cradle	Basic amenities (Infra, School Education & services)	Infrastructure
5	11:35-11:40 AM	IIT Jodhpur	Math-Lab	Basic amenities (Infra, School Education & services)	Edu
6	11:40-11:45 AM	IIT Jodhpur	Personalized AI for patient education and compliance	Basic amenities (Infra, School Education & services)	Edu
7	11:45-11:50 AM	NIT Raipur	Development of eco-friendly bricks /particle boards from waste natural resources for low-cost housing structures: A green manufacturing technology for rural industrialization and entrepreneurship development in Chhattisgarh Region	Basic amenities (Infra, School Education & services)	Infrastructure
8	11:50-11:55 AM	Charotar University of Science and technology, Anand	Augmented Reality and Virtual Reality to Augment Learning Outcome of Primary School Children	Basic amenities (Infra, School Education & services)	Edu
9	11:55-12:00 AM	Manipur Technical University	Leima Learning Kits	Basic amenities (Infra, School Education & services)	Edu
10	12:00 -12:05 PM	IIT Roorkee	Portable Manual Briquetting Machine for Converting Forest Bio Residue to Low Cost Energy Briquettes	Basic amenities (Infra, School Education & services)	Infrastructure
11	12:05 -12:10 PM	Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth, A Deemed to Be University Pilliyarkuppam, Puducherry	Low-Cost Dental Chair For Rural Health Care Reaching The Unreached -An Indigenous Technology For Dental Outreach.	Basic amenities (Infra, School Education & services)	Health
12	12:10 -12:15 PM	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY	RURAL HEALTH KIOSK	Basic amenities (Infra, School Education & services)	Health
13	12:15 -12:20 PM	Dr. Rajeshree Raut	Cattle Health Monitoring System	Basic amenities (Infra, School Education & services)	Health
14	12:20 -12:25 PM	IIT Jodhpur	Talking Gloves: A Language Independent Speech Generation Wearable Device	Basic amenities (Infra, School Education & services)	Health

15	12:25 -12:30 PM	SVNIT Surat	Making of sanitary pads using low-cost and eco-friendly machinery	Basic amenities (Infra, School Education & services)	Health
16	12:35 -12:40 PM	Maharaja Agrasen Institute of Technology (MAIT)	Landslide Detection System	Basic amenities (Infra, School Education & services)	Disaster Mangement
17	12:40 – 12:45 PM	Shubham Chauhan	Anti hail gun (Hail Suppression System)	Basic amenities (Infra, School Education & services)	Disaster Management
	<b>12:45 – 1:00 PM</b>	<b>Discussion with Experts</b>			