

The National Academy of Sciences, India (NASI)

5, Lajpatrai Road, Prayagraj-211002, India

Monthly Summary for the month of July 2021

- 1. Hon'ble Prime Minister of India announced/started the celebration of 'Azadi ka Amrut Mahotsav'; following that, the DST, GoI sent circulars to its AIs to develop programmes for next 75 weeks to celebrate the same. NASI prepared it; and started the programme timely. Several Programmes have been held/being held; just for reference an email from the NASI-Kearala Chapter is enclosed-Annex. 1. A documentary on NASI was also released. The Fellows of the Academy dedicated their articles to Amrut Mahotsav Programme, e.g. article by Prof. Manoj Prasad, NIPGR, New Delhi. Further, about 20 days' workshop was organised by the NASI-TMC on Differential Geometry on July 5-24, 2021 (Annex. 2).
- 2. A Popular Lecture Series was started by the Bhopal Chapter of NASI on Biotechnology on 8th July (Annex. 3); in this series 21 Experts Lectures would be organized throughout the year on specific fields of biotechnology under which advances are going on. A WEBINAR (Speaker-Dr K NANDABALAN) on 'Enhanced and Rapid Drug Discovery.....', was also held on 23rd July at NASI-Bangalore Chapter; please see the details as Annex. 4.
- 3. Jaipur National University Institute of Medical Science and Research and NASI-Rajasthan Chapter jointly conducted a Life-Health Awareness Campaign in July 2021 (please see the report as **Annex. 5**).
- 4. Jagrukta Abhiyan for Covid-19 Pandemic (also dedicated to Amrut Mahotsav), was jointly organized by NASI HQs & Hyderabad Chapter under NASI New Initiatives (please see the report as **Annex. 6**).

Also, a wide publicity to the 'Free Vaccination' was given to encourage people to get themselves vaccinated to combat COVID-19; and save the nation/humanity from the dreaded Coronavirus.

5. The nominations were invited for different prestigious 'Lecture Awards' and other awards, to recognise the talent/good work done

by the Indian Scientists (Annex. 7); till date several nominations have been received.

Several other NASI Chapters also organized online scientific activities.



Dr. Niraj Kumar <aes.nasi@gmail.com>

Azadi Ka Amrut Mahotsav:75th year of Independance

Peter KV <peter.kv@gmail.com>

8 July 2021 at 22:38

To: "Deepu Mathew, KAU" <deepu.mathew@kau.in>, "Dr.Soniya E V" <evsoniya@rgcb.res.in>, PRAKASHKUMAR R <rprak62@gmail.com>, vijayan menon <evjmenon@gmail.com>, "Prof. M. Radhakrishna Pillai" <mrpillai@rgcb.res.in>, B Cc: Peter KV <Peter.kv@gmail.com>

Respected Fellows

Greetings

Following programmes are planned as part of the celebrations of 75th year of India's Independane.

1. World Food Day-16th October 2021: Prof. Dr. B Mohan Kumar Hon. Vice-Chancellor Arunachal Pradesh University of Studies and Executive Councillor NASI has agreed to deliver a lecture on World Food Day.

2. World Fisheries Day:21 November 2021: Speaker to be invited.

3. World Soil Day:5th December 2021:Speaker to be invited.

4. National Mathematics Day: 22nd December 2021: Speaker to be invited.

5. National Science Day: 28th January, 2022: Speaker to be invited.

6.International Water Day:8th March,2022:Speaker to be invited.

7. National Technology Day: 11th May 2022: Speaker to be invited.

I request Hon. Fellows to propose eminent scientists in the field to enable to contact them and invite them.

.Kindly acknowledge With warm regards Yours sincerely

(K V Peter)

Prof KV Peter Ph D.Post Doc(USDA Beltsville) FNAAS.FNASc.FNABS.FIAHS.

FISVS, FISGPB, FISNS, H. FCHAI

Former Vice Chancellor, KAU

Former Director, ICAR-IISR, Calicut

President, Indian Society of Vegetables, Varanasi

President, Kerala Region, National Academy of Sciences, Prayagraj

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Programme schedule for third week (July 19-24, 2021)



NASI-TMC Summer School on Differential Geometry

(July 05-24, 2021)



(To be held online)

Organized as a part of "Azadi ka Amrut Mahotsav" celebrations

Organized by

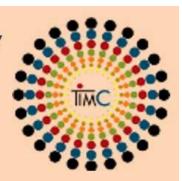
Department of Mathematics and Statistics School of Basic Sciences Central University of Punjab VPO-Ghudda, Bathinda-151401, Punjab, India

Sponsored by



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of Sciences, India
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The Mathematics

Consortium



Day	Date	Morning session	Lunch Break	Afternoon session	Tea Break	Evening session
		(11:00 am–12:30 pm)	(12:30- 2:00 pm)	(2:00–3:30 pm)	(3:30-4:00 pm)	(4:00-5:00 pm)
		(Speaker)		(Speaker)		(Speaker)
Mon	19-07-21	L1 (SGD)	L	L2 (STM)	Т	
Tues	20-07-21	L3 (MP)	U	L4 (SM)		
Wed	21-07-21	L5 (KHP)	N	L6 (AK)	Е	
Thu	22-07-21	L7 (HS)	С	L8 (TV)		
Fri	23-07-21	L9 (MD)	Н	L10 (MMT)	A	L11(RK)
Sat	24-07-21	L12 (RSK)		L13 (RKM) followed by valedictory		

Abstract of talks for the third week

Date: 19-07-21 (11:00 am-12:30 pm)

Speaker- S. G. Dani

School of Mathematics, TIFR, Mumbai

Email ID: dani@math.tifr.res.in

Title- Hyperbolic geometry, modular group and continued fractions

Abstract- The talk will begin with an introduction to (hyperbolic) geometry of the upper half plane (equipped with the Poincare metric), the group of isometries, the modular subgroup, the geodesic flow associated with the modular surface and some dynamical theory around these. In the second half we shall introduce continued fraction expansions of real numbers and discuss the rich interaction between geometry and arithmetic, through considerations of the modular group and the geodesic flow.

Chairperson of the session- Krishnendu Gongopadhyay

Department of Mathematical Sciences

IISER, Mohali

Email: krishnendu@iisermohali.ac.in

Date: 19-07-21 (2:00–3:30 pm)

Speaker- Saikat Mazumdar

Department of Mathematics, IIT Bombay

Email ID: saikat@math.iitb.ac.in

Title- FINDING METRICS WITH CONSTANT SCALAR CURVATURE.

Abstract- In this talk, I will survey the Yamabe problem (1960), which asks to find a (conformal) metric with constant scalar curvature on a compact Riemannian manifold. The solution of the Yamabe problem by Trudinger (1968), Aubin (1976) and Schoen (1984) highlighted the role played by local and global geometry of the manifold, and the unexpected connection to the positive mass theorem of general relativity. I will start with the case of compact surfaces and also introduce some tools and techniques from Calculus of Variations and Nonlinear Analysis on Manifolds. I will also possibly discuss Yamabe flows, Blow-up analysis and the Compactness problem.

Chairperson of the session- Ashok Kumar Pathak

Department of Mathematics and Statistics Central University of Punjab, Bathinda Email ID: ashok.pathak@cup.edu.in Date: 20-07-21 (11:00 am-12:30 pm)

Speaker- M. Prabhakar

Department of Mathematics, IIT Ropar Email ID: prabhakar@iitrpr.ac.in

Title- Brief history of Knot Theory & some of its basic concepts

Abstract- Knots and links are very familiar, and they fascinated people from the dawn of human history. In this talk, I will present some of the past ideas that lead to the development of the modern subject in the field of Mathematics, well known as Knot theory. Further, I will provide some basic concepts of knot theory and discuss the construction of some of the well-known invariants. Finally, I will conclude the talk by posing some open problems related to the topology and geometry of knots.

Chairperson of the session- S. K. Narasimhamurthy

Department of Mathematics, Kuvempu University, Shimoga

Email ID: nmurthysk@gmail.com

Date: 20-07-21 (2:00-3:30 pm)

Speaker- Soma Maity

Department of Mathematical Sciences, IISER Mohali

Email ID: somamaity@iisermohali.ac.in

Title- UNIFORM POINCARÉ INEQUALITIES ON MEASURED METRIC SPACES

Abstract- Consider a proper geodesic metric space (X, d) equipped with a Borel measure μ . We establish a family of uniform Poincaré inequalities on (X, d, μ) if it satisfies a local Poincaré inequality (Ploc), and a condition on the growth of volume. Consequently, if μ is doubling and supports (Ploc) then it satisfies a uniform (σ, β, σ) -Poincaré inequality. If (X, d, μ) is a Gromov-hyperbolic space, then using the volume comparison theorem introduced by Besson, Courtoise, Gallot, and Sambusetti, we obtain a uniform Poincaré inequality with the exponential growth of the Poincaré constant. Next, we relate the growth of Poincaré constants to the growth of discrete subgroups of isometries of X, which act on it properly. This is Joint work with Gautam Nilakantan.

Chairperson of the session- Abhitosh Upadhyay

School of Mathematics and Computer Science, IIT Goa

Email: abhitosh@iitgoa.ac.in

Date: 21-07-21 (11:00 am-12:30 pm)

Speaker- Kapil H. Paranjape

Department of Mathematical Sciences, IISER Mohali

Email ID: kapil@iisermohali.ac.in

Title- Principal bundles, curvature and Chern-Weil theory

Abstract- As a result of the principle of relativity, one can imagine that as one travels along a path on a manifold, the instruments that one uses to make measurements are "deformed". This leads to the notion of gauge theory which is completely captured by Cartan's notion of a connection on a principal bundle. We will give an expository talk on this topic and explain the notion of curvature that arises from it. We will also discuss how this curvature, like Gaussian curvature, can lead to certain global topological invariants through Chern-Weil theory.

Chairperson of the session- Gauree Shanker

Department of Mathematics and Statistics Central University of Punjab, Bathinda

Email: grshnkr2007@gmail.com

Date: 21-07-21 (2:00–3:30 pm)

Speaker- Arpan Kabiraj

Department of Mathematics, IIT Palakkad

Email ID: arpaninto@iitpkd.ac.in

Title- Conjugation invariant norms on groups

Abstract- In this talk, we will discuss the concept of conjugation invariant norm on a group. We will define conjugation invariant norm and discuss various properties and examples of it. Then we will focus on group of diffeomorphisms on an oriented manifold and various conjugation invariant norms on it. If time permits we will discuss some recent results about diffeomorphism group of surfaces.

Chairperson of the session- Jay Prakash Singh

Department of Mathematics and Computer Science, Mizoram University

Email: jpsmaths@gmail.com

Date: 22-07-21 (11:00 am-12:30 pm)

Speaker- Harish Seshadri

Department of Mathematics, IISc. Bangalore

Email ID: harish@math.iisc.ernet.in

Title- Volume and diameter of positively curved Kahler manifolds.

Abstract- I will discuss a recent result of Zhang that of a compact Kahler manifold with positive Ricci curvature is bounded above by that of complex projective space (of the same dimension) endowed with the Fubini-Study metric. To get a similar diameter bound, one needs the stronger condition of positive holomorphic bisectional curvature. I will talk about the case of equality for both these quantities.

Chairperson of the session- Gauree Shanker

Department of Mathematics and Statistics Central University of Punjab, Bathinda

Email: grshnkr2007@gmail.com

Date: 22-07-21 (2:00-3:30 pm)

Speaker- T. Venkatesh

Director, Mathematical Sciences Institute, Belagavi.

Email: tmathvenky@yahoo.co.in

Title- On moduli Space of Riemann surfaces

Abstract- They arise in mathematical physics and how a formal mathematical model can be given. Some issues relating to combinatorial structures also crop up. This exposition is meant for the uninitiated interested in this area of geometry and topology.

Chairperson of the session- Sudhir Kumar Srivastava

Department of Mathematics & Statistics Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh

Email: sudhir.mathstat@ddugu.ac.in

Date: 23-07-21 (11:00–11: 45 am and 12:00 noon-12:45pm)

Speaker- Mahuya Datta

Division of Theoretical Statistics and Mathematics Statistics and Mathematics Unit, ISI, Kolkata Email ID: mahuya@isical.ac.in

Title- Bracket generating distributions

Abstract- A distribution D on a manifold M is a subbundle of the tangent bundle TM. It is called bracket generating if successive Lie brackets of vector fields in D generate the whole tangent bundle. By Chow's theorem, any two points of M can be joined by a smooth path which is tangential to the distribution at all points. This is the origin of sub-Riemannian geometry. We shall discuss the existence of horizontal immersions of a manifold into contact distributions and some recent results in holomorphic and Quaternionic contact geometry.

Chairperson of the session- Krishnendu Gongopadhyay

Department of Mathematical Sciences IISER, Mohali

Email: krishnendu@iisermohali.ac.in

Date: 23-07-21 (2:00–3:30 pm)

Speaker- M. M. Tripathi

Department of Mathematics, Institute of Science, BHU Varanasi Email ID: mmtripathi66@gmail.com

Title-

Abstract-

Chairperson of the session- Poonam Gupta

Department of Mathematics & Statistics, Dr. Harisingh Gour Central University, Sagar, Madhya Pradesh Email ID: punam2101@gmail.com Date: 23-07-21 (4:00-5:00 pm)

Speaker- Rakesh Kumar

Department of Basic and Applied Sciences Punjabi University, Patiala Email: rakesh_bas@pbi.ac.in

Title- Study of null hypersurfaces of Lorentzian manifolds with Rigging technique

Abstract- In the study of null hypersurfaces, the main drawback is the existence of the degenerate induced metric on the hypersurface. To overcome the anomaly due to the degeneracy of the induced metric, we study null hypersurfaces with a fixed rigging vector field. This rigging technique allows us to construct a Riemannian metric on the null hypersurface. Thus, the extrinsic properties of the null hypersurfaces are related to the properties of the Riemannian manifolds. Later, by taking the advantages of the almost complex structure of the almost Hermitian manifolds, we extend the notion of rigging technique for null hypersurfaces of indefinite Kaehler manifolds. Here the rigging vector field enables us to build an associated Hermitian metric on the ambient space and which is restricted into a non-degenerated metric on the null hypersurface. Finally, we study null hypersurfaces given as graph of the function on the fiber of generalized Robertson-Walker spacetimes.

Chairperson of the session- Sachin. K. Srivastava

Srinivasa Ramanujan Department of Mathematics Central University of Himachal Pradesh Email: sachink.ddumath@gmail.com,

Date: 24-07-21 (11:00 am-12:30 pm)

Speaker- Ravi S Kulkarni

Bhaskaracharya Pratishthana, Pune Email ID: punekulk@gmail.com

Title- Curvature and Metric

Abstract: Different aspects of curvature and metric will be discussed.

Chairperson of the session- Bankteshwar Tiwari

DST-CIMS, Institute of Science, BHU Varanasi Email ID: banktesht@gmail.com

Date: 24-07-21 (2:00-3:00 pm)

Speaker- R. K. Mishra

Department of Mathematics SLIET Deemed University, Longowal, Punjab

Email ID: ravkmishra@yahoo.co.in

Title- THEORY OF EXPENDING UNIVERSE & VARIABLE CONSTANTS

Abstract- What is the dynamics of the universe? For this talk I will briefly present the dynamics of the cosmological expansion and the development of large-scale structure. I will then talk about the present roles they have played for a recent, progress in our understanding of the universe along with variable constants. It is also planned to ignite the young minds regarding present area of research in this direction with Dark Energy candidate.

Chairperson of the session- Satya Bir Singh

Department of Mathematics Punjabi University, Patiala, Punjab Email ID: sbsingh69@yahoo.com

Date: 24-07-21 (3:00-4:00 pm)

Valedictory function: Details will be announced later.

(Gauree Shanker)

Convener

NASI-TMC Summer School on Differential Geometry

Head

Dept. of Mathematics and Statistics

Central University of Punjab







Biotechnology Popular Expert Lecture Series-2021

Nano Approach to Control the Pathogens in Biological Mean

Discusses Nanotechnology application for sustainable agriculture



Dr. Aradhana Mishra

Principal Scientist, Divison of Microbiology, CSIR-NBRI, Lucknow

Time & Date:

Thursday, July 8, 2021

FROM 11:30 AM -12:30 PM

Registration: https://forms.gle/EJvPbLu4yTakv9ZG6



Scan for Registration

Prof. G. P. Richariya Dean, Faculty of Life Sciences, AKS University, Satna (MP) 485001 Dr. Manish Kumar, President, Microbiologists Society, India (MSI) - MP Unit Assistant Professor, Amity Institute of Biotechnology, Amity University Madhya Pradesh, Gwalior, MP

Dr. Kamlesh Choure, Professor & Head, Department of Biotechnology AKS University, Satna (MP) 485001 Live Streaming

https://www.aksuniversity.ac.in/live



Scan to attend



National Academy of Sciences, Indi Allahabad <nasi.allahabad1@gmail.com>

WEBINAR- Speaker: Dr K NANDABALAN - Enhanced and Rapid Drug Discovery by Applying Artificial Intelligence and Machine Learning to Decode the Gut-Brain-**Axis**

Rangarajan P N <pnr@iisc.ac.in>

Fri, Jul 2, 2021 at 4:27 PM

To: "ALL @ BC" <all.bc@iisc.ac.in>, Ashok Misra <ashokmisra47@gmail.com>, Kaustuv Sanyal <sanyal@jncasr.ac.in>, "nasi.allahabad1@gmail.com" <nasi.allahabad1@gmail.com>, "Office.BC" <office.bc@iisc.ac.in>

From: Rangarajan P N <pnr@iisc.ac.in>

Sent: 02 July 2021 16:12

To: Rangarajan P N <pnr@iisc.ac.in>

Subject: WEBINAR- Speaker: Dr K NANDABALAN - Enhanced and Rapid Drug Discovery by Applying Artificial Intelligence and Machine Learning to Decode the Gut-Brain-Axis - See attached slide for details and webinar link



Department of Biochemistry, IISc





Enhanced and Rapid Drug Discovery by Applying Artificial Intelligence and Machine Learning to Decode the Gut-Brain-Axis Krishnan Nandabalan, Ph.D

InveniAI® LLC, 2614 Boston Post Road, Guilford, CT 06437; InveniAl GmBH, Lange Gasse 15, 4052 Basel, Switzerland;

E.Z.BioXcel Solutions Pvt. Ltd., Gurugram, India

July 23, 2021 5 PM(IST) 7.30 AM(EDT)

Over the past few years, there has been a tremendous increase in data digitization in the pharmaceutical sector. However, along with this increase comes the challenge of acquiring, scrutinizing, and applying this derived knowledge to solve complex clinical problems. Artificial Intelligence (AI) has been explored in several fields because it can handle large volumes of data

with enhanced automation. The process for researching and developing new medicines is an inherently time-consuming and expensive task that can be addressed using AI to identify hit and lead compounds and provide a quicker validation of the drug-target and disease combinations.

The Gut-Brain Axis (GBA) provides an excellent biological system to apply Al and ML to solve complex diseases with high unmet needs. This intricate biological system involves the Central Nervous System (CNS), the Enteric Nervous System (ENS), the gut microbiome, and the immune responses localized in the gut. InveniAl is building a pipeline of novel therapeutic candidates addressing diseases in the gut associated with GBA dysfunction and inflammasome dysregulation.

We have used the inflammasome and neuronal involvina the applied CNS **ENS** interactome and and computational ML algorithms and analytics to identify the paths or sub-networks whose perturbation is likely to lead to disease. Our analyses of 88 biological processes in gut inflammation and the efferent and afferent signalling between the gut and the brain resulted in the identification of 750 genes or targets, 73 diseases of the gut, and 114 associated symptoms. In this process, our ML algorithms analyzed more than 1.9 million publications from PubMed and 6509 gene expression data points from GEO database. We have identified 170,000 paths or constituting the intersection of these interactomes and a gutassociated disease or symptom. Each of these paths represents multiple nodes (genes, symptoms, diseases, and mediators of the GBA) connected through edges representing the detected pairwise associations identified by AlphaMeld®. The 'association' paths are iteratively and statistically refined by applying a set of network centrality measures and entropy to enrich the paths containing non-random nodes and the nodes with the highest confidence in biological relevance. All of the algorithms and digital processes used in AlphaMeld® are run in an automated manner in the Cloud and are accessible through a user interface.

Ongoing analyses of the data have identified more than 3,400 paths that connect to multiple GBA associated diseases and the genes from these interactomes. Further to this, druggability assessment of these genes as potential targets identified 180 genes that are associated with drugs that may be candidates for repurposing and 251 genes that may be assessed as novel targets

for many gut inflammatory disorders. e have identified the intersection of the cholinergic/serotonergic signalling in the gut with inflammasome activation as a critical step in the initiation and progression of gut inflammation in diseases such as Crohn's disease (CD) and Ulcerative Colitis (UC). Using an established in inflammasome activation model in mice. inhibiting simultaneously demonstrated that inflammasome activation as measured by IL1-b production and enhancing cholinergic innervation produced significant synergistic inhibition of inflammatory responses. We are further evaluating combination in disease-specific mouse models to not only validate this hypothesis but also identify drugs that can be potential candidates for repurposing in CD and UC.

InveniAl will continue to focus on leveraging AlphaMeld® to generate a pipeline of validated targets and candidate drugs addressing unmet needs in gut-related diseases and advance programs with a high probability of clinical success.

About the speaker



Dr. Krishnan Nandabalan is an alumnus of the Department of Biochemistry, Indian Institute of Science. He obtained his Ph.D. in 1989 under the mentorship of Prof. Joseph D. Padayatty and pursued his postdoctoral research at Yale University, New Haven, CT. After working in CuraGen and Genaissance Pharmaceuticals, he began his entrepreneurial journey in 2005 by founding BioXcel, a pioneer in applying big data analytics to significantly improve the clinical and regulatory success of drug discovery and development. He co-founded spinouts BioXcel Therapeutics (https://www. bioxceltherapeutics.com/), a clinical-stage biopharmaceutical company

utilizing Artificial Intelligence (AI) approaches to develop transformative medicines in neuroscience and immuno-oncology and InveniAI LLC (https://www.inveniai.com/), a global leader in applying AI and machine learning to identify and accelerate the development of transformational therapies for patients with unmet medical needs. He currently serves as the President and CEO of InveniAl.

Microsoft Teams meeting Click here to join the meeting

https://teams.microsoft.com/l/meetup-join/19%3ameeting_Y2Y2MGZIMzItZDYzNC00ZmY5LTkyND UtMGI2OTq0ZDJkYzMx%40thread.v2/0?context=%7b%22Tid%22%3a%226f15cd97-f6a7-41e3-b2c5ad4193976476%22%2c%22Oid%22%3a%226f12491f-8d16-491f-a4cc-2878f2d6c8b9%22%7d



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Bcc: to all departments in biology Division

Pundi Rangarajan PhD FASc FNASc FNA FAMS **Professor & Chair Department of Biochemistry** Indian Institute of Science **BANGALORE 560012 INDIA**

Email: pnr@iisc.ac.in



Dr K Nandabalan lecture (July 23, 2021 5 P.M).pptx 293K

Annex. 5

















जेएनयू मेडिकल स्टूडेंट्स ने दी कोरोना की जानकारी

जयपुर | ग्रामीण स्वास्थ्य एवं प्रशिक्षण केंद्र, सांख श्योपरी में जेएनयू आईएमएसआरसी और नेशनल एकेडमी ऑफ साइंसेज नासी जयपुर की ओर से कोरोना से जागरूक करने के लिए 'जन स्वास्थ्य जागरूकता अभियान' का आयोजन किया गया। इस मौके पर स्थानीय आशा कार्यकर्ताओं, आंगनबाड़ी, सरपंच, सामाजिक कार्यकर्ताओं, शिक्षकों व मरीजों को पोषण व टीकाकरण की जानकारी दी गई। वैक्सीन के फायदों पर मुख्य अतिथि डॉ. निर्मल कुमार लोहिया ने चर्चा की। साथ ही जेएनयू मेडिकल कॉलेज के पहले बैच के इंटर्न स्टूडेंट्स ने ग्रामीण स्वास्थ्य सेवाओं से संबंधित अपने अनुभवों को साझा किया। जेएनयू के कुलाधिपति डॉ. संदीप बख्शी ने कहा कि इस तरह के कार्यक्रमों से ग्रामीण क्षेत्रों में कोरोना के प्रति जागरूकता बढेगी।

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में

Jaipur National University Institute of Medical Science and Research/NASI, Rajasthan has conducted a Life-Health Awareness Campaign under the aegis of NASI.

A life health awareness programmein respect of Corona Pandemic has been conducted at Rural Health and Training Center, Saankh Shyopri, Goner Village today on 24th July, 2021 under the aegis of Jaipur National University Institute of Medical Science and Research and National Academy Sciences of India, Rajasthan Chapter.

The Chief Guest of the programme was Dr. KiranKatoch. The Chief Guest apprised the local Anganbadi Workers, Sarpanch, Social Workers, Teachers and patients, who were present there about health, nutrition and vaccination during Corona Pandemic. She also apprised about the deaths due to Corona Pandemic and the efforts made for prevention for the Corona Pandemic at national and international level and Chief Guest Dr. Nimal Kumar Lohiya apprised about the benefits of vaccination.

On this occasion first batch of students, who are doing their Internship apprise about their experiences in respect of rural services. The programme was conducted by Dr. Ashish Banerjee and Vote of Thanks was given by Dr. NoratMeena, Incharge Rural Health. The programme was chaired by Dr. NeerajBedi, Assistant Principal, JNUIMSRC.

The Chancellor of the University Dr. SandeepBakshi praised the programme and wished that such programme should be conducted regularly in rural areas so that the awareness will be developed in respect of prevention from the Corona.

जयपुरनेषनल यूनिर्वसिटी,इंस्टीट्यूटऑफमेडिकलसाइंस एवंरिर्सच / नासी, राजस्थानइकाईके तत्वाधानमेंजन—स्वास्थ्य जागरूकताअभियानसम्पन्न

आजिंदनांक 24 जुलाई 2021 कोग्रामीणस्वास्थ्य एवंप्रशिक्षणकेन्द्र, सांख श्योपरी, गोनरग्राममेंजेएनयूआई एम एस आरसी, जयपुर एवंनेशनल एकेडमीऑफसाइंसेज, नासी—जयपुर, राजस्थान, के तत्वाधानमेंकोरोनामहामारीसेलोगोंकोजागरूककरने के लिए ''जन—स्वास्थ्य जागरूकताअभियान '' काआयोजनिकयागया।

कार्यक्रम के मुख्य अतिथि एवंवक्ता डा. किरणकटोचथी।मुख्य अतिथिद्वाराकोरोनामहामारी के दौरानग्रामीण क्षेत्र मेंस्वास्थ्य, पोषण एवंटीकाकरणजागरूकता के बारेमेंस्थानीय आशाकार्यकर्ताओं, आंगनबाड़ी, सरपंच, सामाजिककार्यकर्ताओं.

शिक्षकोंतथाउपस्थितमरीजोंकोजानकारीदीऔरजागरूकिया।कोरोनामहामारीसेबचावहेतुराष्ट्रीय एवंअर्न्तराष्ट्रीय स्तरपरकोरोनासेसंक्रमितों व उनसेहुईमौतों के बारेमेंबताया, साथहीवैक्सिनसेहोनेवालेलाभ के बारेमेंमुख्य अतिथिडा. निर्मलकुमारलोहिया द्वाराद्वाराचर्चा की गयी।

इसअवसरपरजयपुरनेशनल यूनिर्वसिटी, जयपुर के मेडिकलकॉलेज के प्रथमबैच के इंटर्नकररहेछात्रों द्वाराग्रामीणस्वास्थ्य सेवावोंसेसंबंधितअपनेअनुभवोंकोसाझा कियागया।कार्यक्रमकासंचालन डा. आशीषबर्नजीतथा धन्यवादप्रस्ताव डाँ० नोरतमीना, चिकित्सक, ग्रामीणस्वास्थ्य केन्द्र द्वाराकियागया।कार्यक्रम की अध्यक्षता डा. नीरजबेदी, सहायकप्राचार्य, जयपुरनेशनल यूनिर्वसिटीइंस्टीट्यूटऑफमेडिकलसाइंस एवंरिर्सचसेंन्टर द्वारा की गयी।

जेएनयू के कुलाधिपति डाँ० सन्दीप बख्शी द्वाराकार्यक्रम के आयोजन के सम्बन्ध मेंसराहनाकरतेहुए कहािककोरोनामहामारी के कालमेंइसतरह के नियमितकार्यक्रमोंसेग्रामीण क्षेत्रोंमेंकोरोनासेबचावकीजागरूकता बढेंगीतथाकोरोनािनयन्त्रण कारगरसिद्ध होगा।

JagruktaAbhiyan for Covid-19 Pandemic/AmrutMahotsavjointly organized by NASI HQs & Hyderabad Chapter under NASI New Initiatives

Date: July 28, 2021; time: 11:00 am-2:00 pm

The National Academy of Sciences, India (NASI), the oldest Science Academy of this country has a mandate Science & Society, coined by its founder President, Prof. MeghnadhSaha, an eminent scientist and a great visionary. NASI has been actively pursuing this very mandate since its inception in 1930, through its various science and society programmes. There are programmes on science awareness, capacity building, skill and entrepreneurship development, technological empowerment of women, scientific paper writing and many more.

NASI implemented a nationwide programme on JagruktaAbhiyan for Covid-19 Pandemic after the announcement by Hon'ble Prime Minister in the year 2020 inder the Chairmanship of Dr. Manju Sharma, Former Secretary to the Govt. of India, Department of Biotechnology; Chairperson, NASI New Initiatives. NASI started a series of webinars and organized several events with several prestigious bodies and its local Chapters.

A webinar was jointly organized by NASI HQs and Hyderabad Chapter on July 28, 2021. The event was attended by several eminent dignitaries and the students. Dr. Ch. Mohan Rao CSIR-Distinguished Scientist; Former Director, CCMB, Hyderabad; Chairman, NASI-Hyderabad Chapter delivered Welcome Address and also gave n overview of the Pandemic situation. He mentioned about the earlier pandemics and stressed on the three things viz. Rapid Diagnostic, handling the patient and vaccination.

Dr. Manju Sharma describing the mandate of NASI gave the glimpses of NASI's programmes with special mention about the JagruktaAbhiya. She mentioned about the need for implementing the programme and role of NASI in spreading awareness and role of scientists in handling and managing the pandemic.

Prof. AjoyGhatak, President NASI stressed on the three key message of COVID Appropriate behaviour to be followed, with the emphasis on vaccination. He appreciated the role of technology to connect the people and spread knowledge even during the pandemic crisis.

Dr. AnuragAgrawal, Director, IGIB, New Delhi, talked on 'Genomic Surveillance', importance of Genome sequencing in managing the pandemic, designing of a genome surveillenceprogramme, concept of micro and mega lab, India's efforts in the area of Genomic Surveillance.

Dr. Rakesh K Mishra, Former Director, CCMB, Hyderabad; JC Bose National Fellow, shared his view on 'Variants and the Pandemic'. He mentioned about the emergence of new variants giving the concept of mutations, different variants of concern and role of CCMB, Hyderabad in Genome Sequencing.

Dr. NeerajNischal, Department of Medicine, AIIMS, New Delhi, spoke on 'Living with the virus-the way forward'.He explained about various modes of virus transmission and gave a detailed statistics on the progression of the disease and mortality.Hementiond certain Do's and Don'ts to be followed as the virus is going to be living with us for long.

Dr. V.P. Kamboj, Former Director, CDRI, Lucknow spoke on 'Vaccine hesitancy, a key hindrance in achieving herd immunity'. He stressed on the need for vaccination stating that our battle with virus is still on and our best hope rests in widespread immunization and vaccination.

Dr. Bhanuprakash Reddy, Head, Division of Biochemistry, NIN, Hyderabad, taked on 'Immunity and nutrition in the context of Covid-19'. Giving the concept of immune system, types of immunity, macro and micro nutrients, and importance of vitamins in enhancing immunity adding that in a country like India the lack of nutritious die lead prevalence of vitamin deficiency.

Dr.V.M. Katoch,NASI-ICMR Chair, RUHS, Jaipur Former DG, ICMR, shared his view on 'Continued fight against Covid-19: Bridging the gap between knowledge and practice'. Describing the pandemic situation, he appreciated the role of NASI in initiating this nationwide programme to spread more awareness on this crucial aspect. He also mentioned that the awareness programmes empowered the general masses to cope with the crises and stressed to generate knowledge based on the past and present experience. He stressed the need to implement the practices/ COVID appropriate behaviour to avert the crises.

Prof. ParamjitKhurana, Gen. Secretary (OS), NASIdelivered the 'Closing Remarks' She summarized the whole proceedings in a very explicit manner. She stressed the need to follow an integrated approach to handle such crises in future also.

At the end Ms. Archna Pant, Young Woman Scientist, NASI extended a vote of thanks to all.



The National Academy of Sciences, India (NASI)

5, Lajpatrai Road, Prayagraj - 211002

Prof. Paramjit Khurana

Ph.D., FNA, FASc, FNAAS, FTWAS, FNASc

Prof. Satya Deo

Ph.D. (Arkansas, USA), F.N.A.Sc.

General Secretaries

June 15, 2021

Subject: Nominations for different "Academy Awards/Lectures/Medals"

Dear Fellows,

I request you to kindly send nominations for the following "Academy Awards/Lectures/Medals"-

- 1. Prof. Meghnad Saha Memorial Lecture Award (2021)
- 2. Prof. N.R. Dhar Memorial Lecture Award (2021)
- 3. Prof. Archana Sharma Memorial Lecture Award (2021)
- 4. Prof. M.G.K. Menon Lecture Award (2021)
- 5. Prof. M.G.K. Menon Memorial Award (2021)
- 6. Prof. V. P. Sharma Memorial Lecture Award (2021)
- 7. Prof. A.K. Sharma Memorial Lecture Award (2021)
- 8. Prof. Prafulla Chandra Ray Memorial Lecture Award (2021)
- 9. Prof. S.K. Joshi Memorial Lecture Award (2021)
- 10. Prof. A.C. Banerji Memorial Lecture Award (2021)
- 11. Dr. B.P. Pal Memorial Lecture Award (2021)
- 12. Dr. P. Sheel Memorial (Young Women Scientist) Lecture Award (2021)
- 13. Prof. B.K. Bachhawat Memorial Lecture Award (2021)
- 14. Prof. U.S. Srivastava Memorial Lecture Award (2021)
- 15. Lecture Award in the field of Biodiversity (2021)
- 16. NASI-Buti Foundation Lecture Award (2021)

The nomination papers duly completed in all respect should be emailed to NASI on nasi.allahabad1@gmail.com latest by July 31, 2021. **No hard copy is required for this year;** kindly send the nomination on aforesaid email only (not on any other email id of NASI).

The copy of Regulations regarding these Academy Awards/Lectures/Medals and the names of past recipients are enclosed.

With regards,

Yours sincerely

(Satya Deo)

Encl. - As above.

THE NATIONAL ACADEMY OF SCIENCES, INDIA

5, LAJPATRAI ROAD, PRAYAGRAJ - 211002, UP, INDIA

Excerpts of the Regulations

A) 'Academy Awards/Lectures/Medals' to be held annually, as-

- i) Prof. Meghnad Saha Memorial Lecture Award; Instituted by the Academy in the year 1981; Prof. Meghnad Saha Memorial Lecture may be held in any front line area in Physics and its applications (age- no bar).
- ii) Prof. N.R. Dhar Memorial Lecture Award; Instituted by the Academy in the year 1990; Prof. N.R. Dhar Memorial Lecture may be delivered in an area of Chemistry, preferably having an impact on agriculture (age- no bar).
- iii) Prof. (Mrs.) Archana Sharma Memorial Lecture Award; Instituted by the Academy in the year 2009 from the grant sanctioned by the DBT, New Delhi; Prof. (Mrs.) Archana Sharma Memorial Award Lecture may be delivered by the selected "Eminent Woman Scientist irrespective of age and area".
- iv) Prof. MGK Menon Lecture Award; Instituted by the Academy in the year 2015; Prof MGK Menon Lecture may be delivered by an active working Indian Scientist up to the age of 55 in any field of Science and Technology.
- v) Prof. MGK Menon Memorial Award; The Lecture Award would be given to an eminent Indian scientist for her/his contributions to any area of Science and Technology development, promotion popularization and application (age no bar).
- vi) Prof. V. P. Sharma Memorial Lecture Award; Instituted by the Academy in the year 2016; Prof. V P Sharma Memorial Lecture may be delivered in the frontier areas of Biological Sciences (ageno bar).
- vii) Prof. A.K. Sharma Memorial Lecture Award; **Instituted by the Academy in the year 2018**; Prof. A.K. Sharma Memorial Lecture may be delivered by the selected "Eminent Plant Scientist, a researcher and an efficient manager of science" preferably below 70 years of age.
- viii) Prof. Prafulla Chandra Ray Memorial Lecture Award; **Instituted by the Academy in the year 2018**; Prof. Prafulla Chandra Ray Memorial Lecture may be held in any front line area in Chemistry and its applications (age no bar).
- ix) Prof. S.K. Joshi Memorial Lecture Award; Instituted by the Academy in the year 2021 from the endowment given by Dr. AV Rama Rao, former Director, IICT and CMD, AVRA Laboratories Pvt. Ltd, Hyderabad. Prof. S.K. Joshi Memorial Lecture may be delivered by an Indian Scientist in any field of Science and Technology (age no bar).
 - Prof. A.K. Sharma Memorial Lecture awardee will be given a gold medal, a citation and a cash award of Rs. 1 lakh (from the endowment given by the DBT, GOI). Prof. MGK Menon Memorial Award would carry an honorarium of Rs. 1 lakh with a Gold Medal. In all above remaining awards, each awardee will be given a gold medal, a citation and a cash award of Rs.50,000/-.

B) 'Academy Awards/Lectures/Medals' to be held on every alternate year. The following are to be held this year (2021):

- i) Prof. A.C. Banerji Memorial Lecture Award; Instituted by the Academy in the year 1981 from the endowment given by Sri Milon K. Banerji, Former Attorney General of India, New Delhi (son of Late Prof. A.C. Banerji).
- ii) Dr. B.P. Pal Memorial Lecture Award; Instituted by the Academy in the year 1990 from the endowment given by Dr. Bobby L. Renfro, Maize Pathologist, Mexico and also from Academy's contributions.
- iii) Dr. P. Sheel Memorial (Young Woman Scientist) Lecture Award; Instituted by the Academy in the year 1996 from the endowment given by Mrs. Radhika Sheel.
- iv) Prof. B.K. Bachhawat Memorial Lecture Award; Instituted by the Academy in the year 2002.
- v) Prof. U.S. Srivastava Memorial Lecture Award; Instituted by the Academy in the year 2002.
- vi) Lecture Award in the field of Biodiversity; Instituted by the Academy in the year 2005 from the endowment given by Prof. Pramod Tandon and
- vii) NASI-Buti Foundation Lecture Award; Instituted by the Academy in the year 2017 from the endowment given by the Buti Foundation.

The awardees, in Dr. B.P. Pal Memorial Lecture, Prof. U.S. Srivastava Memorial Lecture, and NASI-Buti Foundation Lecture will be given a medal, a citation and a cash award of Rs. 20,000/-. However, in all the remaining awards in category (B) as mentioned above, the awardees will be given a medal, a citation and a cash award of Rs. 10,000/.

The subject areas for these various lectures are given as under-

- i) Prof. A.C. Banerji Memorial Lecture may be held in any front line area of pure or applied mathematics, astrophysics and related subjects.
- ii) Dr. B.P. Pal Memorial Lecture may be delivered in the field of agricultural science.
- iii) Dr. P. Sheel Memorial (Young Woman Scientist) Lecture is open to all disciplines in science. The awardee lady scientist should be preferably below 50 years of age.
- iv) Prof. B.K. Bachhawat Memorial Lecture may be delivered in the area of Biological Sciences including Medical Sciences.
- v) Prof. U.S. Srivastava Memorial Lecture may be delivered in any area in Animal Sciences.
- vi) Award Lecture in the field of Biodiversity may be delivered in the area of Biodiversity. The lecture is to be given to school children to create awareness in them.
- vii) NASI-Buti Foundation Lecture may be delivered by Distinguished Woman Physicist (age- no bar).

General norms for holding the lectures

- i) Nominations for the aforesaid lectures will be made by the Fellows of the Academy. The awardees will be selected by the Council in accordance with the regulations as may be made from time to time.
- ii) The awardees will be called upon to deliver a lecture at a date, time and place as decided by the Council.
- iii) The awardee would be required to supply a written script of her/his lecture which the Academy would suitably publish.
- iv) The Academy shall bear the cost of travel of the awardee from her/his place of work/residence to the place of lecture and back as per rules of the Academy.

PAST RECIPIENTS OF THE AWARDS/LECTURES/MEDALS

Prof. Meghnad Saha Memorial Lecture Awardees

Prof. Govind Swarup, Radio Astronomy Centre, Tata Institute of Fundamental Research, Bombay

Prof. A.P. Mitra, Director-General, Council for Scientific & Industrial Research, New Delhi

Prof. M.G.K. Menon, 77, Lodi Estate, New Delhi

Prof. Virendra Singh, Director, Tata Institute of Fundamental Research, Mumbai

Prof. S.K. Joshi, Former Director General, CSIR, New Delhi

Dr. R. Chidambaram, Chairman, Atomic Energy Commission & Secretary, Department of Atomic Energy, Mumbai

Prof. T.V. Ramakrishnan, Deptt. of Physics, Indian Institute of Science, Bangalore

Prof. K. Kasturirangan, Director, National Institute of Advanced Studies, Indian Institute of Science Campus. Bangalore

Prof. Sushanta Dattagupta, Formerly Director, S.N. Bose National Centre for Basic Sciences, Kolkata

Prof. Bikash C. Sinha, Director, VECC & Saha Institute of Nuclear Physics, Kolkata

Prof. Ajay K. Sood, Chairman, Division of Physical & Mathematical Ściences, Professor, Department of Physics, Indian Institute of Science, Bangalore

Dr. Satinder Kumar Sikka, DAE Homi Bhabha Chair Professor, Bhabha Atomic Research Centre, Mumbai

Prof. Bimla Buti, Director, Centre for Science & Society, New Delhi.

Prof. Anil Kakodkar, Formerly Chairman, AEC, Flat no. 1104, Building no. 5, Accolade Cooperative Housing Society, Hajuri Dargah Road, Behind LIC, Tahane West, Mumbai

Dr. Sandip P. Trivedi, Director & Sr. Professor, TIFR, Mumbai.

Prof. Anurag Sharma, IIT Delhi, New Delhi

Dr. Srikumar Banerjee, Chancellor, Bhabha Atomic Research Centre, Mumbai

Prof. Ajoy K. Ghatak, Former Professor of Physics at IIT Delhi, New Delhi

Dr. N. Mukunda, Formerly Professor, Indian Institute of Science, Bangalore

Prof. N.R. Dhar Memorial Lecture Awardees

Prof. R.C. Mehrotra, Professor Emeritus, Chemistry Department, University of Rajasthan, Jaipur

Dr. N.S. Randhawa, Former Director General, Indian Council of Agricultural Research, New Delhi

Prof. C.N.R. Rao, President, Jawaharlal Nehru Centre for Advanced Scientific Research, I.I.Sc. Campus, Bangalore

Prof. Rajinder Kumar, Department of Chemical Engineering, I.I.Sc., Bangalore

Prof. M.M. Sharma, Kothari Research Professor, J.N. Centre for Advanced Research, Mumbai

Prof. J.P. Mittal, Director, Chemistry & Isotope Group, Bhabha Atomic Research Centre, Trombay, Mumbai

Prof. Girjesh Govil, DAE-BRNS Senior Scientist, Department of Chemical Sciences, Tata Institute of Fundamental Research, Mumbai

Prof. C.L. Khetrapal, Director, Centre of Biomedical Magnetic Resonance, Sanjay Gandhi P.G. Institute of Medical Sciences, Lucknow

Dr. Anil Kumar, Scientist, Physical Chemistry Division, National Chemical Laboratory, Pune

Prof. Ashok Misra, Former Director, IITB, 68 Adarsh Vista, Basavan Nagar, Vibuthipura, Bangalore

Prof. Goverdhan Mehta, Honorary Professor and CSIR Bhatnagar Fellow, Department of Organic Chemistry, Indian Institute of Science, Bangalore

Dr. S. Swaminathan, Head, Polymer Chemistry Division, National Chemical Laboratory, Pune.

Prof. P. Balram, Professor (Emeritus), Molecular Biophysics Unit, Indian Institute of Science, Bangalore

Dr. R.A. Mashelkar, National Research Professor, NCL, Pune.

Dr. Madhu Dikshit, Director, CSIR-CDRI, Lucknow

Dr. A.K. Nangia, Director, National Chemical Laboratory, Pune

Prof. V. Chandrasekhar, Centre Director, TIFR Hyderabad, Hyderabad

Dr. Rakesh K Mishra, Director, CCMB, Hyderabad

Prof. Archana Sharma Memorial Lecture Awardees

Prof. (Mrs.) Manju Sharma, Former Secretary, Govt. of India; President & Executive Director, Indian Institute of Advanced Research, Gandhinagar; Res. B9/6476 FF, Vasant Kunj, New Delhi-110070

Prof. Veena Tandon, Department of Zoology, North Eastern Hill University, Shillong

Prof. (Mrs.) Kasturi Datta, DBT Distinguished Biotechnology, Professor, School of Environmental Sciences, Adjunct Professor, Special Centre for Molecular Medicine, Jawaharlal Nehru University, New Delhi

Prof. Mahtab Bamji, INSA Hon. Scientist, Dangoria Charitable Trust, Hyderabad

Prof. Chandrima Saha, Director, National Institute of Immunology, Aruna Asaf Ali Marg, New Delhi

Prof. Sneh Bhargava, Professor Emeritus and Formerly Director, AIIMS, New Delhi

Dr. Suchitra Banerjee, Chief Scientist, Plant Biotechnology Division, CSIR-CIMAP, Lucknow

Prof. Rohini M. Godbole, Centre for High Energy Physics, IISc, Bangalore.

Prof. Jaya Sivaswami Tyagi, AIIMS, New Delhi.

Dr. Nilima A. Kshirsagar, National Chair Clinical Pharmacology, ICMR, New Delhi

Prof. Paramjit Khurana, Department of Plant Molecular Biology, University of Delhi, South Campus, New Delhi

Dr. Subhra Chakraborty, Staff scientist-VII, NIPGR, Aruna Asif Ali Marg, New Delhi

Prof. M.G.K. Menon Lecture Awardees

Prof. Balram Bhargava, Department of Cardiology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi – 110029

Dr. T.R. Sharma, Director, ICAR-National Research Centre on Plant Biotechnology, Pusa Campus, New Delhi

Dr. Ajay K. Parida, Director, ILS, Bhubaneswar

Dr. V. Ramgopal Rao, Director, IIT Delhi, New Delhi

Dr. Nikhil Tandon, Professor, Department of Endocrinology & Metabolism, AlIMS, New Delhi

Prof. Amit P. Sharma, Director, ICMR-NIMR, Sector-8, Dwaraka, New Delhi

Prof. M.G.K. Menon Memorial Awardees

Prof. Govind Swarup, FRS, Former Director, NCRA/GMRT, TIFR, Pune

Prof. P N Tandon, President, National Brain Research Society, Manesar.

Prof. Manju Sharma, Former Secretary to GOI, New Delhi

Dr. K. Kasturirangan, Chairman, Raman Research Institute Council, Bangalore

Prof. C.N.R. Rao, Linus Pauling Research Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore

Prof. Vijayalakshmi Ravindranath, Director, Centre for Brain Research, Indian Institute of Science, Bangalore

Prof. V.P. Sharma Memorial Lecture Awardees

Dr. Padmanaban Govindarajan, INSA Senior Scientist/Hon. Professor, Indian Institute of Science, Bangalore; Senior Science and Innovation Advisor, BIRAC, DBT, New Delhi

Dr. V.P. Kamboj, Chairman, BCIL, New Delhi

Dr. Neena Valecha, Director, ICMR-NIMR, New Delhi

Prof. Veena Tandon, NASI Senior Scientist Platinum Jubilee Fellow, Biotech Park, Lucknow

Dr. Ramesh Chand Dhiman, Senior Consultant, Former Scientist 'G'& ICMR-NIMR, Sector-8, Dwaraka, New Delhi

Prof. A.K. Sharma Memorial Lecture Awardee

Prof. Asis Datta, Former NASI Platinum Jubilee Chair Distinguished Professor & Former Director, NIPGR, New Delhi

Prof. Sudhir K. Sopory, Formerly Vice Chancellor, JNU, New Delhi

Prof. Akhilesh K. Tyagi, Professor, Department of Plant Molecular Biology, University of Delhi, South Campus, New Delhi

Prof. Prafulla Chandra Ray Memorial Lecture Awardee

Prof. Animesh Chakravorty, Emeritus Professor, Indian Association for the Cultivation of Science,

Dr. A.V. Rama Rao, Chairman & Managing Director, AVRA Laboratories, Hyderabad

Prof. Seyed Ehtesham Hasnain, Vice Chancellor and Professor, JH-IMM, Jamia Hamdard, Hamdard Nagar, New Delhi

Prof. S.K. Joshi Memorial Lecture Awardee (to be started from 2021)

Prof. A.C. Banerji Memorial Lecture Awardees

Prof. A.K. Ray Choudhuri, INSA Senior Scientist, Presidency College, Calcutta

Sir Hermann Bondi, F.R.S., Master of Churchill College, Cambridge, U.K.

Prof. S.M. Chitre, Senior Professor, Theoretical Astrophysics Group, TIFR, Mumbai

Prof. Ramanath Cowsik, Indian Institute of Astrophysics, Bangalore

Prof. Thanu Padmanabhan, Inter University Centre for Astronomy and Astrophysics, Pune

Prof. Ashoke Sen, FRS, Mehta Research Institute, Prayagraj

Prof. S.K. Malik, Professor & Chairman, CAS in Mathematics, Panjab University, Chandigarh

Prof. M.S. Raghunathan, Distinguished Professor, Tata Institute of Fundamental Research, Mumbai

Prof. R. Balasubramanian, Director, Institute of Mathematical Sciences, Chennai

Prof. M. Lakshmanan, DAE-BRNS Raja Ramanna Fellow, Department of Physics and Centre for Nonlinear Dynamics, Bharthidasan University, Tiruchirapalli

Prof. G. Rajasekaran, Senior Scientist, Institute of Mathematical Sciences, Chennai

Prof. Pankaj Shantilal Joshi, Department of Astrophysics & Astronomy, TIFR, Mumbai.

Prof. Ajoy K. Ghatak, Visiting Professor, IIT Delhi, New Delhi.

Prof. Bimla Buti, Director, Centre for Science and Society, Delhi

Dr. Anurag Kumar, Director, Indian Institute of Science, Bangalore

Dr. B.P. Pal Memorial Lecture Awardees

Dr. M.S. Swaminathan, Chairman, M.S. Swaminathan Research Foundation, 11, Rathna Nagar, Madras

Dr. H.K. Jain, Former Director, Indian Agricultural Research Institute, New Delhi

Dr. R.S. Paroda, Director General, ICAR & Secretary, D.A.R.E., New Delhi

Dr. T.N. Khoshoo, Tata Energy Research Institute, New Delhi

Prof. S.K. Sinha, ICAR National Professor, IARI, New Delhi

Prof. VL Chopra, National Professor, BPPal Chair, National Research Centre on Plant Biotechnology, IARI, N. Delhi

Dr. Sushil Kumar, Emeritus Scientist, National Centre for Plant Genome, Research, JNU Campus, New Delhi

Prof. Akhilesh K. Tyagi, Professor & Programme , Coordinator (CPMB), Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi

Prof. Prem Narain, Formerly Director, IASRI, B-3/27A, Lawrence Road, New Delhi

Prof. A.K. Sharma, Hon. Professor, CAS (Cell & Chromosome Research), Botany Dept., Calcutta University, Kolkata

Dr. Subrahmaniam Nagarajan, Formerly Chairperson, PPV & FRA, Ministry of Agriculture, GOI; Shiwalik 8/49, New Colony, 16th Cross Street, Chrompet, Chennai

Prof. Anupam Varma, Advanced Centre for Plant Virology, Division of Plant Pathology, IARI, New Delhi.

Prof. J.P. Khurana, Department of Plant Molecular Biology, University of Delhi, New Delhi.

Dr Trilochan Mohapatra, Secretary DARE & DG, ICAR, New Delhi

Dr. Ramesh V. Sonti, Director, National Institute of Plant Genome Research, Aruna Asif Ali Marg, New Delhi

Dr. P. Sheel Memorial (Young Woman Scientist) Lecture Awardees

Dr. (Mrs) R.S. Nadgauda, Tissue Culture Pilot Plant Div., The Centre Piece of National Chemical Laboratory, Pune

Prof.(Ms.) R.M. Godbole, Chairperson, Centre for Theoretical Studies, Indian Institute of Science, Bangalore

Dr.(Mrs.) Madhoolika Agrawal, Reader, Department of Botany, Banaras Hindu University, Varanasi

Dr.Srubabati Goswami, Reader F in Physics, Harish Chandra Research Institute, Prayagraj

Dr. Sudha Nair, Director, M.S. Swaminathan Research Foundation, Chennai

Prof. Tanusri Saha Dasgupta, Dept. of Material Sciences, SN Bose National Centre for Basic Sciences, Kolkata

Dr. Shelly Praveen, Principal Scientist, IARI, New Delhi

Dr. Meenu Kapoor, Professor of Biotechnology, GG Singh Indraprastha University, New Delhi

Dr. Ritu Trivedi, Principal Scientist, CSIR-CDRI, Sector-10, Jankipuram Extension, Sitapur Road, Lucknow

Prof. B.K. Bachhawat Memorial Lecture Awardees

Prof. Sandip K. Basu, Director, National Institute of Immunology, Aruna Asaf Ali Marg, New Delhi **Prof. H.K. Majumder**, Scientist G & Head, Infectious Diseases Divison, Indian Institute of Chemical Biology, Kolkata

Dr. Vijay Kumar Chaudhary, Professor, Department of Biochemistry, University of Delhi South Campus, Benito Juarez Road, New Delhi

Prof. Debi Prasad Sarkar, Professor, Department of Biochemistry, University of Delhi South Campus, New Delhi

Dr. Amit P. Sharma, Group Leader, Structural and Computational Biology, International Centre for Genetic Engineering & Biotechnology, New Delhi

Dr. R.S. Gokhale, Director, CSIR-GIB, Delhi University Campus, New Delhi.

Dr. Shekhar Mande, Director, NCCS, Pune

Dr. Alok Dhawan, Director, CSIR-IITR, Vishvigyan Bhawan,31, M.G. Marg, Post Box-80, Lucknow

Prof. U.S. Srivastava Memorial Lecture Awardees

Dr. V.P. Sharma, Formerly Addl. Director General (ICMR) & Director, MRC, New Delhi

Prof. R. Gadagkar, Centre for Ecological Sciences, Indian Institute of Science, Bangalore

Prof. K. Muralidhar, Professor & Head, Department of Zoology, University of Delhi, Delhi

Prof. K.S. Rai, Formerly Professor & Director, Vector Biology/Parasitology Training, Programme, 2, Jaswant Singh Rai Nagar, Salempur Musalmana, P.O. Randhawa Masandan, Jalandhar (Punjab)

Prof. K. Venkataraman, Director, Zoological Survey of India, Kolkata

Prof. U.C. Srivastava, Department of Zoology, University of Allahabad, Prayagraj.

Dr. Shashi Bala Singh, Director, Defence Institute of Physiology and Allied Science, Delhi.

Prof. Kasturi Datta, JNU, New Delhi

Dr. Subeer S. Majumdar, Director, National Institute of Animal Biotechnology, Gopanpally, Hyderabad

Lecture Awardees in the field of Biodiversity

Prof. L.M.S. Palni, Senior Scientific Adviser, Biotechnology & Project Director, State Biotechnology Programme, Govt. of Uttaranchal, Biotech Bhavan, P.O. Haldi, Pant Nagar, Distt. U.S. Nagar, Uttaranchal\ **Prof. J.S. Singh,** NASI-Senior Scientist Platinum Jubilee Fellow, CAS in Botany, Banaras Hindu University, Varanasi

Prof. C.Ř. Babu, Professor Emeritus, Centre for Environmental Management of Degraded Ecosystem, School of Environmental Studies, Delhi University, Delhi

Prof. Pramod Tandon, Centre for Advanced Studies, Department of Zoology, North-Eastern Hill University, Shillong

Prof. C.S. Nautiyal, Director, CSIR-NBRI, Lucknow.

Dr. Anil K. Tripathi, Director, CIMAP, Lucknow

Prof. S.K. Barik, Director-CSIR, NBRI, Rana Pratap Marg, Lucknow

NASI-Buti Foundation Lecture Awardee

Dr. Pratibha Jolly, Principal, Miranda House, Delhi

Dr. Manju Bansal, INSA Senior Scientist, Molecular Biophysics Unit, Indian Institute of Science, Bengaluru

THE NATIONAL ACADEMY OF SCIENCES, INDIA 5, LAJPATRAI ROAD, PRAYAGRAJ – 211002, INDIA

PROFORMA FOR SUBMITTING NOMINATION FOR ACADEMY AWARDS/LECTURES/MEDALS

Name of Th	ne Academy Awards/Lectures/Medals:				
1.	Name of the Nominee :				
2.	Date and place of birth :				
3.	Present position & official address :				
4.	Positions held earlier :				
5.	Academic qualifications :				
6.	Details of any earlier award(s) received : (only give highlights of the work awarded)				
7.	 (i) Significant contributions made in the field of the Award (up to 2000 words): (ii) Summary of the most significant work in the area on which award is being claimed (up to 500 words): (iii) Impact of the contributions (not exceeding 75 words): 				
8.	List of publications connected with concerned study : (Enclose reprints of connected 5 research papers)				
9.	 (i) List of nominee's most significant publications in standard refereed journals only : (ii) List of papers presented in Conferences/Symposia/Seminars : (iii) List of the most outstanding Technical Reports/Reviews : 				
10.	List of patents taken, if any :				
11.	List of Technologies commercialized :				
12.	Details of books published (if any) :				
13.	Any additional information of relevance :				
Place :	Signature of the Fellow				
Date :	Name, Designation & Address				