

INTERNATIONAL SCHOOL ON FUNDAMENTAL CRYSTALLOGRAPHY AND WORKSHOP ON RIETVELD REFINEMENT ANALYSIS (ISFC-2026)

23rd to 28th February 2026



SPONSORS

DEPARTMENT OF PHYSICS & ASTRONOMY

National Institute of Technology Rourkela
Sundargarh, Odisha-769008, India

Prof. Dillip K. Pradhan
Coordinator

About the School & Workshop:

The main focus of the event is the understanding of the fundamentals of crystallography, and implementation of Rietveld refinement analysis of powder diffraction data of functional materials like ferroics and multiferroics. The first three and half days would cover fundamental crystallographic topics starting from crystallographic symmetry and its application to two- and three-dimensional crystallographic point and space groups, symmetry relations between space groups including group-subgroup and group-supergroup relationships, crystal-structure descriptions and comparison. The last two and half days would be devoted to discussions on reciprocal-space construction and diffraction, X-ray powder diffraction, theoretical basis as well as strategy of Rietveld refinement analysis. The lecture sessions will be accompanied by hands-on practical sessions on space groups descriptions in Volume A of International Tables for Crystallography and online training for determination of subgroups of space groups and their applications in crystal-structure relations and comparisons using Bilbao Crystallographic Server (freely available at <https://www.cryst.ehu.es/>). The workshop on Rietveld refinement analysis is also based on intensive hands-on sessions using the computer programs of the FullProf Suite. The FullProf software will be used as the platform for Rietveld refinement, which is freely available at (<https://www.ill.eu/sites/fullprof/>).

Speakers and Tutors:

- **Prof. Mois Ilia Aroyo**, Universidad del País Vasco, Bilbao, Spain.
- **Prof. Massimo Nespolo**, Université de Lorraine, Nancy, France.
- **Prof. Juan Rodríguez-Carvajal**, Institut Laue - Langevin, Grenoble, France.
- **Dr. Claire V. Colin**, Institut Néel - CNRS & UGA, Grenoble, France.
- **Dr. Gemma de la Flor Martín**, Karlsruhe Institute of Technology, Germany.
- **Prof. Dillip K. Pradhan**, National Institute of Technology Rourkela, Odisha, India.
- **Dr. Ranjana R. Das**, Government Autonomous College, Rourkela, Odisha, India.
- **Dr. Anupam Mishra**, National Institute of Technology Rourkela, Odisha, India.
- **Dr. Anusree V. K.**, R Sankar Memorial SNDP Yogam Arts & Science College, Koyilandy, Kerala, India.

Organizers:

- **IUCr Commission on Mathematical and Theoretical Crystallography (MaThCryst).**
- **Department of Physics & Astronomy, NIT Rourkela, Odisha, India.**

International Program Committee:

- **Prof. Mois Ilia Aroyo**, Universidad del País Vasco, Bilbao, Spain.
- **Prof. Massimo Nespolo**, Université de Lorraine, Nancy, France.
- **Prof. Gregory McColm**, University of South Florida, USA.
- **Prof. Juan Rodríguez-Carvajal**, Institut Laue-Langevin, Grenoble, France.
- **Prof. Dhananjai Pandey**, Indian Institute of Technology BHU, India.
- **Dr. Claire V. Colin**, Institut Néel - CNRS & UGA, Grenoble, France.
- **Dr. Gemma de la Flor Martín**, Karlsruhe Institute of Technology, Germany.
- **Prof. R.N.P. Choudhary**, ITER, SOA University, Bhubaneswar, Odisha, India.
- **Prof. Rajeev Ranjan**, Indian Institute of Science (IISc.), Bangalore, India.
- **Prof. Rajesh Prasad**, Indian Institute of Technology (IIT), Delhi India.

Local Organizing Committee Members :

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

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

Prof. Dillip K. Pradhan, Department of Physics & Astronomy, NIT Rourkela, Coordinator.

Dr. Anupam Mishra, Department of Ceramic Engineering, NIT Rourkela, Co-coordinator.

Prof. P. Mahanandia, Department of Physics & Astronomy, NIT Rourkela, Secretary.

Dr. Soudamini Sahoo, Department of Physics & Astronomy, NIT Rourkela, Jt. Secretary.

Dr. Gopi Nath Daptary, Department of Physics & Astronomy, NIT Rourkela, Treasurer.

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

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

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

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

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

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

Dr. S. N. Dash, Department of Physics & Astronomy, NIT Rourkela.

Dr. A. C. Pradhan, Department of Physics & Astronomy, NIT Rourkela.

Dr. S. Mishra, Department of Physics & Astronomy, NIT Rourkela.

Dr. S. Datta, Department of Physics & Astronomy, NIT Rourkela.

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

Dr. M. Biswas, Department of Physics & Astronomy, NIT Rourkela.

Dr. I. Banerjee, Department of Physics & Astronomy, NIT Rourkela.

Dr. B. Kumar, Department of Physics & Astronomy, NIT Rourkela.

Dr. A. P. Yadav, Department of Physics & Astronomy, NIT Rourkela.

Dr. S. K. Bisoi, Department of Physics & Astronomy, NIT Rourkela.

Dr. N. Maji, Department of Physics & Astronomy, NIT Rourkela.

Dr. S. Sharma, Department of Physics & Astronomy, NIT Rourkela.

Dr. R. R. Das, Government Autonomous College, Rourkela, India.

Mr. J. Samal, Department of Physics & Astronomy, NIT Rourkela.

Mr. R. Beuria, Manager, Guest House, NIT Rourkela.

Target Participants:

The school is intended primarily for Ph. D. scholars, Postdoctoral researchers, young faculties, and scientists working in R&D sectors with a strong interest in the fundamental crystallography and its use for Rietveld refinement analysis of ferroelectric and multiferroic systems. Applications are invited from different parts of the globe to participate in the crystallography school. We are expecting nearly 60+ young crystallographers for this workshop. The aim of the school is to acquire both practical skills and theoretical knowledge in crystallography. Therefore, some elementary knowledge in vector algebra, matrix calculus, fundamental crystallography and solid state physics would be highly desirable prerequisites for a clear understanding of advanced topics planned for the school. Prospective participants are encouraged to participate in poster presentation.

Application Procedure:

The application form duly filled by the participants, and after being forwarded through the current research adviser/supervisor/employer should be sent through e-mail (scanned copy) to the workshop coordinator. The application must be

accompanied by a letter of support from the current research advisor/supervisor/employer. The letter of support should mention the potential benefits of attending the workshop and the sources of funding available to the applicant to participate in this workshop.

Workshop Home Page:

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

For updates and application form please visit the website.

Registration Fee:

Industry professionals - US\$ 200 (INR 16,000/-)
(Before 15th December, 2025 and **US\$ 250 (INR 20,000/-)** thereafter)

Faculty/Scientist - US\$ 200 (INR 16,000/-)
(Before 15th December, 2025, and **US\$ 250 (INR 20,000/-)** thereafter)

Research students - US\$ 100 (INR 8000/-)
(Before 15th December, 2025, 2025 and **US\$ 150 (INR 12,000/-)** thereafter)

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

** Attempt will be made for partial waiver of accommodation fees for selected research scholars subject to availability of funds from sponsoring agencies.

Bursary Award:

Travel and housing scholarships for students and young scientists (Ph. D. scholars, Postdoctoral researchers and recent graduates who have not yet secured permanent employment), preferably below the age of 30 years but in no case above 35 years, will be eligible to apply for bursary awards from IUCr to support their attendance at the school. In order to be eligible for the IUCr bursary awards, the applicant has to register, if not already registered, in the World Database of Crystallographers (WDC - registration is free of charge).

Accommodation:

Campus accommodation on a twin sharing basis will be arranged in the institute guest houses, subject to availability/advance payment. We advise participants to stay on campus to ensure timely attendance in the workshop.

Room tariff of Institute Guest House :

South Block

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| Single occupancy per day | - INR 1200.00/- (including GST) |
| Double occupancy for two person per day | - INR 1550.00/- (including GST) |

North Block

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| Single occupancy per day | - INR 750.00/- (including GST) |
| Double occupancy for two person per day | - INR 1000.00/- (including GST) |

*Tariffs are subjected to change without prior notice. Kindly visit the website for further details: <https://guesthouse.nitrkl.ac.in/Users/HomePage.aspx>.

Important Dates :

Last date for receiving applications : 1st November, 2025

Selection of applicants : 15th November, 2025

Early bird registration : 15th December, 2025

**Request for campus accommodation (latest by) :
1st January, 2026**

About Us:

The National Institute of Technology (NIT) Rourkela, was founded as a Regional Engineering College in 1961. NIT, Rourkela is a prestigious Institute with a reputation for excellence at both undergraduate and postgraduate levels. Since its inception, it has been fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on both basic and applied research. Department of Physics & Astronomy, formerly Department of Physics (established in 1961), was rechristened in 2013, has the well-earned reputation of being one of the best departments for imparting graduation and post-graduation levels courses as well as M. Tech. and Ph. D. programmes. At present, various research activities of this department are conducted in the areas of Ferroelectrics & Dielectrics, Multiferroics, Low Temperature Physics, Natural & Synthetic Polymers, Soft Condensed Matter, Semiconductors, Nanotubes & Graphene, Superconductivity, Magnetic Materials, Theoretical Condensed Matter Physics, Theoretical High Energy Physics, Quantum Optics and Astronomy & Astrophysics etc.