The National Academy of Sciences, India

5, Lajpatrai Road, Prayagraj-211002, India





Summary of the Activities, held in the month of September 2022

- Open Science is an important vertical in science policy globally and requires regional dialogues and robust systems on how we generate and disseminate knowledge accessible to everybody. Taking this forward, Open Science South Asia Network (OSSAN) organized a conference/round table, where the NASI was an important invitee. Prof Jayesh Bellare, General Secretary (OS), NASI, participated on 5th Sept. 2022; the excerpts of NASI Views (presented by Prof Bellare) are enclosed herewith as Annex. 1.
- NASI-HQ and its different Chapters celebrated the National Teachers Day on 5th Sept. 2022. A few teachers were also honoured with the awards on this auspicious day (a copy of programme & news clipping is enclosed as Annex. 2). The theme of the programme was National Education Policy. Further, NASI-Jharkhand Chapter also organized a workshop on NEP on 5th September at Jamshedpur, Jharkhand (the details are enclosed as Annex.3). The NASI-Bhopal Chapter also organized the lecture series on Wildlife on 5th Sept. 2022 (the details enclosed as Annex.4).
- A two days comprehensive programme was organized by the NASI-HQ in collaboration with the CSIR-NBRI, Lucknow and BCIL, New Delhi on 'S &T based Entrepreneurship Development', on Sept. 12-13, 2022 at Lucknow under the Chairmanship of Prof. Manju Sharma, Past President, NASI (a copy of the programme enclosed herewith as Annex. 5). About 200 students/researchers/entrepreneurs participated in the programme.
- 4. The National Academy of Sciences, India (NASI), Local Chapter-Varanasi, organized recently a lecture on a very important and pertaining topic, "Funding Opportunities in India for Scientists and Engineers". The distinguished speaker was Prof. T.K. Chandrasekhar. Senior Professor in NISER, Bhubaneshwar, and was also the founder Secretary of the Science and Engineering Research Board (SERB), New Delhi (photographs enclosed as Annex. 6).
- 5. The 'Women in Science' Lecture Series was organized by the NASI-Delhi Chapter (details given as Annex. 7).
- 6. The 'River Cauvery the Lifeline' an interactive socio-scientific gallery, established by the NASI at Mysuru with the support of GoK and the NCSM, was inaugurated by Shri S T Somashekar Hon'ble Minister for Co-operation and Mysore District Minister-in-charge, Government of Karnataka on 17th September 2022 at Karnataka Exhibition Authority Campus, Mysuru, in the august presence of Prof S R Niranjana, Former Vice Chancellor Gulbarga University, Smt. K A Sadhana Director, VITM, and others (the details given as Annex. 8).
- 7. Several Chapters of the Academy also organised Science-Society Programmes of the NASI; the publication of the NASI-Journals also achieved their time-lines.



Prof. TA Abinandanan

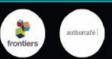
Dr. Moumita Koley

Dr. Pragya Chaube

e Dr. Gautam Sharma

Mr. Jahnab Bharadwaj







NASI informal views on Open Science

- 1. NASI fully supports and encourages the concept of Open Science for its many known advantages.
- 2. NASI recognizes that Open Science can spark change and inspire by its auto-catalytic effect and societal friendliness.
- 3. There is no formal NASI position paper on open science, but its decisions are driven with OS in mind.
- 4. NASI is part of the Inter-Academy group and supports its views, e.g., in Current Science, VOL. 118, NO. 7, 10 Apr 2020.
- 5. NASI encourages citizen science and its dissemination through its Science and Society initiatives.
- 6. NASI is inclusive at multiple levels through formal programs: Schedule Tribe program, training of school students, women empowerment program, sensitization of society during COVID 19, development of river galleries, etc.
- 7. NASI tries to broaden participation by historically excluded communities through its meetings and fellowships.
- 8. NASI journals provide options of traditional publishing model (without APC) or open access (with APC)
- 9. But NASI wishes to have OA without charges to author or reader.
- 10. NASI is discussing how to deal with the transformative process (journals and agreements) for cOAlition S.
- 11. NASI notes disadvantages of researchers in India and South Asia: visibility of research, easy access to global research.
- 12. Who pays, and how much, remains undecided. International, Regional, and National efforts here are welcome.
- 13. Whereas the rising menace of predatory journals is worrisome, the concept of preprints and open review is welcome.





The National Academy of Sciences, India

राष्ट्रीय विज्ञान अकादमी,भारत 5,लाजपराय मार्ग, प्रयागराज-211002

5, Lajpatrai Road, Prayagraj -211002

राष्टीय शिक्षक दिवस समारोह

NATIONAL TEACHERS DAY CELEBRATION (offline mode)

विषयः – नई शिक्षा निति में विज्ञान एवम् प्रौद्योगिकी

Theme: - Science & Technology in New Education Policy

Date: September 5th ,2022 Time: 11.00 am to 1.30 pm

Venue: NASI Auditorium, 5, Lajpatrai Road, Prayagraj

--- Tentative Programme ---

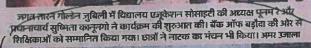
Reporting of the Students - 10.30 am

Inaugural Session: - (to be coordinated by Dr. Santosh Shukla, AES, NASI)

Address by the Guest of Honour

- Chief Guest Address.
- Presidential Address
- Welcome & Introductory Remarks : Dr. Niraj Kumar, Executive Secretary, NASI
 - : Prof. Krishna Misra, Emeritus Professor, IIITA, Prayagraj; & Former General Secretary, NASI
 - : Prof. R.S.Verma, Director Motilal Nehru National Institute of Technology Prayagraj
 - : Prof. U.C.Srivastava, Coordinator, Science Communication Programme & Treasurer, NASI
- Conferment of NASI-Science Teacher Awards and Felicitation of the Guests (to be coordinated by Shri B.P. Singh & Dr. Pavitra Tandon, AES, NASI)
- Vote of thanks

: Shri A K Srivastava, Dy. Executive Secretary, NASI 6/9/2022->News Published in Hindi Daily (Amar Uzala)





शिक्षक पुरस्कार विजेता डॉ. मोहम्मद ससूद, डॉ. लालजी यादव, डॉ. चीके घोष, संजय श्रीवास्तव भी

सम्मानित किए गए।

यंचितों को निशुल्क शिक्षा देने वाले शिक्षकों को सम्मानित करती भाजपा महिला मोर्चा की महामंत्री कविता यादव त्रिपाठी। अमर उनाला



सरकार के डलेक्ट्रॉनिक्स कश्मीर साइव पद नाम परियोजना

अभियंता

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भिरतम दियस पर जिला अपराध

Annex. 3



"NEP 2020: A Visionary Roadmap towards Transforming Indian Education Focused on Science, Technology, Research and Skill Development."

Organized By



Faculty of Science & Faculty of Commerce Karim City College, Jamshedpur In Association with



The National Academy of Sciences (Jharkhand Chapter) C/o CSIR National Metallurgical Laboratory, Jamshedpur, India

Date: 05.09.2022(Monday) Venue: Karim City College Auditorium, Jamshedpur

Venue. Rann only concyc Additorian, cam

Contact: +91 7631165700 website: www.karimcitycollege.org Email: office@karimcitycollege.org foc.kcc@gmail.com moazzam.nazri@gmail.com

Introduction

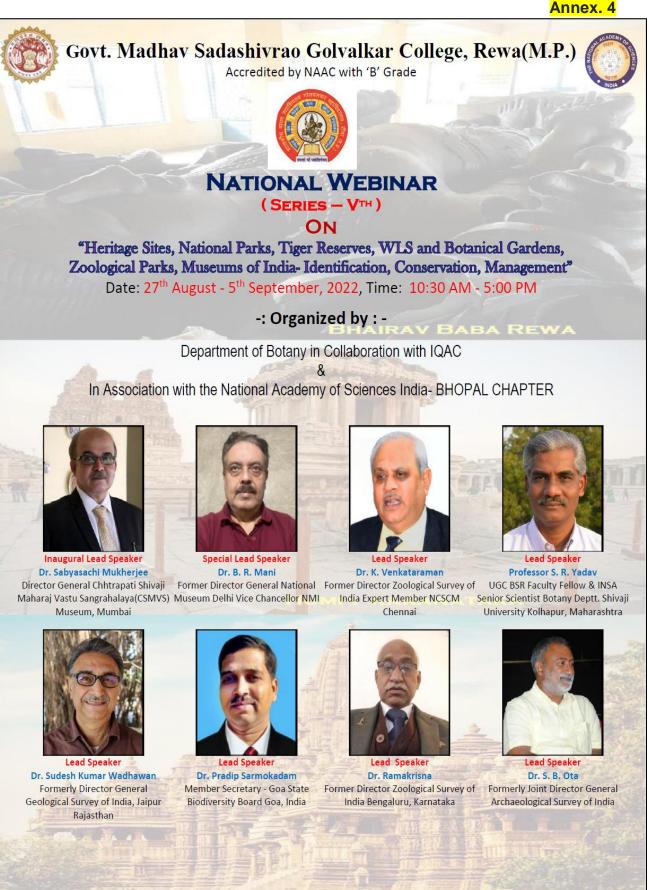
Education is of utmost priority for any developing nation in the world. The growing youth population in India is increasing, and so is the use of science and technology and changing dynamics of the labour market which have thrown up many challenges as well as opportunities for policymakers today. It is a need of the hour that all efforts be made to equip our youths with employable and entrepreneurial skills so that they do not only cope with the changing world but also become active agents of positive change. Skills play a pivotal role in the optimum utilisation of human resources towards sustainable economic growth and social development for any nation. We need to prepare our youth for future entrepreneurial skills to earn their livelihoods and realise their aspirations. Our campuses of higher education need to be transformed. All aspects of academia like teachers, administrators and students at our colleges and universities need to involve themselves in achieving the major goals. Our education needs to be aligned with advanced technologies, opportunities, and challenges for which the National Education Policy - 2020 provides a boundless and visionary road map. With the world witnessing several developments such as the COVID-19 pandemic and expanded globalization, the future of any nation, demands in every sphere, radical transformation and the education model needs to be reassessed to meet the global needs and challenges.

Objectives

NEP-2020 is a comprehensive framework for the development of education in the country. In the current Indian scenario, the employment opportunities are considered that the unskilled jobs are taken over by artificial intelligence and there seems to be more demand for skilled labour. Further more, new demands for Humanities, Arts and Sciences are perceived. This has led to the revelation that students should know how to learn. They need to be creative and skilled in multi-disciplinary areas and be able to innovate, adapt and absorb new things. Technology has a major role to play in all aspects of life. Fostering these multi-disciplinary skills in students, the education needs to focus on critical thinking, problem-solving,thought-provoking learner-centric, experiential, holistic and flexible models. The main aim of NEP-2020 is to create an effective global education system to be imbibed in Indian ethos. The objective of this workshop is to bring awareness about National Education Policy 2020 among the stakeholders and to foster the path of implementation.

Scope:

- Innovative Approaches to Remediate Issues in Basic Science, Research & Education-An Adaptive Competence Development Approach.
- NEP & Environmental Science.
- National Education Policy on Higher Education: Challenges and Solutions Holistic and multi-disciplinary education – Integrating Humanities, Arts with Sciences STEM (Science, Technology, Engineering & Mathematics)
- "NEP-2020: A Visionary Roadmap for Transforming Indian Education towards Entrepreneurial Skill Development, Innovation and Research."
- Ecosystem for multi-disciplinary education, research and funding Quality Academic Research through National Research Foundation.



Annex. 5







'S&T based Entrepreneurship Development'

Celebrating 75 years of India's independence



Jointly organized by National Botanical Research Institute (CSIR-NBRI), Lucknow The National Academy of Sciences, India (NASI), Prayagraj

&

Biotech Consortium India Limited (BCIL), New Delhi (Hybrid Mode)

Date: September 12th & 13th, 2022

Tentative Programme (To be compered by Dr. Niraj Kumar, ES, NASI)

Day-1: September 12th, 2022

Registration: 9:00 - 10:00 am Opening Session (10:00-11:00 am)

Welcome Address (10:00 - 10:10 am) Opening Remarks (10:10 - 10:20 am)

NASI's Programme on 'Entrepreneurship Development' (10:20 - 10:40 am) Theme Address (10:40 -10:50 am) Presidential Remarks (10:50 - 11:00 am)

- : Prof. S K Barik
 - Director, CSIR-NBRI, Lucknow

: Prof. V P Kamboj Former Director, CDRI, Lucknow; Past President, NASI

- : Prof. Manju Sharma Former Secretary to the Govt. of India, DBT;
- Chairperson, NASI's New Initiatives
- : Prof. V Ramgopal Rao Former Director, IIT Delhi

: Prof. Ajoy Ghatak

President, NASI

The programme was continued till Sept. 13, 2022.





<mark>Annex.</mark> 7

Women in Science Lecture Series

On the Eve of the 75 years of Independence, the National Academy of Sciences, India (NASI) is celebrating Azadi Ka Amrit Mahotsav through different science and society initiatives. As part of NASI's science and society initiative, Delhi Chapter of NASI and Jaypee Institute of Information Technology (JIIT, Noida) will jointly organize a series of lectures entitled, "Women in Science Lecture Series". All the lectures of this series will be delivered by the eminent Women Scientists. The lectures will be aimed to motivate young female students involved in UG, PG and PhD programs to continue science. All the talks will have two parts. In one part, the speaker will speak lucidly about her research works and the other part will be focused to inculcate confidence among the young students that even they can do top-class science and thus contribute to the society. Some practical problems that a growing scientist faces and how to circumvent those may also be discussed during the interaction sessions at the end.

Kindly make it convenient to join and encourage your students to actively participate in the discussion.

LECTURE-7

About the Speaker

Dr. Ankona Datta is Associate Professor in the Department of Chemical Sciences, Tata Institute of Fundamental Research (TIFR), Mumbai. Dr. Datta's research interest covers broad field of organic and inorganic chemistry with an emphasis on chemical biology and molecular imaging. Her research group develops different chemical tools to track essential biomolecules and second messengers *in vivo*. The mode of operation is to design and synthesize selective fluorescence and magnetic resonance imaging probes that can image target molecules in living systems. The ultimate aim is to apply the tools to visualize and track crucial small molecules and ions involved in regulation of essential life processes like cell signalling, autophagy, and neural activity. Her research interest include imaging metal ion trafficking and its implications in neurodegenerative diseases, apoptotic signals in cancer and peroxidase activity upregulation in atherosclerosis.

Topic: Smart Sensors Capture Life in Action

All living things are made of molecules. However, molecules in living systems are not static. In fact, temporal changes in molecular distribution drive essential life processes. Can we visualize this intricate molecular dance in living systems? If yes then how? Come find out how we design 'smart molecular sensors' that can capture biological molecules live in action.



Dr. Ankona Datta <u>More info. about the speaker</u> Date & Time: Sep 23, 2022 04:00 PM (IST) Zoom Link: <u>https://us02web.zoom.us/i/863</u> 07548164?pwd=aU4vYkdoQiVH <u>dk5pU0daczhPRU5VUT09</u> Meeting ID: 863 0754 8164 Pass code: 046650

YouTube Live Telecast: https://www.youtube.com/chan nel/UCWgXoRptNM7cEgkxthRCFg



Prof. Annapurni Subramaniam More info. about the speaker

Date & Time: Sep 26, 2022 04:00 PM (IST)

Zoom Link: https://us02web.zoom.us/1/864 245008977pwd=MVZETFplcDZtb Yntenin0000000009 Meeting ID: 864 2454 0897

Pass code: 851473 YouTube Live Telecas<mark>t:</mark>

https://www.youtube.com/chan ncl/UCWoXoRptNMZcEuksthRGEg

LECTURE-8

About the Speaker

Prof. Annapurni Subramaniam is the director of the Indian Institute of Astrophysics, Bangalore. She works on areas like star clusters, stellar evolution and population in galaxies and Magellanic clouds. Prof. Subramaniam's major field of research includes: Star clusters (open and globular), Star formation and pre-MS stars Classical Be & Herbig Ae/Be stars, Galactic structure, Magellanic Clouds and Stellar population. She is an active member of the International Astronomical Union. Prof. Subramaniam's current research interests are :Star formation history of young star clusters, Accurate photometry of unstudied open clusters, Stellar population in the Large Magellanic Cloud, Outer limits Survey: Magellanic Clouds etc.

Topic: Astronomy from Ground and space - My journey

My career in astronomy is primarily done in India. I have developed expertise in ground and space-based astronomy and carry out research in stars and galaxies. In this talk, I shall present some highlights of my research along with snapshots of my personal journey in research.

To attend these talks and receive announcements of other talks of this series kindly fill the form https://forms.gle/ehFrhwYrEUxGLVJv6

Convener Prof. Anirban Pathak Email: anirban.pathak@jiit.ac.in Prof. Papia Chowdhury Email: papia.chowdhury@jiit.ac.in DEPARTMENT OF PHYSICS AND MATERIALS SCIENCE AND ENGINEERING JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY

A-10, Sector-62, Noida-201 309, Uttar Pradesh, India

<mark>Annex. 8</mark>

Page-9

STAR OF MYSORE

Sunday 18th September 2022

Cauvery Gallery opens at Exhibition Grounds Visually appealing Gallery to be open on all days; entry fee not decided

Mysuru, Sept. 18 (GA&BCT)-The Cauvery Gallery that has been set up at Karnataka Exhibition Authority (KEA) Grounds showcasing the life, culture and biodiversity of the River from its birth at Talacauvery in Kodagu till it reaches the Bay of Bengal at Poompuhar in Tamil Nadu opened to the public last evening.

District Minister S.T. Somashekar did the honours and went around the Gallery with the fine points, concepts and technology being explained to him by K. Sadhana Attavar, Director, VisvesvarayaIndustrialandTechnological Museum, Bengaluru.

The Gallery will be open throughout the year and the entry fee has not yet been decided. Mostly it will be Rs. 20 or at the most Rs. 30 per visitor, he said.

There are many multimedia features and electronic display at the Gallery that provides visitors with an immersive experience of life and culture along the River. "For people of Mysuru, Mandya and Bengaluru, the Galleryholds utmost importance as the River is the lifeline. In addition, it will be a valuable resource for research scholars," he said. The 19,000 sq.ft visually ap-



K. Sadhana Attavar, Director, Visvesvaraya Industrial and Technological Museum, Bengaluru, takes Minister S.T. Somashekar and others along the Cauvery Gallery last evening. Picture right shows a sculpture of a villager going on a fishing trip on a coracle.

pealing Gallery with many 3-D presentations has been built jointly by Karnataka Knowledge Commission and Tourism Department. It has been modelled as per the design, specifications and imagination of the National Academy of Sciences, India (NASI) at a cost of Rs. 3.5 crore.

The project is based on research conducted by the National Council of Science Museums (NCSM). Officials of NASI and the State Tourism Department had signed an agreement to establish the Gallery in the KEA complex (at Kannada Karanji). It is the first river Gallery in South India and the third such one in the country. There is a Gallery for River Brahmaputra in Guwahati and River Ganga has a Gallery in Allahabad. The Gallery, through multimedia and 3-D features, highlights the geological and ecological characteristics of the Cauvery River apart from projecting the social and cultural characteristic features of civilisation that have evolved along the river bank.

At the Mysuru Gallery, there are many artefacts and life-size dolls that narrate the story of the

River. Pictures, live visuals and models of the river flowing from one part to another criss-crossing the hills and plains will narrate the Cauvery story.

Apart from allowing a visitor to have a glimpse of visually appealing scenes all through the journey of the river, the Gallery will screen movies and documentaries on Cauvery. After the viewers see the Gallery, there will be a 20-minute short film on Cauvery. The overall message will be conserving the river and increasing green cover around the river for sustenance. In ad-

dition, places and industries that are polluting the river are shown to spread awareness. Along with the visual representation of various communities that have a close affinity with Cauvery like the Kodava community that finds representation in the Gallery, prominent waterfalls like Shimsha, rugged terrain like Mekedatu and picturesque Hogennakkal have found a place.

Mayor Shivakumar, Dy. Mayor Dr. G. Roopa, City BJP President T.S. Srivatsa, KEA Chairman Mirle Srinivas Gowda and CEO K. Rudresh were present.

