

Call for Papers

Research papers are invited from Scientists, Academicians, Teachers, Teacher educators, Educationalist, researchers, NGOs and functionaries working in the interdisciplinary areas of the above mentioned themes and subthemes. Abstract of the paper should not be more than 250 words and full length paper in about 3000-4000 words duly typed in MS-word, font size 12 (Times New Roman). Reference should be given in APA style. The paper must contain title, name and affiliation of the author, contact number and email address with themes and subthemes. All papers need to be mailed to ncraisrieb.2025@gmail.com with CC to chakradhar.b@ncert.nic.in

Publication: Selected papers will be published in conference volume with ISBN and RIE Bhopal Journal of Education with ISSN: 2582-0621 after peer review. Beside, work is in progress to publish the selected peer reviewed papers in SCI/Scopus indexed journal.

Registration fee: No registration fee for participants in the conference. Only selected papers will be allowed to present. All participants and presenters need to register through a link which will be provided after 10 Dec. 2024.

Mode of Conduct: Physical mode of presentation

Venue: Regional Institute of Education (NCERT), Shyamala Hills, Bhopal, M.P-462002

How to Reach: The Institute is located at Shyamla Hills and is 7 Kms away from both Bhopal railway station and Rani Kamalapati railway station and about 20 Kms from Raja Bhoj Airport, Bhopal.

TA will be paid as per entitlement and limited to AC III tire fare of railways by the shortest route on production of valid tickets (only booked from IRCTC website) to the participants (only one author) whose papers are selected and invited for presentation at the conference.

Accommodation: For outstation participants accommodation may be arranged on prior request in guest houses of the institute

Important Dates

- **Registration starts:** 5th August 2024
- **Last date of submission of abstract and full paper:** 15th December, 2024
- **Notification of acceptance:** 5th January 2025
- **Conference date:** 7-9 February 2025

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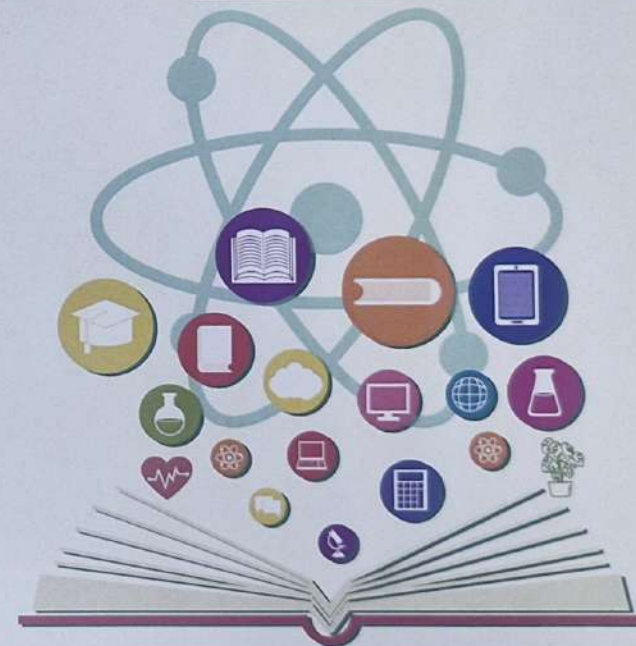
Prof. Ratnamala Arya

Prof. Ayushman Goswami



National Conference on "Recent Advances in Interdisciplinary Science" (NCRAIS-2025)

February 7-9, 2025



Organized by

REGIONAL INSTITUTE OF EDUCATION
National Council of Educational Research and Training
Shyamla Hills, Bhopal (M.P.)- 462 002

Context

The National Conference on 'Recent Advances in Interdisciplinary Science' opens scope for convergence of human resources from diverse disciplines for timely and essential dialogue on the imperative of interdisciplinary collaboration and innovation. The thematic foci and objectives of the conference are strategically aligned with the National Education Policy 2020, underscoring the significance of interdisciplinary research for addressing complex societal issues. The upcoming opportunity will provide a dynamic platform for teachers, researchers, scientists, and experts to disseminate their research findings, besides engaging not only fruitful discussion but also helping collaborative research. The comprehensive thematic areas encompass broad scientific concepts including advanced materials, nanoscience, sustainable development, and environmental science reflecting multidisciplinary approach to facilitate meaningful knowledge sharing. The objectives of the conference are to prioritize the promotion of innovation, critical thinking as well as sustainable development. It also seeks to contribute to the development of innovative solutions to societal challenges, besides fostering a culture of collaboration, quality research and innovation in interdisciplinary science. This event represents a significant milestone in the unification of diverse disciplines and the advancement of interdisciplinary research.

Objectives

Keeping in view the recommendations of NEP-2020, following objectives are proposed for inviting research papers:

- Promote interdisciplinary research and innovation to address societal challenges
- Foster a culture of collaboration and knowledge sharing among researchers from diverse disciplines
- Enhance the quality of research and innovation in interdisciplinary science
- Encourage interdisciplinary approaches to problem-solving and critical thinking
- Develop innovative solutions for sustainable development and environmental conservation
- Promote digital literacy and data-driven decision making in interdisciplinary research
- Foster international collaborations and partnerships in interdisciplinary research
- Develop ethical and responsible research practices in interdisciplinary science
- Enhance the accessibility and affordability of interdisciplinary education and research
- Support the development of innovative startups and entrepreneurs in interdisciplinary science

Theme and Sub-themes

1. Interdisciplinary Research Methodologies in the light of NCFSE-2023

- 1.1 Collaborations between Sciences in Schools and Universities: Research and Practice
- 1.2 Ethical Dimensions in Interdisciplinary Scientific Inquiry: Navigating Challenges
- 1.3 Integrative Research in Chemistry, Mathematics, and Physics: Best Practices
- 1.4 Interdisciplinary Studies in Biology, Environmental Science, and Social Science: Research and Teaching

2. Sustainable Development and Environmental Science in the light of NEP-2020

- 2.1 Circular Economy and Waste Management: Pedagogy and Practice
- 2.2 Climate Change Mitigation and Adaptation: Research and Teaching
- 2.3 Renewable Energy Technologies: Sustainable Emerging Technologies
- 2.4 Sustainable Agriculture and Food Security: Interdisciplinary Approaches

3. Interdisciplinary Education and Outreach activities in the light of NEP-2020

- 3.1 Collaborative Research Initiatives and Partnerships: Industry and Community Engagement
- 3.2 Innovative Teaching Methods for STEM Education and TLM for Interdisciplinary Approaches
- 3.3 Interdisciplinary Curriculum Development: Beyond the boundaries
- 3.4 Public Engagement and Science Communication: Outreach and Impact

4. Advanced Materials and Nanoscience

- 4.1 Advanced, Smart and Functional materials: Synthesis, Characterization and Application
- 4.2 Curriculum Design for Advanced Materials in School and Higher Education
- 4.3 Advanced Materials for Energy Storage and Conversion
- 4.4 Functional materials for Electronics and Photonics

5. Cybersecurity and Privacy in Educational Institutions

- 5.1 Cybersecurity Governance and Risk Management
- 5.2 Cybersecurity Literacy and Awareness
- 5.3 Data Privacy and Protection: Ethical and Legal Implications
- 5.4 Cyber-Physical Systems and Critical Infrastructure Security: Research and Practice

6. Data-Driven Decision Making in Education

- 6.1 Computational Modeling and Simulation: Pedagogy and Practice
- 6.2 Data-Driven Decision Making in School Administration: Best Practices
- 6.3 Educational Research and Big Data Analytics
- 6.4 Predictive Analytics for Student Success and Retention

Theme and Sub-themes

7. Emerging Technologies and Applications

- 7.1 Artificial Intelligence (AI) and Machine Learning in Education: Pedagogy and Practice
- 7.2 Internet of Things (IoT) and Smart Systems in Schools: Innovative Applications
- 7.3 Manufacturing and Automation in Vocational Training: Emerging Technologies
- 7.4 Nanotechnology and Its Applications: Research and Teaching

8. Health and Biomedical Innovations

- 8.1 Advanced Materials in Medical Applications: Research and Teaching
- 8.2 Neurotechnology and Cognitive Science: Interdisciplinary Approaches
- 8.3 Precision Medicine and Genomics: Curriculum Development
- 8.4 Telemedicine and Digital Health: Best Practices and Applications

9. Indian Knowledge Systems (IKS) and Local Scientific Practices in the light of NEP-2020

- 9.1 Integrating Traditional Ecological Knowledge into Science Curriculum
- 9.2 Science and Society in Ancient India an Interdisciplinary approach in Indian Civilizations
- 9.3 Promoting Scientific Thinking in Indian Society, based on scientific evidence in the Context of Indian culture.

About Organizing Institute

The Regional Institute of Education, Bhopal is one of the constituent units of NCERT, New Delhi, India. It is located in Shyamla Hills, Bhopal, the capital of Madhya Pradesh. The institute caters to the needs of school education and teacher education of the Western states Chattishgarh, Goa, Gujarat, Madhya Pradesh, Maharashtra, and Union Territories of Dadra and Nagar Haveli and Daman and Diu.

The institute offers pre-service Teacher Education Programmes such as four year Integrated Teacher Education Programme (ITEP in Arts and Science), B.Sc B.Ed, B.A. B.Ed, two year B.Ed, three year integrated B.Ed.M.Ed, two year M.Ed; and a blended Diploma Course in Guidance and Counselling (DCGC). Besides, the institute offers in-service training programme for Teachers, Teacher educators and state educational functionaries of Western India. The institute has a Demonstration Multipurpose School (DMS) on its campus for trying out innovative practices in School education and Teacher education.