

About the School/Workshop:

The main focus of the event is the symmetry analysis of structural phase transitions in functional materials like ferroics and multiferroics. The first four days would cover fundamental crystallographic topics related to space group symmetry and its representation in International Tables for Crystallography, Vol. A, symmetry relations between space groups including group-subgroup and group-supergroup relationships, structure descriptions and comparison, crystal structure relationships. The last two days would be devoted to brief introduction to space group representations and their application in the analysis of structural phase transitions. The lecture sessions will be accompanied by hands on practical sessions on description of space groups in International Tables for Crystallography, and online training for determination of subgroups of space groups, crystal structure relations and pseudosymmetry, representations of space groups and symmetry mode analysis using Bilbao Crystallographic Server.

Speakers:

- Prof. Mois Ilia Aroyo, Universidad del País Vasco, Bilbao, Spain.
- Prof. Massimo Nespolo, Universite de Lorraine, Nancy, France.
- Prof. Bernd Souvignier, Radboud University, Nijmegen, The Netherlands.
- Prof. Dhananjai Pandey, Indian Institute of Technology BHU, India.
- Prof. Dillip K. Pradhan, National Institute of Technology, Rourkela Odisha 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, Universite de Lorraine, Nancy, France.
- Prof. Bernd Souvignier, Radboud University, Nijmegen, The Netherlands.
- Prof. Dhananjai Pandey, Indian Institute of Technology BHU, India.
- Prof. R. N. P. Choudhary, ITER, SOA University, Bhubaneswar, Odisha, India.

Local Organizing Committee:

- Prof. A. Biswas; Director, NIT Rourkela, Patron
- Dr. P. Kumar, HOD, Physics & Astronomy.
- Dr. D. K. Bisoyi, *Chairman*
- Dr. Dillip K. Pradhan *Coordinator*
- Dr. P. N. Vishwakaram, *Secretary*
- Dr. A. K. Singh, Jt. *Secretary*
- Dr. J. P. Kar, *Treasurer*
- Prof. S. Panigrahi, *Member*
- Prof. K. C. Pati, *Member*.
- Dr. P. Mahanandia, *Member*.
- Dr. S. S. Jena, *Member*.
- Dr. B. Ganguli, *Member*.
- Dr. D. Behera, *Member*.
- Dr. S. N. Dash,, *Member*.
- Dr. S. Mishra, *Member*.
- Dr. A. C. Pradhan, *Member*.
- Dr. S. Datta, *Member*.
- Dr. A. Rai, *Member*.
- Dr. S. K. Sahoo, *Member*.



International School on Fundamental Crystallography and Workshop on Structural Phase Transitions: A Satellite School of 24th IUCr Congress, 2017

Aug 30-Sept 4, 2017



Coordinator

Dr. Dillip K. Pradhan, Coordinator,
Satellite School of 24th IUCr Congress, 2017
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About Us:

Founded in 1961 as Regional Engineering College, National Institute of Technology (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 department 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 area 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 .

Important Dates:

- **Last date for receiving applications:** 28th February, 2017
- **Selection of applicants:** 15th March, 2017
- **Early bird registration:** 15th April, 2017
- **Request for campus accommodation (latest by):** 15th May, 2017
- **Application for bursary awards (Grant):** 1st May, 2017

Workshop Home Page:

<http://www.nitrkl.ac.in> → **Events & Happenings** → **Conference & Courses** → **Short Term Courses**

Sponsor:

- International Union of Crystallography (IUCr)

Registrations Fee:

Faculties/Scientist/ Industry professionals- US\$ 150.00 (INR 9000)

Research Students - US\$ 100.00 (INR 6000)

** Attempt will made for waiver of registration fees subject to receive of funds from sponsoring agency.

Accommodation:

Limited on campus accommodation on twin sharing basis would be arranged in the institute guest houses, subject to availability/advance payment. Participants are advised to stay on campus to attend the workshop on time.

Kindly visit the website for further details; <http://guesthouse.nitrkl.ac.in/Users/HomePage.aspx>

The Organizers of the [International School on Fundamental Crystallography and Workshop on Structural Phase Transitions](#) will observe the basic policy of non-discrimination and affirms the right and freedom of scientists to associate in international scientific activity without regard to such factors as citizenship, religion, creed, political stance, ethnic origin, race, colour, language, age or sex, in accordance with the Statutes of the [International Council for Science](#). At this school/workshop no barriers will exist which would prevent the participation of bona fide scientists.

Target Participants:

Ph. D. scholars, Postdoctoral researchers, young faculty and R & D scientists with a strong interest in the crystallography of structural phase transitions should plan to participate in the workshop. We are expecting nearly 50 participants for this workshop, out of which about 40 per cent of the participants will be from outside India. Some elementary background in Vector algebra, Matrix, Fundamental crystallography, Solid state physics and Group theory would be highly desirable prerequisite before moving to advanced topic planned for this workshop. Prospective participants are encouraged to make poster presentation in the workshop.

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. The letter of support should mention the potential benefit by attending the workshop, and the sources of funding available to the applicant to attend this workshop. The application form can be downloaded from the workshop homepage.

Bursary Award:

Travel and housing scholarships for students and young scientists (e.g. 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).