



: Organized by :  
College of Food Processing Technology & Bio Energy,  
Anand Agricultural University, Anand - 388110



**AICTE Teaching and Learning (ATAL) Academy Faculty Development (FDP) Program on**



## *Non Thermal Processing of Food Products*

Date: June 29 to July 3, 2021

College of FPTBE College of Food Processing Technology & Bio-energy, Anand Agricultural University, Anand has successfully organized an online FDP program sponsored by AICTE Training and Learning (ATAL) during 29-06-2021 to 03-07-2021. The program was completed under the guidance of Hon. Vice Chancellor Dr. K B Kathiria, Director of Research Dr. M. K. Jhala and Principal and Dean, College of FPTBE Dr. R. F. Sutar and other university authorities. Dr H Pandey, acted as coordinator for the program. The online FDP was organised using Webex on line platform with technical support from Director Information Technology and his team at Anand Agricultural University. There were in total 173 registrations received for the online program from different institutions and organisations throughout India. The most of the participants were faculty from institutions of National Importance like IICPT Thanjavur, DRDO-DFRL, IARI, New Delhi, BHU, Varanasi, DOGOR, Pune, CIT, Kokrajhar, Tezpur University, Assam, HBTU, Kanpur, BU, Jhansi. Participant's from various state agricultural university like PAU, Ludhiana, KAU, Kerala, ANGRU, YSR Horticultural University, SKUAST, Kashmir, JAU, Junagadh, NAU, Navsari, SDAU, Dantiwada and Kamdhenu University.

Various eminent speakers from different renowned institutions delivered their lecture in the FDP. Dr. H N Mishra, Professor from IIT Kharagpur delivered on Innovative Extrusion Process to Produce Designer Health Foods. Dr. S N Jha, ADG Process Engineering, ICAR, New Delhi elaborated the role of NIR Technology in Food Processing. Dr. C Anandramkrishnan, Director IIFT discussed various Innovation in Food Processing Technologies. Dr. P S Rao, Professor, IIT Kharagpur delivered his talk on High Pressure Processing Intervention in Food Processing. Dr. A K Sharma, from College of FPTBE, AAU, Anand elaborated the Irradiation in Food Processing. Dr. Nachiket Kotwaliwale, Director ICAR-CIPHET, Ludhiana discussed the application on Image Processing in Food Industry. Dr. N K Rastogi, Head Food Engineering, CFTRI, Mysore delivered a talk on Application of Pulse Electric Field in Food Processing. Dr. U S Annapure, Director ICT, Jalna elaborated the Cold Plasma Processing and its application in Food. Dr. H Pandey, College of FPTBE, AAU, Anand discussed Ultrasound and its Application in Food Processing. Dr. S K Giri, Principal Scientist, CIAE, Bhopal spoke on Membrane processing and Osmotic Dehydration in Food Processing. Dr. Snehashis Chakraborty, Assistant Professor, ICT Mumbai elaborated the role of Pulse Light Technology for Beverage Processing. Dr. V V Goud, Professor, IIT Guwahati delivered a talk on Green Technologies in Food Processing. Dr. R V Prasad, Ex-Head FQA, elaborated role of Food Safety and Management System in food processing. Dr. Pratima Khandelwal, Founder High Fly discussed the Pedagogical tools for teaching Food Technology in new-normal. Some of the glimpses of the event are as follows:

Webex Meeting Info | Hide Menu Bar

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Harsh Zalavadiya (Cohost) | Abhaykumar Bafna | **H N Mishra** | Anupriya | Hridyesh Pandey (Host)

### Functional Foods & Nutraceuticals Statistics

- The fastest growing food sectors
- Most interesting areas for research and innovation
- Japan and US are the world largest markets of functional foods followed by Europe

**Global Nutraceuticals Market (Billion US\$)**

Year	Market Size (Billion US\$)
2015e	183
2016e	198.7
2017e	209
2018e	252.5
2019e	285.2
2020f	308.9

**Indian Nutraceuticals Market (Billion US\$)**

Year	Market Size (Billion US\$)
2015e	2.8
2016e	3
2017e	4
2018f	4.7
2019e	5
2020f	6

29 June 2021 | Professor H N Mishra, IIT Kharagpur | 6

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Windows Taskbar: 27°C Partly sunny | 09:46 AM | 29-06-2021

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Video Participant Meeting Breakout Sessions Help

Participants (125)

Dr. Ravindra Babu | Abhaykumar Bafna | Abhirami P | Adarsh Yadav | AK Sharma

Akhila J Chand | Akshayjit Podder | Amit Barman | Amol Dagadkhair

Anitha Krishnan | Anjali Srivastava | Anuradha Pathak | Aryakrishnan

Unmute | Start video | Share | Participants | Chat

Windows Taskbar: 30°C Partly sunny | 11:14 AM | 29-06-2021

Professor H N Mishra, IIT Kharagpur

Webex Meeting Info

Speaking: Dr. Shyam Narayan Jha

## Theory of NIRS

- NIR is a part of electromagnetic radiation of light. So its propagation may be considered as a simple harmonic wave.
- Electric and magnetic fields are interconnected and affected by the properties of matter.
- Electric and magnetic fields interact with matter to give rise to a spectrum. Any simple harmonic motion has the properties of the sine wave defined by equation

$$y = A \sin \theta$$

where  $y$  is the displacement with a maximum value  $A$ , and  $\theta$  is an angle varying between zero and  $2\pi$  radians.

Participants (118)

- Harsh Zalavad... Cohost, me
- Hridayesh Pandey Host
- Dr. Shyam Narayan Jha
- Hridayesh Pandey Cohost
- VIPUL Cohost
- A. ALLWYN SUNDARRAJ
- Abhirami P
- Adarsh Yadav
- Akhila J Chand
- Amit Barman
- Amol Dagadkhair

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Dr. S. N. Jha, ADG Process Engineering, ICAR

Webex Meeting Info

VIPUL MAHIDA Cohost, me

A. ALLWYN SUNDARRAJ

Director IIFPT

## Food Start-ups in India

**"Start-ups have the potential to transform Indian food processing economy"** - MoFPI, 2020

- India has the 3<sup>rd</sup> largest start-up ecosystem in the world
- Out of 15000 recognized registered start-ups in India, only around 8 % are in food and agricultural sector
- The organized food processors are hardly 1.5% of the total food processors
- New start-ups are focusing on AI, robotics, drones and IoT to solve food supply chain challenges

Source: Munshi, Indian Journal of Public Administration, 2019; Food and Beverage News, 2019

Participants (98)

- VIPUL MAHIDA Cohost, me
- Hridayesh Pandey Host
- Director IIFPT
- Nikunj Soni - AAU Incuba... Cohost
- A. ALLWYN SUNDARRAJ
- Abhirami P
- Adarsh Yadav
- AK Sharma
- Akhila J Chand
- Amit Barman
- Anand

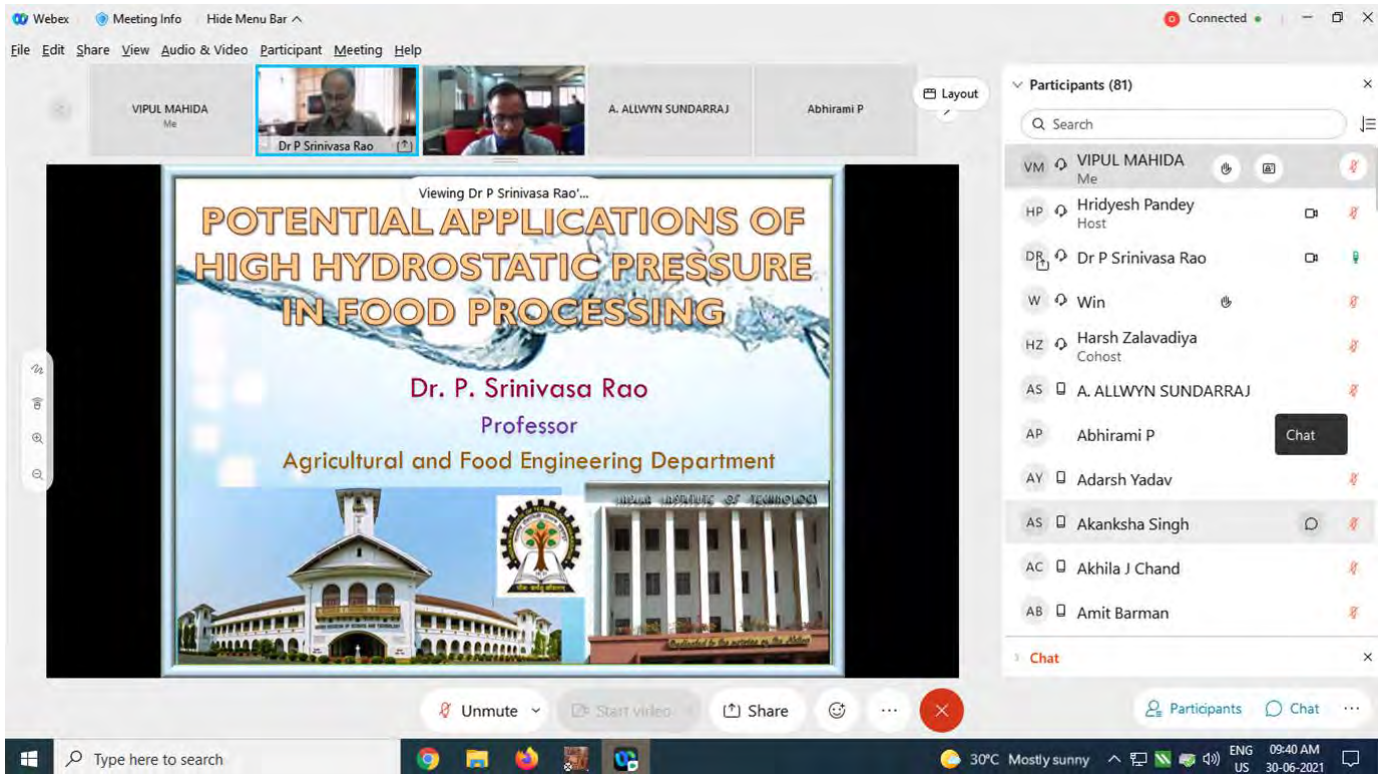
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Dr. C Anandramkrishnan, Director, IICPT, Thanjavur



Dr. Nachiket Kotwaliwale, Director, CIPHET, Ludhiana



Dr. P S Rao, Professor, IIT Kharagpur