



भारत 2023 INDIA

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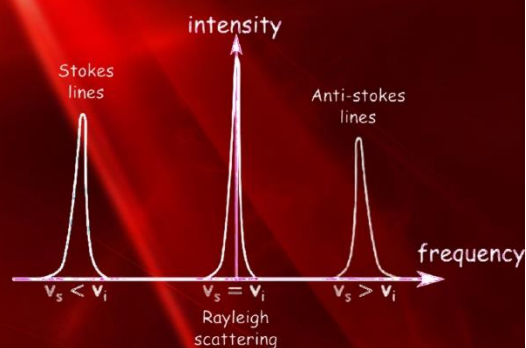
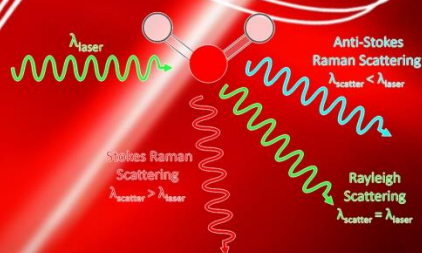
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Azadi Ka
Amrit Mahotsav

Five Days National Workshop cum Hands-on Training Program on Raman Spectroscopy

24th -28th July 2023



DEPARTMENT OF PHYSICS & ASTRONOMY

National Institute of Technology Rourkela

Sundargarh, Odisha-769008, India

Dr. Pitamber Mahanandia

Coordinator

ABOUT THE WORKSHOP:

Raman spectroscopy is one of the most versatile and robust non-destructive spectroscopy methods available to researchers and technologists. It is a powerful tool for analyzing a wide range of different materials. Since it was discovered, the technique has been employed to investigate material features such as, metal, ceramic, and polymer, nanoparticles, biomolecules ,in medicine, tumor and cancer diagnoses ,in pathology, in mineralogy ,carbonaceous and inorganic properties and their phases, functions, and defects. Cultural heritage diagnostics is a growing interdisciplinary field that unites the arts and the sciences, based around Raman spectroscopy results. In industry, Raman spectroscopy is used for quality control, research and development, and environmental and waste monitoring. Raman spectroscopy has even made its way into space. In this workshop, theoretical basis of classical and quantum approach of Raman scattering will be discussed. Last two days will be specially devoted for Raman Sampling Techniques followed by ,Spectral Analysis, Principles of spectral interpretation and Material Identification

SPEAKERS IN THE WORKSHOP:

- Prof.Shikha Varma
Institute of Physics,
Bhubaneswar-751005,OdishaINDIA
- Prof.Anushree Roy
Indian Institute of Technology
Kharagpur,West Bengal-721302,INDIA
- Prof. Satyaprakash Sahoo
Institute of Physics,
Bhubaneswar-751005,Odisha INDIA
- Prof.Subhabrat Dhar
Indian Institute of Technology
Powai, Mumbai 400 076, Maharashtra, INDIA
- Prof.Pitamber Mahanandia
National Institute of Technology
Rourkela-769008,Odisha, INDIA

ADVISORY COMMITTEE

Prof. K. K. Nanda, Director, Institute of Physics, Bhubaneswar, Odisha, India

Prof. Subhabrat Dhar, Indian Institute of Technology, Mumbai, India

Dr. Achintya Dhar, Indian Institute of Technology, Kharagpur, INDIA

Prof. Nishith Verma, Indian Institute of Technology, Kanpur, India,

Prof. Ajit Kumar Mahapatro, Delhi University, India

Prof. T.P. Radhakrishnan, University of Hyderabad, Gachibowli, Hyderabad, Telangana, India

Prof. Parameswar Krishnan Iyer, Indian Institute of Technology Guwahati, Assam, INDIA

LOCAL ORGANIZING COMMITTEE:

Prof. K. Umamaheshwar Rao, Director, NIT Rourkela, Patron.

Prof. P. N. Vishwakarma, HOD, Department of Physics & Astronomy, NIT Rourkela, Chairman.

Prof. Pitamber Mahanandia, Department of Physics & Astronomy, NIT Rourkela, Coordinator.

Prof. Dillip Kumar Pradhan, Department of Physics & Astronomy, NIT Rourkela, Secretary,

Prof. A. K. Singh, Department of Physics & Astronomy, NIT Rourkela, Member

Prof. B. Ganguli, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. S. S. Jena, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. P. Kumar, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. D. K. Bisoyi, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. J. P. Kar, Department of Physics & Astronomy, NIT Rourkela, Member.

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Prof. S. Mishra, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. S. Datta, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. S. C. Mahapatra, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. Mithun Biswas, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. Indrani Banerjee, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. Bharat Kumar, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. Abhay Pratap Yadav, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. Susanta Kumar Bisoi, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. Gopi Nath Daptary, Department of Physics & Astronomy, NIT Rourkela, Member.

Prof. Soudamini Sahoo, Department of Physics & Astronomy, NIT Rourkela, Member.

TARGET PARTICIPANTS

The workshop is intended primarily for Ph. D. scholars, Postdoctoral researchers, young faculty, and R & D scientists with a strong interest in Raman Spectroscopy. The workshop will give overview on theory of Raman scattering, its fundamental limitations, typical experimental setups, different measurement modalities with special focus on spectrometers, detectors acquired data analysis and its applications. To attend this workshop no previous experience or knowledge is required. The participants are expected to gain both theoretical and practical knowledge about Raman Spectroscopy.

APPLICATION PROCEDURE:

The application form duly filled by the participants, and after forwarded through current research adviser / supervisor / employer should be sent through e-mail (scanned copy) as well as post to the workshop coordinator. The application must be accompanied by a letter of support from the current research advisor / supervisor / employer.

Workshop Home Page: <http://www.nitrkl.ac.in/Research/Workshop>

For updates, please visit the web site: <https://website.nitrkl.ac.in/Academics/Events/Workshops/>

The application form can be downloaded from the website.

REGISTRATION FEE:

Industry professionals : INR 9000 (Before 7th July, 2023 and INR 10000 there after)

Faculties/Scientist : INR 9000 (Before 7th July, 2023 and INR 10000 there after)

Research students : INR 5000 (Before 7th July, 2023 and INR 6000 there after)

*Registration fee includes Conference Kit, Food (Breakfast, Lunch, and Dinner) during the workshop days. The registration fee is non-refundable.

ACCOMMODATION:

Possibility of accommodation on twin sharing basis can be arranged in the institute guest houses, subject to availability/advance payment. It is advised to the participants to stay on campus to attend the workshop on time.

ROOM TARIFF OF INSTITUTE GUEST HOUSE:

South Block

Single occupancy per day. **950.00 + 12% GST**

Twin sharing per person per day. **1250.00 +12% GST**

North Block

Single occupancy per day. **600.00 + 12% GST**

Twin sharing per person per day. **800.00 + 12% GST**

Tariffs may change without prior notice. Kindly visit the website for further details; [https://guesthouse.nitrkl.ac.in / Users/HomePage.aspx](https://guesthouse.nitrkl.ac.in/Users/HomePage.aspx)

Those who want to stay outside campus, there are budget hotels available near NIT Rourkela. By contacting directly the respective hotels, they can make their own arrangement. To reach the workshop venue from hotels, the participants have also to make their own arrangement.

- **Hotel Mayfair** (Panposh Road, Rourkela) (www.mayfairhotels.com)
- **Radhika Regency** (Bisra,Rourkela) (www.hotelradhikaregency.com)
- **The Regency Inn** (Main Road ,Rourkela) (www.regencyinn.in)
- **The Central Park Boutique Hotel** (Main Road, Rourkela) (www.thecentralpark.in)
- **Hotel Brindaban** (Main Road, Rourkela)(www.hotelbrindaban.com).

IMPORTANT DATES:

Last date for receiving applications : **15th July, 2023**

Early bird registration: **17th July, 2023**

Request for campus accommodation (latest by) : **15th July,2023**

ABOUT NIT ROURKELA & PHYSICS AND ASTRONOMY DEPARTMENT

National Institute of Technology, Rourkela has made rapid progress ever since it was converted to a deemed university from earlier Rourkela Engineering college. The institute has earned reputation in engineering, science and technology during the last decade for quality education. The institute striving very hard to become an institution of higher learning along with advanced research. Department of Physics & Astronomy, has maintained reputation as one of the best department for providing graduation and postgraduation levels courses along with M. Tech. and Ph.D. research programmes. Various research activities of this department in the area of Low Temperature Physics, Natural & Synthetic Polymers, Soft Condensed Matter, Semiconductors, Ferroelectrics & Dielectrics, Multiferroics, Nanotubes & Graphene, Superconductivity, Magnetic Materials, Theoretical Condensed Matter Physics, Theoretical High Energy Physics, Quantum Optics and Astronomy & Astrophysics etc. The experimental facilities available in the department of Physics & Astronomy are Raman Spectroscopy, XRD machine, VSM, Solar Simulator, Hall Measurement setup and dielectric measurement setup.

CONTACT:

Dr. Pitamber Mahanandia,

Coordinator, Workshop-2023

Department of Physics & Astronomy,

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