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AWARD

Professor Chandrima Shaha, President INSA, was awarded with Professor S. P. Ray Chaudhuri 75th Birthday Endowment lecture award initiated by the Cell Biology Society of India for the year 2020. She delivered her award lecture on the topic 'Intracellular parasitism: succeed to survive' during All India Cell Biology Conference & International Symposium on "**Molecular and Cellular Insights of Human Diseases**" on 02 September, 2022 at University of Kashmir.

IMPORTANT EVENTS/MEETINGS

INSA Annual General Meeting (Hybrid mode) was held on 17 October, 2022. The following activities / announcements (obituaries / elections) were organized:



Dr Chandrima Shaha, President, INSA is addressing the Annual General Meeting

- The sad demise of Dr Chittranjan Bhatia, Professor Nanjundappa Rudriah and Dr KVR Chary, Fellows and Professor John Frank Davidson and Sir Arnold Whittaker Wolfendale, Foreign Fellows of the Academy were reported.
- Council for 2023

President:

Professor Ashutosh Sharma, Kanpur

Vice-Presidents:

Dr Amit Ghosh, Kolkata

Professor DV Khakhar, Mumbai

Dr Madhu Dikshit, Lucknow

Professor Narinder K Mehra, Gurugram

Professor Sanjay Puri, New Delhi

Professor SR Wadia, Bengaluru

Members:

Amit Prakash Sharma, New Delhi
Anirban Basu, Manesar
Anurag Kumar, Bengaluru
Arup Bose, Kolkata
Chitra Sarkar, New Delhi
DM Banerjee, Delhi
Maithili Sharan, New Delhi
Sanghamitra Bandyopadhyay, Kolkata
Santanu Bhattacharya, Bengaluru
SC Mande, New Delhi
Sriram R Ramaswamy, Bengaluru
Srivari Chandrasekhar, New Delhi
Srubabati Goswami, Ahmedabad
Subeer S Majumdar, Hyderabad
Sudeshna Sinha, Mohali
Sunil Kumar Singh, Goa
Tilak Raj Sharma, New Delhi
TR Ramadas, Kelambakkam
V Nagaraja, Bengaluru
Vidita Ashok Vaidya, Mumbai

Representatives of Cooperating Academies and Govt. of India

The Asiatic Society, Dr Kunal Ghosh

The Indian Science Congress, Professor R Ramamurthi

Association The National Academy of Sciences (India),
Professor Anurag Sharma

The Govt. of India, Department of Science &
Technology, Dr Virendra M Tiwari

- 48 Indian scientists elected as INSA Fellows

Fellows Elected 2022 (Effective from January 1, 2023)

1. Achanta, Venu Gopal (b 15.01.1972), PhD, Professor, Department of Condensed Matter Physics and Material Science, Tata Institute of Fundamental Research, Mumbai.



2. Aggarwal, Amita (b 31.12.1960), MBBS, MD, DM, Professor and Head, Department of Clinical Immunology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow.



3. Agrawal, Amit (b 07.10.1974), PhD, Professor, Department of Mechanical Engineering, Indian Institute of Technology Bombay, Mumbai.



4. Ashraf, Mohammad Zahid (b 02.02.1973), PhD, Professor and Head, Department of Biotechnology, Jamia Millia Islamia, New Delhi.



5. Bandyopadhyay, Arun (b 25.09.1963), PhD, Director, CSIR-Indian Institute of Chemical Biology, Kolkata.



6. Banga, Surinder Singh (b 06.08.1955), PhD, Professor (Honorary Adjunct), Department of Plant Breeding and Genetics, Punjab Agricultural University, Ludhiana.



7. Bhujanga Rao, Vepakomma (b 10.10.1951), PhD, DSc, ISRO Chair Professor, National Institute of Advanced Technologies (NIAS), Bengaluru.



8. Das, Samar Kumar (b 22.01.1963), PhD, Professor, University of Hyderabad, Hyderabad.



9. Dasika, Nagesh Kumar (b 15.07.1963), PhD, Professor Satish Dhawan Chair Professor, Department of Civil Engineering, Indian Institute of Science, Bengaluru.



10. Gadiyara Chakrapani, Anupama (b 04.08.1961), PhD, Senior Professor and Dean, II A, Indian Institute of Astrophysics, Bengaluru.



11. Ganesan, Venkatasubramanian (b 24.01.1975), MD, PhD, Professor of Psychiatry, Head, Department of Clinical Neurosciences, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru.



12. Ganesh, Subramaniam (b 23.05.1968), PhD, Deputy Director, Department of Biological Sciences and Bioengineering, Indian Institute of Technology, Kanpur, Kanpur.



13. Ghorpade, Sudhir Ramakant (b 03.08.1963), PhD, Professor, Department of Mathematics, Indian Institute of Technology, Bombay, Mumbai.



14. Goswami, Debashish (b 30.10.1972), PhD, Professor (HAG), Indian Statistical Institute, Kolkata.



15. Gromiha, M Michael (b 26.06.1967), PhD, Professor, Department of Biotechnology, Indian Institute of Technology Madras, Chennai.



16. Guha, Debatosh (b 26.01.1963), PhD, Professor, Institute of Radio Physics and Electronics, University of Calcutta, Kolkata.



17. Gupta, Yashwant (b 01.11.1962), PhD, Centre Director and Distinguished Professor, National Centre for Radio Astrophysics, Tata Institute of Fundamental Research, Pune.



18. Jhala, Yadvendradev Vikramsinh (b 27.02.1962), PhD, Dean & Senior Professor, Wildlife Institute of India, Dehradun.



19. Joshi, Yogesh Moreshwar (b 29.12.1974), PhD, Pandit Girish & Sushma Rani Pathak Chair Professor and Dean of International Relations, Department of Chemical Engineering, Indian Institute of Technology Kanpur, Kanpur.



20. Kaur, Rupinder (b 14.09.1971), PhD, Staff Scientist - VII, Centre for DNA Fingerprinting and Diagnostics, Hyderabad.



21. Kumar, Sanjay (b 14.02.1963), PhD, Director, CSIR-Institute of Himalayan Bioresource Technology, Palampur.



22. Kundu, Gopal Chandra (b 02.11.1959), PhD, Director R&D, KIIT University, Bhubaneswar.



23. Maji, Samir K (b 06.03.1974), PhD, Professor, Department of Biosciences and Bioengineering, Indian Institute of Technology Bombay, Mumbai.



24. Malik, Javed Husain Nurmohmed (b 24.11.1968), PhD, Professor, Department of Earth Sciences, Indian Institute of Technology Kanpur, Kanpur.



25. Misra, Hari Sharan (b 22.07.1962), PhD, Head, Molecular Biology Division, Bhabha Atomic Research Centre, Mumbai.



26. Nagendra, Harini (b 15.05.1972), PhD, Director, Research Centre and Professor, School of Development, Azim Premji University, Bengaluru.



27. Nair, Deepak Thankappan (b 25.10.1973), PhD, Professor, Regional Centre for Biotechnology, National Capital Region Biotech Science Cluster, Faridabad.



28. Palakurissi Balagopal, Sunil Kumar (b 30.05.1964), PhD, Professor, Department of Physics, Indian Institute of Technology Madras, Chennai.



29. Pandey, Daya Shankar (b 04.08.1961), PhD, Professor, Department of Chemistry, Institute of Science, Banaras Hindu University, Varanasi.



30. Pareek, Ashwani (b 27.09.1969), PhD, Professor of Plant Molecular Biology and Biotechnology, Stress Physiology and Molecular Biology Laboratory, School of Life Sciences, Jawaharlal Nehru University, New Delhi.



31. Paul, Alope (b 04.10.1973), PhD, Professor, Department of Materials Engineering, Indian Institute of Science, Bengaluru.



32. Pradhan, Narayan (b 12.10.1972), PhD, Professor, Indian Association for the Cultivation of Science, Kolkata.



33. Rajagopal, Subramanyam (b 14.06.1970), PhD, Professor, Department of Plant Sciences, School of Life Sciences, University of Hyderabad, Hyderabad.



34. Ranga, Udaykumar (b 03.06.1959), PhD, Professor, HIV-AIDS Laboratory, Molecular Biology and Genetics Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru.



35. Rao, Cherukumalli Srinivasa (b 04.10.1965), PhD, Director, ICAR-National Academy of Agricultural Research Management (NAARM), Hyderabad.



36. Sen De, Aditi (b 01.10.1974), PhD, Professor H, Physics Division, Harish-Chandra Research Institute, Allahabad.



37. Shukla, Arun Kumar (b 01.11.1981), PhD, Joy Gill Chair Professor, Department of Biological Sciences and Bioengineering, Indian Institute of Technology Kanpur, Kanpur.



38. Singh, Gyanendra Pratap (b 17.03.1964), PhD, Director, ICAR-Indian Institute of Wheat & Barley Research, Karnal.



39. Srinivas, Mandyam Doddamane (b 02.10.1950), PhD, Senior Fellow and Chairman, Centre for Policy Studies, Chennai.



40. Srivastava, Pradeep (b 15.03.1971), PhD, Associate Professor, Department of Earth Sciences, Indian Institute of Technology-Roorkee, Roorkee.



41. Srivastava, Rajesh K (b 30.06.1961), PhD, Professor, Centre of Advanced Study in Geology, Banaras Hindu University, Varanasi.



42. Tamang, Jyoti Prakash (b 16.11.1961), PhD, Professor, Department of Microbiology, Sikkim University (Central University), Gangtok, Sikkim.



43. Tandon, Nikhil (b 28.11.1963), PhD, Professor and Head, Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi.



44. Tharmalingam, Punniyamurthy (b 03.06.1964), PhD, Dean of Faculty Affairs and Professor of Chemistry, Department of Chemistry, Indian Institute of Technology Guwahati, Guwahati.



45. Trivedi, Vijaylaxmi Girijashankar (b 14.03.1966), PhD, Professor (H), School of Mathematics, Tata Institute of Fundamental Research, Mumbai.



46. Verma, Kaushal Kumar (b 07.03.1971), PhD, Professor, Department of Mathematics, Indian Institute of Science, Bengaluru.



47. Yendluri, Shanthi Pavan (b 01.06.1973), PhD, NT Alexander Institute Chair Professor and Dean (Academic Research), Department of Electrical Engineering, Indian Institute of Technology Madras, Chennai.



48. Yusuf, Seikh Mohammad (b 03.03.1965), PhD, Associate Director, Physics Group, Bhabha Atomic Research Centre, Mumbai.



➤ 5 Overseas scientists elected as Foreign Fellows

Foreign Fellow Elected 2022 (Effective from January 1, 2023)

1. **Fayer, Michael D** (b 12.09.1947), David Mulvane Ehrsam and Edward Curtis Franklin Professor of Chemistry, Department of Chemistry, Stanford University, Stanford, CA 94305-5080, USA.



2. **John, Sajeev Oommen** (b 04.04.1957), University Professor, Department of Physics, University of Toronto, Toronto, Ontario M5S1A7, Canada.



3. **Knust, Elisabeth** (b 09.01.1951), Professor Dr. Rer. Nat, Max-Planck-Institute of Molecular Cell Biology and Genetics, Pfotenhauerstr, 108, 01307 Dresden, Germany.



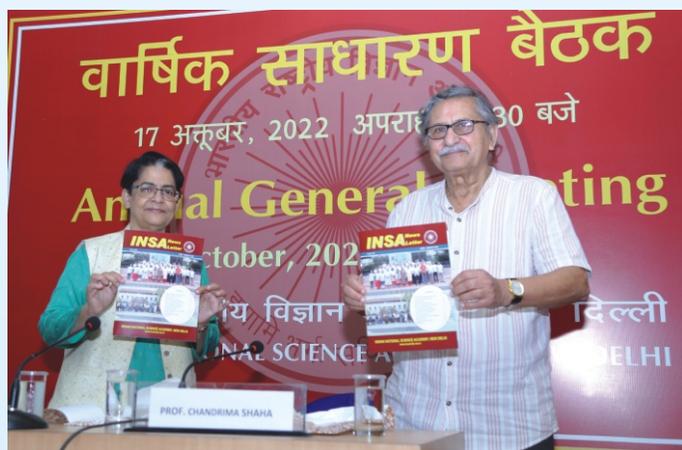
4. **McNutt, Marcia Kemper** (b 19.02.1952), President, National Academy of Sciences, 505 5th St. NW, NAS 215, Washington, DC, 20001, USA.



5. **Withers, Philip John** (b 11.05.1963), Regius Professor of Materials, University of Manchester, Royce Hub Building, Manchester, M139PL, United Kingdom.



- INSA News Letter (June-August 2022) was released by President, INSA during the Annual General Meeting held on 17 October, 2022 and same was circulated to all Fellows of INSA.



INSA News Letter (June-August 2022) was released by President, INSA during the Annual General Meeting held on 17 October, 2022

- A virtual meeting of Conveners of the Sectional Committees to review the received nominations (16 July, 2021 to 15 July, 2022) for INSA Fellowship was held on 15 November, 2022.

- The online screening meetings for INSPIRE Fellowship Program of all eight committees were held in November 2022.

- As nominated by The Academy Professor N.K. Mehra, Vice President, International Affairs and Dr. Brotati Chattopadhyay, AED I (International) attended S 20 Summit held at Jakarta, Indonesia during 20-21 September, 2022.

- The Academy has nominated Dr Virendra M. Tiwari, Director, CSIR-National Geophysical Research Institute, Hyderabad as IUGG Bureau Member for the term 2023-2027.

- The Academy nominated Dr Bharath Holla, National Institute of Mental Health and Neuro-Sciences, India for attending IAP Young Physician Leaders Programme held in Berlin from 13-19 October, 2022.

- The Academy has nominated Dr G. Bhanuprakash Reddy, Scientist G and Head, Biochemistry Division, National Institute of Nutrition for IUNS Fellowship. He has been inducted as IUNS Fellow (FIUNS). The results will be officially declared in the General Assembly of IUNS on 7 December, 2022.

- The Academy has nominated Professor Renee Maria Borges, Centre for Ecological Sciences, Indian Institute of Science (IISc) Bangalore for the post of Executive Committee Member and Secretary General for the council of IUBS.

- Professor Narinder Kumar Mehra, VP-International Affairs attended 19th Annual Meeting of Science and Technology in Society (STS) Forum 2022 held in Kyoto, Japan during 02-04 October, 2022.

- The Academy nominated Dr Vikram Vishal, Associate Professor, Dept. of Earth Science, Indian Institute of Technology (IIT) Mumbai for attending Young Leaders Program special session “Young Leaders Network” and the “Dialogue between Young Leaders and Nobel Laureates” in the 19th Annual Meeting of the STS forum held from 2-4 October, 2022, in Kyoto, Japan

- Professor N K Mehra attended Triennial Conference of the Inter Academy Partnership (IAP) and the Worldwide Meeting of Young Academies during 1 to 3 November, 2022 at the University of Arizona's Biosphere.

- Dr Chandrima Shaha, President, INSA, gave a Distinguished Lecture titled “The emerging infectious diseases: The challenges for survival” at National Institute of Oceanography, Goa on 21 November, 2022.



IAP Meeting

➤ Professor Amitabha Chattopadhyay has been inducted as the Chairman of the National Committee for International Union of Pure & Applied Biophysics (IUPAB) on sad demise of Professor KVR Chary.

➤ **History of Science Meeting, 10-11 October 2022:**

The mid-year meeting of Research Council and National Commission (RCNC) for history of science and a seminar was held during 10-11 October, 2022 at Rajiv Gandhi University, Itanagar. Professor Saket Kushwaha (Vice Chancellor, Rajiv Gandhi University) in his welcome address thanked INSA for selecting RGU as venue for the seminar and in the process creating awareness among the scholars of the north east region about the researches being carried out in the different areas of history of science by the Academy. He highlighted on the need and importance to carry out a systematic study of the rich flora & fauna, cultural heritage and traditional knowledge system of the numerous tribal people of the north east region. Professor D Balasubramanian, Chairman Research Council highlighted the activities of Commission since the formation of History of Science Board in 1960. He pointed out that the objective of the board was to compile authoritative volumes on history of sciences in India and carry out research on evolution and growth of science of Indian civilization. Professor Balasubramanian also highlighted other activities of the Commission such as supporting research projects, publication of authoritative volumes like Concise history of sciences in India, History of technology (three volumes), History of astronomy, History of medicine and many others. He also stressed the role of IJHS in promoting quality researches in areas related to history of science. The following papers were presented in the seminar session:

K. Ramasubramanian (Department of Humanities and Social Sciences, IIT Bombay): History and historiography of discovery of calculus in India.

P. Ram Manohar (Amrita School of Ayurveda, Kollam): Evolution and historical contributions from Ayurveda in India.

Jharna Chakravorty (Department of Zoology, Rajiv Gandhi University, Itanagar): Review on the history of entomophagy.

T. Wangpan (Department of Botany, Rajiv Gandhi University, Itanagar): Traditional rice of Arunachal Pradesh prospect and challenges.

Nikhil Kumar Mahnot (Department of Food Technology, Rajiv Gandhi University, Itanagar): Non-Thermal technology for food preservation.

P. R. Gajurel (Forest Systematics & Ethnobiology Lab, Dept. of Forestry, Arunachal Pradesh, NERIST): Traditional knowledge system in north east India: prospects in health and nutrition management.

Rajesh Kumar Shah (Department of Zoology, D.H.S.K. College, Dibrugarh, Assam): Traditional medicinal plant Cinnamomum tamala - Bridging traditional knowledge with evidence based scientific approaches in drug discovery.

Sampat Ghosh (Agriculture Science and Technology Research Institute, Andong National University, South Korea): Inclusion of traditional foods into mainstream food supply chain to achieve sustainable nutrition security: Emphasizing Indian scenario.

V. B. Meyer-Rochow (Department of Genetics and Physiology, Oulu University, Oulu, Finland): On the history and possible consequences of the uses of arthropods in north-east India for food and medicine.

➤ A seminar on “History of textiles and clothing: Science, technology, conservation and cultural influences” in collaboration with Textile Clothing and Research Center (TCRC), New Delhi was organized at the premises of the Academy during 14-15 October, 2022. During the two days seminar, the following papers on archaeological and historical evidences of textile, dyes and dyestuffs, textile weaving and technological developments in handloom, textiles as cultural heritage and its conservation etc. were presented.

Choodamani Nandagopal (Art Historian, UNESCO Fellow Tagore): Historical review on art of textiles and clothing a few observations.

Anamika Pathak (Retd. National Museum, Delhi):



Saket Kushwaha, Vice Chancellor with INSA delegation during the inauguration of day-long seminar on 10th October, 2022 at RGU, Itanagar

Archaeological evidences of textile from Harappan period.

Ishrat Alam (Aligarh Muslim University, Aligarh): Dyes and dyeing: surface treatment of textiles in medieval India.

Padmini Tolat Balaram (Vishva Bharati University, Shantiniketan): Japanese and Indian clamp resisted natural dyed textiles.

Hansmukh Seth (City Palace Museum, Udaipur): Archeological evidences of textiles of Mewar.

Kanika Choudhary (MSU, Baroda, Vadodara): Textile art museum: chronicle of cultural heritage.

Smita Singh (Textile Conservation Consultant, New Delhi): Gold and silver cloths of India.

Radhana Raheja (Lady Irwin College, Delhi): Experimental study on cleaning of warak printed textiles.

Sakthi G (NID Kurukshetra): Evolution of Negamam cotton sarees.

Garvita Sharma (MSU Baroda, Vadodara): The charm of traditional Bhutia fabric of Sikkim-Khoechen: history and connects.

B B Paul (Weavers' Service Centre, Govt. of India): Types of handlooms and techniques of weaving.

Ayush Tanwar (NID Kurukshetra): Design lexicon of Pilkhuwa block making tradition.

Ekta Gupta (NIFT, Delhi): Sustaining craft and community: design education for artisans.



Group photographs during the two day INSA-TCRC seminar held in the premises of the Academy during 14-15 October, 2022

DST-India Science and Research Fellowship (ISRF) Program

Dr Htay Win Oo of Myanmar and Dr Ashrafi Hossain of Bangladesh have joined CSIR-Institute of Minerals and Materials Technology (IMMT), Bhubaneswar under Dr Shivakumar Angadi and CSIR-Central Food Technological Research Institute (CFTRI), Mysore under the mentorship of Dr A. Jayadeep, respectively for six months ISRF research training.

Financial assistance by INSA for participation in International Conferences abroad

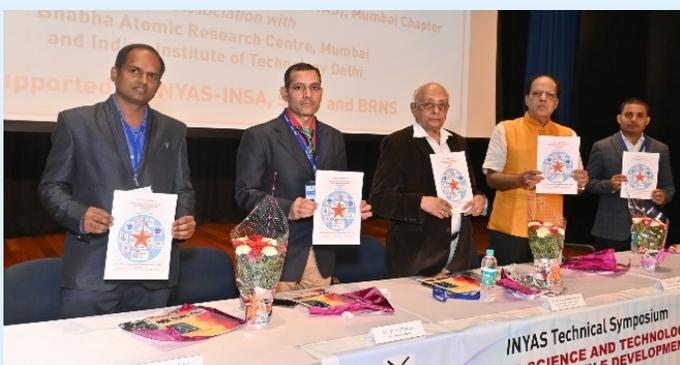
Four Indian scientists were supported by the Academy for attending the ISC (International Science Council) sponsored conferences abroad.

Eighteen Indian scientists were supported by the Academy for attending the Non ISC (International Science Council) sponsored conferences abroad.

Indian National Young Academy Of Sciences (INIAS) Activities

The Indian National Science Academy established Indian National Young Academy of Sciences (INIAS) in December 2014. Following outreach activities have been carried out by INIAS members during September-November 2022.

INIAS Technical Symposium on Basic Science and Technology for Sustainable Development (BSSD-2022)



BSSD-2022

was organised by INIAS Mumbai Chapter at DAE Convention Centre, Anushaktinagar, BARC in Mumbai during 16-18 September, 2022.

INIAS organized a "Vigyan Mela" event on 3rd September, 2022 at Bribangra, Kaithal (Haryana) in association with the Society for Promotion of Science and Technology (SPSTI) and the CSIO JIGYASA team.



आयोजन भारतीय राष्ट्रीय युवा विज्ञान अकादमी का विज्ञान मेला

भ्रांतियों को विज्ञान से किया दूर

संवाद न्यूज एजेंसी

राजौंद। गांव बीर बांगड़ा के सरकारी स्कूल में भारतीय राष्ट्रीय युवा विज्ञान अकादमी की तरफ से विज्ञान मेला आयोजित किया। इसमें विद्यार्थियों को विज्ञान की सहायता से भ्रांतियों को दूर किया। कार्यक्रम का उद्देश्य बच्चों में विज्ञान के प्रति रुचि पैदा करना था।

इस दौरान विज्ञान एवं प्रौद्योगिकी विभाग दिल्ली के सौजन्य से विज्ञान बस मेले में पहुंची। कार्यक्रम में वैज्ञानिक डॉक्टर पूजा शर्मा का ग्रामीणों ने भव्य स्वागत किया।

विद्यालय के सभी विद्यार्थियों को उनके विषय से संबंधित प्रयोग कराए। इसमें अमल शार को पहचानना एटीडीएस मीटर ने पानी की गुणवत्ता को जांचना, रसायनों का प्रयोग करके हाथ में आग लगाना क्रिया बताई। साथ ही लोगों में

राजौंद में बच्चों को विज्ञान के प्रयोगों की जानकारी देती डॉ पूजा।

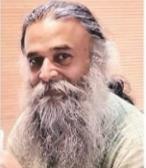
वैज्ञानिक सोच को विकसित करने के प्रयास किए। कार्यक्रम के अंत में विद्यार्थियों में प्रतियोगिता करवाई। जिसका सही जवाब देने वाले विद्यार्थियों को टी-शर्ट व प्रमाण पत्र देकर सम्मानित किया। इंजीनियर एमएल गर्ग ने विद्यार्थियों की करियर काउंसलिंग की। एसपीएसटीआई के प्रबंधक महिपाल शर्मा ने विद्यार्थियों को विज्ञान विषय के लिए प्रेरित किया। विज्ञान संचारक गुलशन चौरसिया, अमित कुमार ने कार्यक्रम में अहम भूमिका निभाई।

Vigyan Mela

Lecture series on Nobel Prizes 2022: A lecture series on Nobel Prizes 2022 is being organised by INYAS in association with SPSTI, NASI and IAPT. The first lecture in this series was on 22 October, 2022, delivered by Professor Arvind, Vice Chancellor, Punjabi University, Patiala, on the Nobel Prize in Physics 2022. The Speaker delivered his talk in vernacular to facilitate its easier comprehension by Punjabi & Hindi speaking students. The Guest of Honour in this lecture was Dr Jatinder Kaur Arora, Executive Director, PSCST and Member Secretary, Punjab Biodiversity Board.



Lecture Series on Nobel Prizes 2022
Online Expository Lecture on Nobel Prize in Physics 2022
Quantum Information Processing: Entangled States from Theory to Technology

SPEAKER

Prof. Arvind
Eminent Quantum Physicist
Vice Chancellor
Punjabi University, Patiala

GUEST OF HONOUR

Dr. Jatinder Kaur Arora
Executive Director, Punjab State Council for Science & Technology & Member Secretary
Punjab Biodiversity Board

Saturday
October 22, 2022
11:00 AM

The Speaker would deliver his talk in vernacular to facilitate its easier comprehension by Punjabi & Hindi speaking students

About the Speaker
Prof. Arvind is a well known theoretical physicist working in the areas of quantum information theory, quantum optics and foundations of quantum mechanics. Prof. Arvind did his Masters in Physics in 1990 from the Indian Institute of Technology Kanpur & obtained his Ph.D. from the Department of Physics and the Centre for Theoretical Studies at the Indian Institute of Science Bangalore in 1997. He then joined the Physics department of Guru Nanak Dev University, Amritsar as a faculty member. During 2002-2004, he was at the Physics Department of Carnegie Mellon University Pittsburgh as a special faculty and then joined as a faculty member in the physics department of the Indian Institute of Technology-Madras in 2005. He later moved to IISER Mohali as it was established in 2007. He progressed to become Dean of Faculty and also served as its officiating Director. In April, 2021, he took deputation from IISER Mohali to serve as VC of Punjabi University. In 2018, he had been designated by DST-Gol as the National Coordinator of multi-institutional program on Quantum Enabled Science and Technology (QEST), which he continues to steer.

Citation for Nobel Prize in Physics 2022
The Royal Swedish Academy of Sciences has decided to award the Nobel Prize in Physics 2022 to Alain Aspect from France, John F. Clauser from USA and Anton Zeilinger from Austria "for experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science". They have conducted groundbreaking experiments using entangled quantum states, where two particles behave like a single unit even when they are separated. Their results have cleared the way for new technology based upon quantum information. There is now a large field of research that includes quantum computers, quantum networks and secure quantum encrypted communication. One key factor in this development is how quantum mechanics allows two or more particles to exist in what is called an entangled state. What happens to one of the particles in an entangled pair determines what happens to the other particle, even if they are far apart.

Joining Details:
Saturday, October 22 2022
at 11:00 AM

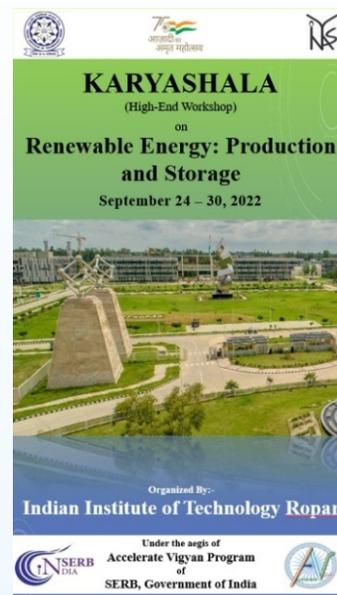
Meeting ID: 826 160 1295
Passcode: spsti

Organized by
Society for Promotion of Science & Technology in India (SPSTI) in association with
Chandigarh Chapter of National Academy of Sciences India (NASI)
Chandigarh Chapters of INSA & INYAS
Indian Association of Physics Teachers (IAPT)

Organized under Science Communication Popularization & Its Extension in Punjabi (SCOPE) Program initiated by Punjab State Council for Science & Technology (PSCST) with support from Vigyan Prasar

www.spsti.org | Email: info@spsti.org | Helpline: 98132-55855

KARYASHALA is an effort to improve research productivity of promising PG and PhD students from universities and colleges through high-end workshops on specific themes. KARYASHALA workshop on “Renewable Energy: Production and Storage” was organised by INYAS in association with IIT Ropar and SERB at IIT Ropar during 24-30 September, 2022. The workshop was focused on a diverse area of renewable energy and focus on thin film growth, solar cell fabrication, solar cell testing, HER and



KARYASHALA
(High-End Workshop)
on
Renewable Energy: Production and Storage
September 24 – 30, 2022

Organized By:-
Indian Institute of Technology Ropar

Under the aegis of
Accelerate Vigyan Program
of
SERB, Government of India




KARYASHALA (High-end workshop) on Renewable Energy: Production and Storage
24 – 30, September 2022

Organized by – Indian Institute of technology (IIT), Ropar-140001, Punjab, India
Sponsored By - Science and Engineering Research Board (SERB) through Accelerate Vigyan Scheme(AVS), DST, Govt. of India

About the workshop
“KARYASHALA” is an effort to improve research promising postgraduate and young Ph.D. scholars from Institutes, universities and colleges. The workshop will provide the following in-depth:
➤ Thin Film Science and Technology
➤ Vacuum Science and Technology
➤ Physics of solar cells
➤ Solar cell fabrication
➤ Solar cell characterization
➤ Hydrogen generation
➤ Other sources of renewable energy and storage

Speakers

 Dr. Pooja Devi Principal Scientist, CSIR-CSIO, Chandigarh Topic: Hybrid Nanostructured Electrodes for Photoelectrochemical Wastewater treatment and Hydrogen Generation	 Dr. Rajendra S. Dhaka Associate Professor, IIT Delhi Topic: Development of cost effective sodium ion batteries
 Dr. Ramendra Sundar Dey Scientist-C, INST Mohali Topic: Next-generation Energy storage and conversion system: Metal-air battery and electrochemical NH3 synthesis	 Dr. Akshai K. A. Seetharam Associate Professor, IIT Guwahati Topic: Organometallic Catalysis Towards Green Hydrogen Generation
 Dr. Praveen Kumar Assistant Professor, Indian Association for the Cultivation of Science, Kolkata Topic: Hybrid 2D Materials for Energy Harvesting Applications	 Dr. Manoj Gupta Scientist, CSIR-Advanced Materials and Processes Research Institute Bhopal, MP Topic: Piezoelectric Flexible Smart Nano-generator for Energy Harvesting

There is no registration fee for the workshop. The selected participants will be provided boarding and lodging at IIT Ropar.

ELIGIBILITY: - Highly motivated Masters and PhD students (up to 3rd Year) actively involved in applied sciences

DEADLINE for Registration:- 31st July 2022

REGISTRATION FORM:-
<https://docs.google.com/forms/d/e/1FAIpQLSeUQaJ5e0f483FA0OzeMPLDty19tbV3d013oPP70f99f0kQ/viewform>

The workshop duration will be of one week, the dynamic and pragmatic facilities from various eminent institute/research labs/University will deliver the lectures. This program aims to educate and enrich the postgraduate and young researchers to carry out high-end scientific research in the area of renewable energy. The government of India and SERB through Accelerate Vigyan Scheme (AVS) is primarily supporting the workshop, facilitated by the Indian Institute of Technology (IIT) Ropar. Participation certificates will be issued upon successful completion of the workshop after meeting the required attendance in the sessions

Research Facilities:-

					
Combustion sputtering system	Dual chamber sputtering unit	Chemical vapour deposition	PVE-300 EQE/3QE response	Hall measurement	AM 1.5 Solar Simulator

Co-ordinator: Dr. Mukesh Kumar, Associate Professor
Department of Physics, IIT Ropar
Email: mksumar@iitrr.ac.in | karyashalaititrr@gmail.com
Research home page: www.iitrr.ac.in/physics/faculty

Organized By:-
  

Karyashala

new materials for energy storage. The hands-on training of the students is the unique recipe of the workshop.

Identification of concrete models for the young scientists to create new knowledge and at the same time translate research into tangible products is important. For this purpose, the Office of the Principal Scientific Adviser (PSA) to GoI, Indian National Young Academy of Sciences (INyas), and IIT (BHU) have developed a questionnaire, which aims to obtain feedback from young researchers (≤ 45 years of age) across India.

Eureka Science Club, Sindhudurg, Maharashtra in collaboration with Indian National Young Academy of Sciences (INyas), Mumbai Chapter organised a two day workshop based on practical and innovative ideas. The first session was on 31st October, 2022, for the students of 1st to 4th standard on the theme "Fun with Electronics" and the second session on 1st November, 2022, for the students of 5th to 10th standard on the theme "Electronics and Robotics". The event was conducted in hybrid mode where the offline event held at Vidyaniketan Convent School, Kasal, Sindhudurg, Maharashtra.

 Eureka Science Club, Sindhudurg, Maharashtra <i>in collaboration with</i> Indian National Young Academy of Sciences (INyas), Mumbai Chapter 	
Date: 31st Oct. 2022 10 am to 4 pm Fun with Electronics For STD- 1 st To 4 th Experiments based on Breadboard, LED, Resistors, Buzzer, Sensor, Motor, Switch	Date: 1st Nov. 2022 10 am to 4 pm Electronics & Robotics For STD- 5 th To 10 th Experiments based on Breadboard, LED, Resistors, Buzzer, Sensor, Motor, Switch & 4 different robots
Resource person  Mr. Bhushan Pangam B.E. (I.E) (Eureka Science Club)	Workshop fully based on practical and Innovative Ideas Mode - Online / offline Registration link : https://forms.gle/B5ULva5ZGQGHCNw7 Offline Venue: Vidyaniketan Convent School, Kasal, Sindhudurg, Maharashtra Organisers from INyas : Dr. Vivek Parkar, Dr. Jayavant Gunjekar from Eureka Science Club: Mrs. Sushama Keni

A Science awareness program was organised on 04th November 2022 at Middle School Pachhan Gaya. This program includes lectures on general science and demonstration of general science experiments to motivate school students for Science education.

"ACS Editors Meeting" was organised jointly by the American Chemical Society (ACS), the Indian National Young Academy of Sciences (INyas) and IIT Delhi on November 9th, 2022. Primarily, the program is focused on fostering collaborations and enhancing the community experience in Engineering, Energy, Sustainability, Environment, and other interdisciplinary domains while responding to queries related to their respective journals.



Science awareness programme



 ACS Chemistry for Life	 ACS Publications Most Trusted. Most Cited. Most Read.	 INyas
American Chemical Society Editors Talk and Interaction Session		
 Prof. Wonyong Choi Editor-in-Chief, ACS ES&T Engineering KENTECH Korea	 Prof. Gregory Lowry Executive Editor, Environmental Science & Technology Carnegie Mellon University, United States	 Prof. Bryan Brooks Editor-in-Chief, Environmental Science & Technology Letters Baylor University, United States
A joint event being organized by American Chemical Society (ACS), Indian National Young Academy of Sciences (INyas) and Indian Institute of Technology Delhi (IIT/D)		
Date : November 9th, 2022 Time : 04:30 PM – 06:30 PM Venue : Lecture Hall Complex (LHC 527), IIT Delhi		
We invite students and young researchers from Engineering, Energy, Environmental Sciences & Allied Fields		
 Dr. Rojendra S. Dhaka Chairperson INyas and Associate Professor, IIT/D	 Dr. Deeksha Gupta Senior Associate Director, ACS-India	

ACS Editors Meeting

IACS and INYAS conducted a SERB-sponsored workshop on "Green Energy Harvesting and Storage: Materials, Methods and Applications" at IACS from 16-22 November, 2022. This workshop is specially designed for Masters' and PhD students.

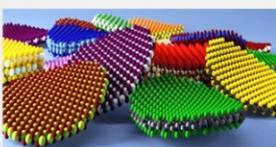
Invited Speakers	 Prof. D D Sarma (IISc Bangalore)	 Prof. Amitava Patra (INST Mohali)	 Prof. Indra Das Gupta (IACS Kolkata)
	 S M Shivaprasad (JNCASR Bangalore)	 Prof. Abhishek De (IACS Kolkata)	 Prof. Sombrata Acharya (IACS Kolkata)
	 Prof. Narayan Pradhan (IACS Kolkata)	 Prof. Sabastine Peter (JNCASR Bangalore)	 Prof. Vivek Palitosh (TIFR Mumbai)
	 Prof. Ayan Dutta (IACS Kolkata)	 Prof. Arnab Dutta (IIT Mumbai)	 Prof. Mukesh Kumar (IIT Ropar)
	 Prof. C S Sharma (IIT Hyderabad)	 Prof. Ritu Gupta (IIT - Jodhpur)	 Dr. Ramendra S De (INST Mohali)
	 Dr. Y. S. Chaudhary (CSIR-IMMT)	 Dr. Mahesh Kumar (CSIR-NPL)	 Dr. Shubdeep Dutta (IACS Kolkata)
	 Dr. Urmimala Maitra (IACS Kolkata)	 Dr. KDM Rao (IACS Kolkata)	 Dr. Praveen Kumar (IACS Kolkata)
Organizers	Convener: Dr. Praveen Kumar		Organizing Team Prof. Narayan Pradhan Prof. Ayan Dutta
			Dr. Shubdeep Dutta Dr. KDM Rao Dr. Urmimala Maitra







November 16 – 22, 2022




**Raman Hall,
Indian Association for the Cultivation of Science, Kolkata**

Important Dates:
 Registration opens: **October 15, 2021**
 last date for registration: **October 28, 2021.**
 Display of shortlisted candidates: **October 31, 2021**



Recent Publications of the Academy

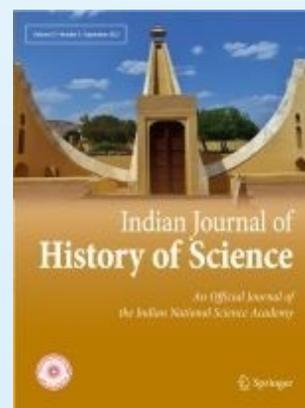
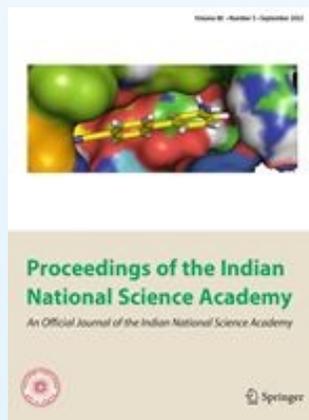
Proceedings of the Indian National Science Academy: Volume 88, No. 3 (September 2022 issue): Published.

Indian Journal of Pure and Applied Mathematics: Vol 53 No. 3 & 4 (September & December 2022 issue): Published.

Indian Journal of History of Science : Vol. 57 No. 3 (September 2022 issue): Published. The issue includes papers on Indus zoomorphism and classification of seal-impressions based on a design logic and genealogical figure charts; reassessing European impressions of Indian Astronomy (1750-1850); the origins of scientific disciplines and a counter-history of western science; cattle plague and the introduction of veterinary education in colonial Bengal; technological modifications in the tanning and leather industry from pre-British to colonial Punjab; Meghnad Saha as a teacher, and history of ARIES. The issue also includes a report of a project on Ethno-medico-botanical studies of Eruliga and Lambani tribes of Ramanagara district of Karnataka.

Annual Report 2021-2022 (English & Hindi) : Published.

INSA News Letter (June - August 2022): Published.

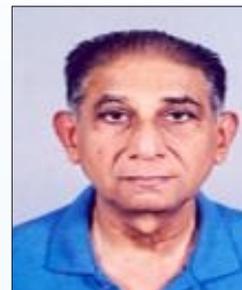


Obituary Notes

KRISHNA MANDA VENKATA APPARAO

KMV Apparao (*b* 04 August, 1933; *d* 2020) obtained his PhD from the University of Rochester, and returned to TIFR in 1963 to continue research. He worked at the Massachusetts Institute of Technology, Cambridge, Mass, USA and at the Marshall Space Flight Centre in Huntsville. After retirement, he was INSA Senior Scientist during 1996-2000. Professor Apparao started his research career in the area of Space Physics and Particle Physics. This finding gave an important clue to the origin of cosmic rays and triggered further work in several observatories to discover isotopes of several other elements in cosmic rays.

Professor KMV Apparao was elected as a Fellow of the Indian National Science Academy in 1993.



KANDALA VENKATA RAMANA CHARY

K. V. R. Chary (*b* 10 February 1954; *d* 30 September 2022) obtained PhD from Osmania University, Hyderabad specializing in Physics. He served as Chairman, Department of Chemical Sciences, TIFR, Mumbai and Director, IISER, Berhampur. His research interests are primarily focused on the investigation of the three-dimensional structures and properties of biological molecules, particularly proteins and nucleic acids, in atomic detail and their correlation with biological activity. He was a Fellow of Indian Academy of Sciences, Bangalore and the Academy of Sciences for the Developing World.

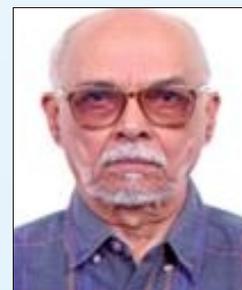
Professor K. V. R. Chary was elected as a Fellow of the Indian National Science Academy in 2012.



SALEM RAMACHANDRA VENKATASUBBA RAO

SRV Rao (*b* 27 December, 1927; *d* 25 October, 2022) obtained PhD from University of Rajasthan on cytology of Homoptera: Auchenorrhyncha. He worked in the Department of Zoology, University of Delhi, as Lecturer, Reader and then Professor till retirement. He was INSA Senior Scientist during 1995-99. Professor Rao focused his investigations on X-chromosome regulation and heterochromatin and discovered the mammalian type X-chromosome (inactivation) in the Indian Mole Cricket, *Gryllotalpa fossor*.

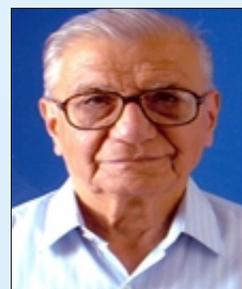
Professor SRV Rao was elected as a Fellow of the Indian National Science Academy in 1983.



SUKUMAR SHYAMLAL MERH

SS Merh (*b* 02 October, 1928; *d* 03 November, 2022) obtained PhD from Imperial College of Science and Technology, London. He was a Professor in the Department of Geology, Baroda. Professor Merh taught and did research on geology, both pure and applied. He worked on Moinia rocks of Scottish Highlands and emphasized on the structural complexities.

Professor SS Merh was elected as a Fellow of the Indian National Science Academy in 1982 and served its Council as Member (1987-89).



KANKAN BHATTACHARYYA

Kankan Bhattacharyya (*b* 17 November, 1954; *d* **10 November, 2022**) obtained PhD from Indian Association for the Cultivation of Science (IACS), Kolkata. He was the Director and Chair Professor of IACS, Kolkata. Professor Bhattacharyya was a modern non-linear laser spectroscopy scientist. His main interest was in femtosecond dynamics in nano-confined systems that include biological assemblies. His most significant discovery is that water molecules, confined in a nanocavity, display an ultraslow component of solvation dynamics which is 100-1000 times slower compared to bulk water. He also showed that proton transfer in nano-confined systems is substantially slower compared to that in bulk water.



Professor Kankan Bhattacharyya was elected as a Fellow of the Indian National Science Academy in 2002 and served its Council as Member (2007-09), Vice-President (2016-18) and Additional Member (2012-13).

ASHOKE NATH MITRA

ANMitra (*b* 15 April, 1929; *d* **26 November, 2022**) obtained his PhD in Physics from Delhi University. He obtained second doctorate from Cornell University, USA with **specialization of Theoretical Physics, Quantum Field Theory, Hadron and Quark Dynamics. He served as Reader at Aligarh Muslim University, Professor at Indiana University and University of Delhi.** He was an Indian theoretical physicist known for his work in nuclear physics, particle physics and quantum field theory.

Professor AN Mitra was elected as a Fellow of the Indian National Science Academy in 1966 and served its Council as Secretary (1975-78) and Editor of Publication (1983-86).



HR Activity

Hindi Fortnight-2022

Hindi Fortnight was observed from September 14 to 28, 2022 in the Academy to promote the progressive use of official language Hindi and to create an encouraging environment for working in official language Hindi. Hindi Day was observed in the Academy on 14th September, 2022, Hindi workshop was organized and Hindi Fortnight was inaugurated in which Dr. Narmada Prasad Shukla, Full Time Member (Technical), Air Quality in National Capital Region and Neighboring Areas Commission, New Delhi was invited as the Chief Guest who presented an interesting lecture on the topic "Discipline in Office" and Dr. Arvind C. Ranade, Chairman of the Official Language Implementation Committee of the Academy & Chairman of Hindi Fortnight-2022, Organizing and Evaluation Committee & Executive Director of the Academy expressed his views and encouraged the staff members to connect with Hindi through the core of their heart and participate in all the competitions and programmes of Hindi Fortnight.



Cleanliness Drive

Mass cleanliness drive was carried out from 01.10.2022 to 31.10.2022 in the premises of the Academy as per the instructions of DST, GoI. In addition to the cleanliness drive, total 192 old files/registers were also weeded out as per the retention schedule. Along with this, the various type of scrap were also disposed off by selling them for an amount of Rs. 1,81,663/-.

Due to this cleanliness drive, a total 60 Sqm of space in the basement of Jubilee Centre of the Academy, which was surrounded byscrap, has also been freed. The cleanliness drive was very successful.



was organized to mark the occasion in the Multipurpose Hall on the ground floor on 31st October, 2022. Dr Arvind C Ranade, Executive Director of the Academy administered “Integrity Pledge” to the staff members. The vigilance pledge was administered to the staff members by Mr. Madhvendra Narayan, the Vigilance Officer. An Essay competition on the topic “Corruption Free India for a Developed Nation” was organized during the week. Five employees of the Academy took part in the competition. Mr. Sandeep Kumar won the First prize of Rs. 1000/- while the second prize (Rs. 700/- each) was jointly won by Mr Abhishek Mishra and Ms. Madhvi Sharma. The book “बदनाता भारतीय विज्ञान” was given to two other participants as consolation prize.

Vigilance Awareness Week--31st October 06 November 2022

The Vigilance Awareness Week was observed in the Academy during 31 October to 06 November. A function



Staffs members of the Academy taking integrity and vigilance pledge during the vigilance awareness week



Dr Arvind C Ranade administering the Integrity pledge to the staff members of the Academy

Constitutional Day

Samvidhan Diwas (Constitutional day) was celebrated in the Academy on 26th November, 2022 on the theme “**India- the mother of Democracy**” to commemorate the adoption of Constitution of India as Jan Bhagidari and to honor and acknowledge the contribution of Founding Fathers of the Constitution. Staff members read the preamble and participated in the quiz “*India - the mother of Democracy*” on that day.

Shri Lokinder, Multi-Tasking Staff joined Indian National Science Academy on 23rd June, 1986. He retired after attaining the age of superannuation on 30th November, 2022.

