

24th National Symposium on Radiation Physics

NSRP-24

On

Reactor and Radiation Physics

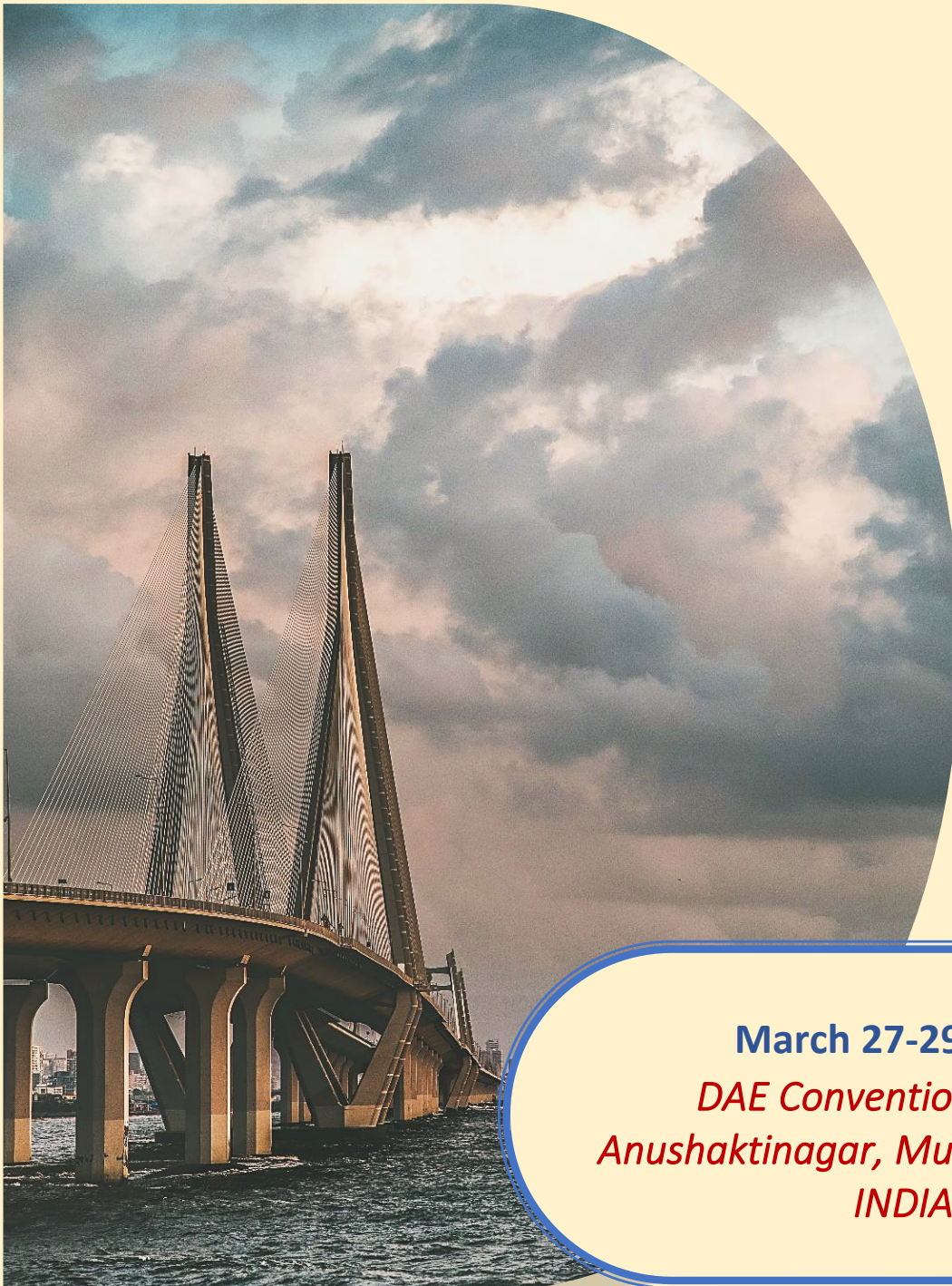
Organized by

Indian Society for Radiation Physics (ISRP)

In association with

Bhabha Atomic Research Centre

Board of Research in Nuclear Science



March 27-29, 2025

***DAE Convention Centre,
Anushaktinagar, Mumbai-400 094,
INDIA***

ABOUT ISRP

The Indian Society for Radiation Physics (ISRP) was formed with a primary objective of providing a common forum to Scientists and Engineers working on different basic as well as applied aspects of ionizing radiation. The idea of forming ISRP originated during the National Symposium on Radiation Physics (NSRP) held in Mumbai in 1970 under the inspiring leadership of Dr. A. K. Ganguly. The memorandum of constituting ISRP was issued in July 1973 and was formally inaugurated by Dr. Raja Ramanna during the 2nd NSRP at the University of Mysore on June 10, 1976. Scientists and Engineers from national laboratories, research scholars and academicians from universities and institutions of higher education, and professionals from industry are members of ISRP. To facilitate the nationwide activities in the field of radiation physics, many chapters of ISRP have been formed. These include the chapters at Mumbai, Kalpakkam, Patiala, Kolkata, Mysore, Mangalore, Coimbatore, Dharwad and Hyderabad. ISRP launched publishing newsletters, popular brochures, and technical reviews on various aspects of ionizing radiation. The list of publications includes 'Ionizing Radiation for Non-Destructive Evaluation', 'Safety of Nuclear Power Reactors', 'Isotope Tracer Applications in Industry and Civil Engineering', 'Solid State Nuclear Track Detector: theory & applications', and 'Monte Carlo methods.

National Symposium on Radiation Physics is conducted once in two years in collaboration with universities, research institutes and DAE units, to provide a platform for the scientists, young researchers, and students of Radiation Physics to share their work, knowledge and observations with each other. The previous symposium – NSRP-23 with the theme “Innovations in radiation physics” was held at Department of Studies in Physics, University of Mysore during January 19-21, 2023. The present symposium NSRP-24 focuses on the theme “Reactor and Radiation Physics” and it will be held during March 27-29, 2025 in Mumbai.

OBJECTIVES:

Indian Society for Radiation Physics (ISRP) is an association of professionals working on various aspects of radiation physics. ISRP organises regular symposium on thematic topics to share and upgrade the knowledge and activities at national and international levels. It promotes interdisciplinary and inter-institutional collaboration to promote the understanding and application of radiation in research, healthcare, nuclear power and industry.

NSRP-24 aims to focus on Reactor and Radiation Physics covering reactor core physics, shielding, safety analysis, key areas of radiation physics including applications, basic processes of radiation interaction, regulatory and safety practices, development and characterisation of radiation detectors, measurement techniques, quantification of radiation are integral part of NSRP-24 theme. Applications of radiation in medicine, industry and nuclear energy, nuclear safety and protection practices are also covered under the symposium theme.

Physics concept of reactors such as PHWR, VVER, BWR, and FBR, new reactor concepts such as SMR, Micro Reactor, MSBR, GCR, and advanced FBRs are

continuously putting new challenges for reactor physicists to upgrade conventional simulation tools and methods of design analysis. Reactor Shielding, Fuel cycle, Validation and Uncertainty Analysis etc. are topics of interest for nuclear reactors and will be discussed in the conference.

Public outreach, particularly with emphasis on myths verses facts about radiation, is critical to harness the benefits of nuclear energy. This issue will be suitably addressed in the symposium.

The NSRP-24 would provide a platform for experts from DAE, various research laboratories and universities to exchange ideas and latest through technical sessions covering panel discussions, keynote address, invited talk, oral and poster presentation during three days of symposium. The conference invites contributed papers on thematic topics for presentation from prospective authors.

THE VENUE:

Mumbai, the capital of Maharashtra, is located on the west coast of India. The city is well connected to other parts of India. The Symposium venue is at the Convention Centre in Anushaktinagar, which is located in the north-east part of Mumbai. This is a residential colony for the employees of Department of Atomic Energy (DAE) and is surrounded by beautiful hills with lush greenery.

People coming to Mumbai by train can alight at Mumbai CSMT, Dadar, LTT, Mumbai Central, and Bandra Terminus. Those travelling by flight will alight either at the domestic airport at Santacruz or at the Chhatrapati Shivaji Maharaj International Airport at Sahar. Anushaktinagar is located around 20 kms from the Airport and Railway stations. Prepaid taxis are available at most of the railway stations and the airports. The weather in Mumbai during March is pleasantly warm, with temperature ranging between 28°C and 32°C.



DAE Convention Centre Anushaktinagar

SCIENTIFIC PROGRAMME:

The scientific program of the symposium will include panel discussion, plenary and invited talks, selected oral and poster presentations of contributed papers. The theme covers all gamut of Reactor and Radiation physics with focus on the following:

Technical Track 1: Reactor Physics

- ***Concept and design of Advanced nuclear Reactor***
- ***Verification, Validation and Uncertainty Analysis***
- ***Reactor Physics Experiments***
- ***Advanced computing and modelling***
- ***Reactor Operation, Transient and Safety Analysis***
- ***Transient and Safety Analysis***
- ***Nuclear reactions and Data***
- ***Research Reactors and its application***
- ***ADS and Spallation Sources***
- ***Fuel Cycle and Actinide Management***
- ***Nuclear Safeguards and Regulation***
- ***Radiation Shielding***
- ***Education & training in Reactor/radiation Physics***

Technical Track 2: Radiation Physics

- ***Radiation Protection practices in nuclear facilities***
- ***Regulatory aspects in application of radiation***
- ***Management of Radiological aspects in nuclear industry***
- ***Radiation dosimetry and its applications***
- ***Development of Radiation detectors & nuclear instruments***
- ***Radiation measurement techniques, detector testing & calibration***
- ***Development & characterization of materials using radiation***
- ***Radiation physics in advanced technologies***
- ***Societal and health care applications of radiation***
- ***Public perception on radiation: Myths and truths***
- ***Radiations in the atmosphere and space***

WHO SHOULD PARTICIPATE?

This symposium is an ideal platform for scientists, engineers, academicians, research students, and industries actively engaged in the fields of radiation physics and reactor physics. It is tailored for professionals working on topics such as physics, safety and shielding aspects of nuclear reactors, radiation protection practices, regulatory aspects and management of radiological concerns in nuclear industries. This symposium is aimed to provide an inclusive platform for knowledge sharing and professional upgradation.

CONTRIBUTED PAPERS:

The NSRP-24 invites technical papers from prospective authors for presentation during the symposium. The topic of the paper should be in line with the theme. Papers limited to a maximum 4 pages should cover Introduction, Materials & Methods, Discussion, Results, Conclusion, etc. Paper should be in Times Roman with 12 font size. The content should be original, convey novel and clear insights and should be complete in all respects. A few selected papers would be considered for publication in journal.

PAPER SUBMISSION:

Authors are requested to submit their original work intended for presentation at the symposium by the specified deadline mentioned below. Paper should be submitted by email to ***nsrp24@barc.gov.in***. Mode of presentation will be communicated along with acceptance.

IMPORTANT DATES

Full paper submission:	Feb 15, 2025
Communication of acceptance:	Feb 25, 2025
Registration Start:	Jan 20, 2025
Request for accommodation	March 10, 2025

ACCOMMODATION:

Efforts are being made to accommodate a limited number of participants in DAE guest houses on chargeable basis preferably for participants from government institutions. The guest houses are close to the conference venue.

Hotels of various category are available in nearby suburbs. Accommodation in nearby budget hotels may be arranged upon advance payment and confirmation in some of these hotels.

Those requiring accommodation should send the scanned copy of filled attached accommodation request form by mail at ***nsrp24@barc.gov.in***. The last date for receiving requests for accommodation booking is March 10, 2025.

Participants may also book accommodation in their desired hotels by contacting the hotel directly or through the respective online hotel booking portals. However, the delegates should share the information on the hotel booking for security purposes.

Further details can be found on <http://www.barc.gov.in/symposium/2025>.

REGISTRATION FEES (PER PARTICIPANT)

Govt. & academic/ research institutes (ISRP members)	Rs. 3500
(Non-ISRP Member)	Rs. 4000
Research Scholar	Rs. 2,500
Students	Rs. 2,000
Accompanying person	Rs. 2,500
Trade Delegate	Rs. 10,000



Awards for Best Papers

The primary objective of giving away these awards is to encourage experimental research work by young researchers in universities and national research labs in the field of Radiation Physics and Reactor Physics. Work presented/published has to be original and innovative in nature. Three cash prizes accompanied by certificates of appreciation will be awarded.

A three-member committee consisting of eminent professors and scientists appointed by the ISRP executives, will decide on the selection of the awardees. The awards will be presented during the conference.

SCIENTIFIC EXHIBITION

Arrangements for trade and scientific exhibitions have been made at the symposium venue. Interested vendors or companies can avail themselves this facility for demonstrating their products. Companies/Traders can also send in their requests for publishing product advertisements in the book of abstracts/Souvenir. Companies may send their request for participation in the trade exhibition to the convenor/Secretary by email (nsrp24@barc.gov.in) latest by March 01,2025.

ADDRESS FOR CORRESPONDENCE

Dr. Tej Singh

Convener

Head, Reactor Physics & Nuclear
Engineering Section, Reactor Group,
Bhabha Atomic Research Centre
Trombay, Mumbai, 400085, India

[Tel:+91-22-25594196](tel:+91-22-25594196)

Mobile: 9321540145

Email: t_singh@barc.gov.in

nsrp24@barc.gov.in

Shri Ras Bihari Rakesh

Secretary

Head, Research Reactor Health Physics
Section, Health Physics Division,
Health, Safety & Environment Group,
Bhabha Atomic Research Centre
Trombay, Mumbai 400085, India

Tel: +91-22-2559 0921

Email: rbrakesh@barc.gov.in

nsrp24@barc.gov.in

PATRONS

Dr. A. K. Mohanty, Secretary, DAE & Chairman, AEC

Shri B. C. Pathak, CMD, NPCIL

Shri D. K. Shukla, Chairman, AERB

Shri Vivek Bhasin, Director, BARC

NATIONAL ADVISORY COMMITTEE

Prof. A. K. Tyagi, Director, UM-DAE, Dean, HBNI

Shri Anurag Kumar, CMD, ECIL

Dr. A.K. Nayak, NCPW, DAE

Dr. B. Venkataraman, Ex-Director, IGCAR

Dr. B. L. Ahuja, VC, Bodoland State University

Shri C. G. Karhadkar, Director, IGCAR

Shri Clement C. Verghese, Chairman, BSCS

Dr. D.K Aswal, Director, IPR

Shri Dheeraj Pande, Director, AMD

Shri D. Singh, CMD, IREL

Prof. Gautam Bhattacharya, Director, SINP

Prof. H. N. Ghosh, Director, NISER

Dr. Hassan P. A., AD, BSG, BARC

Shri Joe Mohan, Associate Director, RPG, BARC

Dr. Jaya Mukherjee, BRNS, DAE

Shri K. V. Suresh Kumar, CMD, BHAVINI

Dr. Komal Kapoor, CE, NFC

Prof. Maitreyee Nandy, Sr. Professor, NPD, SINP

Dr. N. Karunakara, Mangalore University

Shri Pradeep Mukherjee, CE, BRIT

Shri R.V. Hara Prasad, Director, DL, Jodhpur

Dr. Sumit Som, Director, VECC

Shri Sunil Chafle, ED, AERB

Dr. Sudeep Gupta, Director, TMC

Dr. S.M. Yusuf, Director, PG, BARC

Shri S. Satyakumar, CE, HWB

Dr. Sandeep Kansal, VC, MRSPTU, Bathinda

Dr. S. K. Satpati, CMD, UCIL

Shri U. D. Malshe, Director, RRCAT

Prof. U. Kamachi Mudali, VC, HBNI

NATIONAL ORGANIZING COMMITTEE

Dr. D. K. Aswal, Director, HS&EG, BARC, Chairman

Dr. Anit K. Gupta, Head, NPD, BARC

Dr. A. Vinod Kumar, Head, EMAD, BARC

Dr. A. John Arul, AD, EPG, IGCAR

Dr. Aditi Ray, Head, ThPS, BARC

Prof. B. S. Sandhu, President, ISRP

Dr. Smt. B. K. Sapra, Head, RP&AD, BARC

Dr. C. N. Patra, Head, ACD, BARC

Dr. Deb Mukhopadhyay, Head, AHWRD, BARC

Dr. D. K. Mahapatra, SRI, AERB

Dr. Jeyakumar, Head, RCD, BARC

Dr. K. P. Singh, Head, RPDD, BARC

Shri K. Venktaramana, CE, Health Physicist, NPCIL

Shri Manoj Tilara, AD, RG, BARC

Shri N. S. Bhamra, Head, ROD, BARC

Shri Probal Chaudhury, Head, HPD, BARC

Dr. P. K. Das Sharma, Head, RSD, AERB

Dr. R. B. Oza, Head, RSSD, BARC

Dr. R. Acharya, Head, IRAD, BARC

Shri R Das, NPCIL, Mumbai

Shri Shibu Thomas, Head, RRSD, BARC

Dr. Sherly Ray, AD, Physics & shielding, NPCIL

Dr. S. Chandrasekaran, Secretary, ISRP, IGCAR

Dr. S. Gautam, Head, FTD, BARC

Dr. Tapas Das, Head, RPhD, BARC

Dr. V.K. Aswal, Head, SSPD, BARC

Dr. Y.K. Bhardwaj, AD, RC&IG, BARC

Shri Y K Pandey, AD, LWR, NPCIL

Dr. Tej Singh, Head, RPNES, RG, BARC-Convener

Shri R.B. Rakesh, Head, RRHPS, HPD, BARC- Secretary

Dr. Anurag Gupta, RPDD, BARC – Chairman, Scientific Programme Committee

Registration Form

National Symposium on Radiation Physics (NSRP-24)

On

Reactor and Radiation Physics

March 27 - 29, 2025

Name: _____

Organization: _____

Address for Communication: _____

Phone:

Email:

Payment details:

Amount:

Transaction Ref. No:

Date of payment:

Applicant Signature:

Payments should be made online to the accounts given below. Kindly attach a print of payments made with the registration form

Account detail:

Name	:	NSRP-24
A/c No.	:	43696031050
IFSC code	:	SBIN0001268
Branch	:	BARC, TROMBAY

Accommodation Request Form

National Symposium on Radiation Physics (NSRP-24)

On

Reactor and Radiation Physics

March 27 - 29, 2025

Name: _____

Organization: _____

Address for Communication: _____

Phone:

Email:

Detail of accompanying person, if any: _____

Accommodation Preference: (1) DAE Guest House

(2) Budget Hotel

(2) Luxury Hotel

Preferred mode of occupancy: _____ **(SINGLE / SHARED)**

Duration of stay: From _____ **To** _____

Applicant Signature: