

# KARYASHALA

## A FIVE DAY HIGH END WORKSHOP

Sponsored by Science & Engineering Research Board (SERB),  
Government of India under the Accelerate Vigyan Scheme

ON

## INDUSTRY-RELEVANT ADVANCED ANALYTICAL TECHNOLOGIES FOR NUTRACEUTICAL DEVELOPMENT AND DESIGNER FOOD

**Date: 17 July 2023 – 21 July 2023**

**Venue: NIT Rourkela (Offline mode)**



**Convenor**

**Prof. Winny Routray**

Assistant Professor  
Department of FPE  
NIT Rourkela

Email: routrayw@nitrkl.ac.in



**Co-Convenor**

**Prof. Rachna Sehrawat**

Assistant Professor  
Department of FPE  
NIT Rourkela

Email: sehrawatr@nitrkl.ac.in

**Organized by**

**Department of Food Process Engineering  
National Institute of Technology Rourkela  
Odisha – 769008, India**

## **About the Institute**

NIT Rourkela is one of the premier national level institutions for technical education in the country and is funded by the Government of India. The main objective of the Institute is to produce quality Engineers and Scientists in Graduate and Post-Graduate levels in various branches of Engineering and Science. The Institute is managed by the Board of Governors of National Institute of Technology (Rourkela) Society and vested with significant degree of administrative and financial autonomy. Government of India have recognized the Institute as a premier institution of repute and have developed it as a center of excellence under plan funding.

<https://www.nitrkl.ac.in/>

## **About the Department**

The Food process engineering department at National Institute of Technology Rourkela blends engineering disciplines with a strong understanding of food and food science. The academic and research activities in the department focus on the frontier areas of food process engineering such as food properties and prediction, post-harvest operations, food quality and safety, transport process and kinetics, product development and ingredients innovation, food packaging and storage engineering, computer-aided food engineering, energy efficiency, process control and efficiency, automation and manufacturing systems. Food process engineers can specialise in design, development, research, maintenance and operations such as processing, packaging, storage and transportation.

<https://website.nitrkl.ac.in/FP/>

## **About the workshop**

Nutraceuticals, which are generally components derived from food items beneficial for health, have become essential parts of our daily lives attributed to our current busy lifestyle and food habits. Simultaneously, the development of designer foods will help in enhancing the health benefits on a regular basis in day-to-day life. The workshop will be focussed on the latest analytical and sample preparation methods being developed and used in laboratories and industries. Often, the technology developed in the lab does not get transferred to the industry due to the lack of practicality, including economical and resource consumption. The intended speakers will highlight all the aspects of the processes being developed, starting from experimental design, and logic behind various studies to the choice of different instruments. This workshop will introduce the intended audience to the principles of these advanced technologies and the different sophisticated instruments extensively being used for analysis and process development. Speakers from different worldwide universities will also enlighten the students about the global skillsets required to prosper in this field. Industrial representatives will introduce the attendees to the points of focus relevant and important for the industries, which should be focused on successful product development and a career in R&D for preparing nutraceuticals and designer foods.

Some of the instruments, which they will get to see and have the training, include cold plasma set-up, microwave processing chambers, membrane filtration units, high-performance liquid chromatography, gas chromatography and FTIR, among many others.

## Objectives of the workshop and Topics to be covered

- Introduction to nutraceuticals and designer foods and to their market demand
- To increase knowledge of advanced and novel technologies relevant to the development of nutraceutical and designer food at an industrial scale.
- To introduce advanced analytical methods used for the processing as well as in-line quality assessment of the products.
- To provide knowledge on the utilization of food industry waste for the production of nutraceuticals and designer foods
- To provide information about the career opportunities for students working in this field and the complementary skill sets required.

## Eligibility and Shortlisting Criteria

- Applications are being invited from the **PG, PhD and UG 4th-year Eng. students.**
- Candidates should be able to provide a **letter of authentication** from their Supervisor/ Head of the department/Head of the Institute indicating their association with the institute and **“No Objection Certificate (NOC)”** for allowing their student to undergo training in the workshop, if selected.
- **Only 25 candidates** will be allowed to attend the Workshop.
- Applications will be shortlisted based on **“first come first serve”** basis as well as on the basis of academic and research credentials.
- **No registration fees.**
- **Accommodation and food will be provided.**

**REGISTER  
SOON**

**Last Date of Registration:  
2<sup>nd</sup> July 2023**

**LIMITED  
SEATS**

**Link for registration:**

<https://forms.gle/uBibqWFyEZv5PmKc6>

## **Organizing Committee**

**Patron**

**Prof. K. Umamaheshwar Rao**

Director, NIT Rourkela

**Convenor**

**Prof. Winny Routray**

Assistant Professor

Department of FPE,

NIT Rourkela

Email: routrayw@nitrkl.ac.in

**Co-Convenor**

**Prof. Rachna Sehrawat**

Assistant Professor

Department of FPE,

NIT Rourkela

Email: sehrawatr@nitrkl.ac.in

**Student Co-ordinators**

Subhanki Padhi

Shristi Shefali Saraugi

Kishan Kishor Gupta

Ankan Kheto

Ram Prasad Bebartta

**Department of Food Process Engineering  
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