

WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY

31st Annual General Meeting
May 27, 2022

Venue :
Indian Institute of Chemical Biology (IICB) Auditorium
4, Raja S. C. Mullick Road, Jadavpur, Kolkata - 700 032

Council 2021-2023

President

Prof. Somnath Dasgupta

INSA Senior Scientist

Geological Studies Unit, Indian Statistical Institute and

Honorary Professor, Indian Institute of Science Education & Research- Kolkata

Vice-Presidents

Prof. Partha P. Majumder

National Science Chair (Scientific Excellence), Government of India

Distinguished Professor and Founder, National Institute of Biomedical Genomics, Kalyani

Emeritus Professor, Indian Statistical Institute, Kolkata

Honorary Professor, Indian Institute of Science Education & Research, Mohali

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Indian Association for the Cultivation of Science, Kolkata

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Prof. Sumita Jha NASI, Senior Scientist, University of Calcutta

Prof. Syamal Chakrabarti University of Calcutta



(S/65001 of 1990-1991)

West Bengal Academy of Science and Technology

Annual Report 2021

**Thirty First Annual General Meeting
May 27, 2022**

KOLKATA, INDIA

CSIR-Indian Institute of Chemical Biology (IICB) Auditorium
4, Raja S. C. Mullick Road, Jadavpur
Kolkata - 700 032



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY

CSIR-Indian Institute of Chemical Biology

4, Raja S. C. Mullick Road, Jadavpur

Kolkata-700032, Tel. : (033) 2499-5796

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(S/65001 of 1990-91)

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Annual Report 2021

Report from the Secretary

President and Fellow members:

I am honoured to present before the learned Fellowship of the Academy the Annual Report for the year 2021-2022. The present council has been working since August 2021 and has tried its best in executing the major activities under several constraints caused by the worldwide Covid-19 pandemic. The Academy organized Annual Oration along with other Memorial and Endowment lectures.

- a) **Annual Oration:** Annual oration in the 31st AGM of the Academy is delivered by Dr. Sandip Chatterjee, Professor & Head of Neurosurgery, VIMS and Park Clinic, Kolkata on May 27 in the Dr. J.C. Ray Auditorium, CSIR-Indian Institute of Chemical Biology, Kolkata. The title of his talk is “Lessons Learnt and Unlearned During the Covid Pandemic”.
- b) **Council Meeting:** The present Council met thrice prior to the AGM to discuss the major plans and activities. One of the main aspects was to discuss the draft amendments of the WAST rules and regulations. It would be relevant to note that, a committee comprising six council members had critically analyzed and prepared the initial draft of amendments.
- c) **Dr. Sunil Chandra Bose Memorial Oration:** Dr. Sunil Chandra Bose Memorial Oration was delivered by eminent clinician Dr. Alakendu Ghosh, Professor and Founder Head, Dept. of Clinical Immunology & Rheumatology, Institute of Post Graduate Medical Education & Research, Kolkata, and President Indian Rheumatology Association on November 15, 2021 through Hybrid mode in the 1st Floor Board Room, CSIR-Indian Institute of Chemical Biology, Kolkata. The title of his talk was “Rheumatoid Arthritis - Looking Beyond the Joint”. Professor Somnath Dasgupta, President, WAST welcomed the audience. Dr. Mitali Chatterjee briefly described the life and scientific contribution of Dr. Sunil Chandra Bose. The lecture was attended by a large number of Scientists, Clinicians, Students and others. The program ended with the vote of thanks offered by Prof. Debatosh Guha, Secretary, WAST. The abstract of the talk is presented in this report.
- d) **Endowment Lecture :** J C Sengupta Endowment lecture was delivered by Prof. Sampa Das, INSA Senior Scientist, Division of Plant Biology Bose Institute, Kolkata, on November 26, 2021 through Hybrid mode in the 1st Floor Board Room, CSIR-Indian Institute of Chemical Biology, Kolkata. The title of her talk was “Protective Halo of Plants”. Professor Somnath Dasgupta, President, delivered the welcome address and reminisce about the life and activities of Prof. J C Sengupta. The lecture was attended by large number of Scientists, Students and others. The program ended with the vote of thanks delivered by Prof. Maitreyee Dasgupta. The abstract of the talk is presented in this report.

- e) **Induction to the Fellowship and Associateship of the Academy :** Based on the recommendation of each Sectional Committee, the Council approved of the induction of the eminent scientists to the Fellowship and promising young scientists to the Associateship of the Academy. Section-wise lists of the newly elected Fellows and Associates have been provided in this report.

I convey my sincere thanks to Dr. Arun Bandyopadhyay, Director, IICB, Kolkata for extending his wholehearted support in holding most of the meetings and seminars in the physical mode and finally, in organizing the Annual General Meeting 2022 in the Institute premises. Our special thanks to Prof. Maitree Bhattacharyya, Director of Jagadis Bose National Science Talent Search (JBNSTS), Kolkata for collaborating with us in the science programs. I convey my sincere thanks to the members of the Executive Council for their continuous support and advice in smooth running the activities of the Academy.

Debatosh Guha

Secretary

West Bengal Academy of Science and Technology



Annual Oration

Dr. Sandip Chatterjee
Professor & Head of Neurosurgery
VIMS and Park Clinic, Kolkata



Lessons Learnt and Unlearnt During the Covid Pandemic

May 27, 2022 @ 12 noon

The speaker will be introduced by Professor Somnath Dasgupta,
President, West Bengal Academy of Science and Technology.

West Bengal Academy of Science and Technology



Dr. Sunil Chandra Bose Memorial Oration 2021

Dr. Alakendu Ghosh

*Professor and Founder Head,
Dept. of Clinical Immunology & Rheumatology,
Institute of Post Graduate Medical Education & Research, Kolkata
President, Indian Rheumatology Association*



Rheumatoid Arthritis - Looking Beyond the Joint
November 15, 2021 at 4:00 PM

*You are cordially invited to attend this event to be organized in **Hybrid Mode***

VENUE

**1st Floor Board Room, Indian Institute of Chemical Biology
Jadavpur Campus**
[Online participation link](#)

Abstract of the talk

Rheumatoid Arthritis (RA) is a chronic autoimmune inflammatory disease characterized by polyarthritis and inflammation is triggered by different combinations of genetic and environmental factors. Smoking is one of the most possible culprits for the induction of disease activity in small joints which induced citrullination and autoantibody production. Amongst other possible causes, the bacterial infection might have an important role in initiating the disease progression. *P. gingivalis* bacteria induce citrullination and post-translation modification leading to the production of anti-citrullinated protein/peptide antibodies (ACPA). Periodontitis is the most commonly associated disease in RA patients. Lung has also been shown to be another site of citrullination as well. Increased citrullination alters cytokine levels which induce mononuclear cell infiltration inside the joints. FLS(Fibroblast like synoviocytes) is the important cell that resides inside the synovium, cell infiltration increased FLS proliferation and creates a hypoxic environment that leads to pannus formation. Autophagy and apoptosis play a dual role in RA synovium. Though FLS cells are apoptosis-resistant in RA patients autophagic proteins get altered and increased expression of ER stress protein. Due to the breakdown to self-tolerance of T cells, autophagic waste is recycled as an autoantibody and this cycle goes on as a loop.

Early detection is helpful to diagnose RA patients through ACR/EULAR classification criteria 2010. Therapeutic intervention with available synthetic/biologic DMARD is changing the outcome of disease clinically but we need to look deep into the subclinical pathologic process. This aspect of assessment is being endorsed by the use of the PDUS (Power Doppler Ultrasound) modality. Methotrexate (MTX) is the sheet anchor of therapy but with the addition of active compounds of phytochemicals which may ameliorate the adverse events of MTX possibly.

West Bengal Academy of Science and Technology



J C Sengupta Endowment Lecture 2021

Prof. Sampa Das

INSA Senior Scientist

Division of Plant Biology Bose Institute
Kolkata



Protective Halo of Plants
November 26, 2021 at 4:00 PM

*You are cordially invited to attend this event to be organized in **Hybrid Mode***

VENUE

**1st Floor Board Room, Indian Institute of Chemical Biology
Jadavpur Campus**

[Online participation link](#)

Council 2021-2023

President	Prof. Somnath Dasgupta INSA Senior Scientist Geological Studies Unit, Indian Statistical Institute and Honorary Professor, Indian Institute of Science Education & Research- Kolkata somnathdasg@gmail.com
Vice-Presidents	Prof. Partha P. Majumder National Science Chair (Scientific Excellence), Government of India Distinguished Professor and Founder, National Institute of Biomedical Genomics, Kalyani Emeritus Professor, Indian Statistical Institute, Kolkata Honorary Professor, Indian Institute of Science Education & Research, Mohali ppm1@nibmg.ac.in Prof. Aswini Ghosh Indian Association for the Cultivation of Science, Kolkata sspag@iacs.res.in, aswghosh@gmail.com
Secretary	Prof. Debatosh Guha University of Calcutta dguha@ieee.org
Treasurer	Dr. Mrinal Kanti Ghosh Indian Institute of Chemical Biology (CSIR-IICB) mrinalghosh@iicb.res.in, mrinal.res@gmail.com
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WAST SECTIONAL COMMITTEES (2021-2023)

Sectional Committee I: Mathematical Sciences

Ayanendranath Basu, ISI, Kolkata (Convener)

Indrajit Lahiri, University of Kalyani

Sudeshna Banerjea, Jadavpur University

Rahul Mukerjee, (ex) IIM, Kolkata

Prof. Mihir Kumar Chakraborty, (ex) University of Calcutta

Sectional Committee II: Physical Sciences

Mrinal Pal, CGCRI, Kolkata (Convener)

Pathik Kumbhakar, NIT Durgapur

Bikas K. Chakrabarti, (ex) SINP, Kolkata

Sukhen Das, Jadavpur University

Abhijit Kr. Das, IACS, Kolkata

Swapan Kumar Pradhan, Burdwan University

Aswini Ghosh, IACS, Kolkata

Sectional Committee III: Chemical Sciences

Nikhil Guchhait, University of Calcutta (Convener)

Samita Basu, SINP, Kolkata

Subratanath Koner, Jadavpur University

Chinmay Chowdhury, IICB, Kolkata

Kumares Ghosh, University of Kalyani,

Tarun K Mandal, IACS, Kolkata

Surajit Chattopadhyay, University of Kalyani

Sectional Committee IV: Engineering and Technology

Swarnendu Sen, Jadavpur University (Convener)

Amlan Jyoti Pal, IACS, Kolkata

Animesh Maitra, University of Calcutta

Dipti Prasad Mukherjee, ISI, Kolkata

Sekhar Chandra Dutta, IIT-ISM Dhanbad

Dipankar Chattopadhyay, University of Calcutta

Amitava Datta, Jadavpur University

Sectional Committee V: Earth and Planetary Sciences

Joydip Mukhopadhyay, Presidency University, (Convener)

Subir Sarkar, Jadavpur University

Saibal Gupta, IIT, Kharagpur

Sankar Bose, Presidency University

Prabir Dasgupta, Durgapur Govt. College

Supriyo Mitra, IISER, Kolkata

Sudipta Sengupta, (ex) Jadavpur University

Sectional Committee VI: Plant Sciences

Maitrayee Dasgupta, University of Calcutta (Convener)

A. N. Lahiri Majumder, (ex) Bose Institute, Kolkata

Sudip Chattopadhyay, NIT Durgapur

Swapan Kr. Datta, Biswa Bangla University

Somnath Bhattacharya, BCKV, Kalyani

Sectional Committee VII: Animal Sciences

Arun Bandyopadhyay, IICB, Kolkata (Convener)

Subrata Adak, IICB, Kolkata

Sudip K Ghosh, IIT Kharagpur

Rathindra Nath Baral, Chittaranjan National Cancer Institute, Kolkata

Siddhartha Jana, IACS, Kolkata

Ellora Sen, National Brain Research Centre, Guargaon

Sectional Committee VIII: Medical and Veterinary Sciences

Mitali Chatterjee, IPGMER, Kolkata(Convener)

Jayasri Das Sarma, IISER Kolkata

Amit Ghosh, NICED, Kolkata

Alakendu Ghosh, IPGMER, Kolkata

Santanu Guha, Medical College, Kolkata

Partha Sarathi Bhattacharya, IPCR, Kolkata

Bibhuti Saha, School of Tropical Medicine, Kolkata

Sectional Committee IX: Biochemistry and Biophysics

Susanta Roychoudhury, IICB, Kolkata (Convener)

Syamal Roy, IICB, Kolkata

Sharmila Sengupta, National Institute of Biomedical Genomics, Kalyani

Koustubh Panda, University of Calcutta

Subrata Majumdar, Bose Institute, Kolkata

Shelley Bhattacharya, Visva Bharati University

Tanya Das, Bose Institute, Kolkata

Sectional Committee X: Agriculture and Forestry

Somnath Bhattacharyya, Bidhan Chandra Krishi Viswavidyalaya, Kalyani (Convener)

Tapan Purakayastha, Indian Agricultural Research Institute, New Delhi

Gouranga Kar, ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore

Bikash Mandal, Indian Agricultural Research Institute, New Delhi

Pratap Bhattacharyya, ICAR-National Rice Research Institute, Cuttack

K.G. Mandal, ICAR-Mahatma Gandhi Integrated Farming Research Institute, Bihar

Biswapati Mandal, Bidhan Chandra Krishi Viswavidyalaya, Kalyani

Sectional Committee XI: Social Sciences

Maitree Bhattacharya, University of Calcutta (Convener)

Manas Pratim Das, All India Radio, Kolkata

Amalesh Mukhopadhyay, DST, Govt. of India

Ambika C. Banerjee, (ex) East India Pharmaceutical Works

Sk. Emdadul Islam, (ex) Birla Industrial & Technological Museum

Shree Bhagwan Roy, (ex) Indian Institute of Bio Social Research & Development, Kolkata

Sectional Committee XII: Environmental Sciences

Pradip K. Sikdar, IISWBM, Kolkata (Convener)

Asis Majumdar, Jadavpur University

Pinaki Sar, IIT, Kharagpur







Tapan Kumar Dutta, Bose Institute, Kolkata

Sandip K. Mukhopadhyay, University of Calcutta

Tapan Adhya, KIIT, Bhubaneswar

Aniruddha Mukhopadhyay, University of Calcutta

List of Fellows Elected in 2021

	Name, Address & Mail	Specialization
Section I : Mathematical Sciences		
	<p>Kalyan Chakraborty Director, KSCSTE, Kerala, School of Mathematics, Kunnamangalam, Kozhikode, Kerala 673571 Email : director@ksom.res.in kalyan@hri.res.in Mobile : +91 9956567372</p>	<p>Number Theory</p>
Section II : Physical Sciences		
	<p>T. K. Nath Professor, Dept. of Physics Indian Institute of Technology Kharagpur-721302 Email : tnath@phy.iitkgp.ac.in tapnath@gmail.com Mobile : +91 9932952097</p>	<p>Physics, Materials Science Magnetism, Nanomaterials.</p>
	<p>Upendranath Nandi Associate Professor, Dept. of Physics, Scottish Church College Kolkata-700006 Email : unphys@scottishchurch.ac.in Mobile : +91 9836448414</p>	<p>Physics, Materials Science Electrical study.</p>
	<p>P. K. Giri Professor, Dept. of Physics Indian Institute of Technology Guwahati-781039 Email : giri@iitg.ac.in Tel. : 0361-2582703</p>	<p>Physics, Materials Science Photovoltaics, Nanomaterials.</p>
Section III : Chemical Sciences		
	<p>Pranab Sarkar Professor, Dept. of Chemistry Visva-Bharati University Shantiniketan - 731235 Email : pranab.sarkar@visva-bharati.ac.in Mobile : +91 9647567390</p>	<p>Genetic algorithm-density functional- tight binding (GA-DFTB) method Energy storage devices Spintronics materials Catalysis</p>
	<p>Tushar Jana Professor, School of Chemistry University of Hyderabad Hyderabad - 500046 Email : tusharjana@uohyd.ac.in tjscuoh@gmail.com Mobile : +91 9440127016</p>	<p>Polymer membranes Polymeric nanostructures polyurethanes polymerization induced self-assembly (PISA)</p>

**Pabitra Chattopadhyay**

Professor, Department of Chemistry
The University of Burdwan
Burdwan-713104
Email : pchattopadhyay@chem.buruniv.ac.in
pabitracc@yahoo.com
Mobile : 9434473741

Solid phase extractors
Chemosensors
Radiopharmaceuticals

Section IV : Engineering & Technology**Nikhil Kumar Singha**

Professor, Rubber Technology Centre
Indian Institute of Technology
Kharagpur-721302
Email : nks@rtc.iitkgp.ac.in
Mobile : 9434369873

Polymer Science
and Engineering

**Rajib Bandyopadhyay**

Professor, Department of Instrumentation
and Electronics Engg., Jadavpur University
Jadavpur-700032
Email : bandyopadhyay.rajib@gmail.com,
rajib.bandyopadhyay@jadavpuruniversity.in
Mobile : 9331038954

Instrumentation and
Electronics Engineering

**Amlan Chakrabarti**

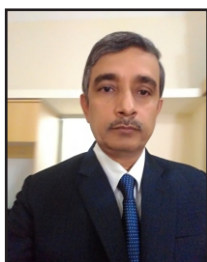
Professor, A.K. Choudhury School of Information Technology
University of Calcutta
Kolkata-700106
Email : acakcs@caluniv.ac.in
Mobile : 9831129520

Embedded Systems,
Quantum Computing
and Computational Intelligence

**Anupam Basu**

Director, NIT Durgapur
Professor, Dept. Computer Science, IIT Kharagpur
Kharagpur-721302
Email : anupambas@gmail.com,
director@admin.nitdgp.ac.in
Mobile : 8335881836, 9434017654

Artificial Intelligence based
Language Processing

**Subrata Chakraborty**

Professor, Dept. of Civil Engineering, Indian Institute
of Engineering Science and Technology
Shibpur-711103
Email : schak@civil.iiests.ac.in
Mobile : 9830147101

Structural Engineering

**Suvankar Ganguly**

Principal Scientist, Research & Development Division,
Tata Steel Ltd., Jamshedpur-831007
Email : suvankarganguly@tatasteel.com
Mobile : 9234885563

Mechanical Engineering

Section V : Earth and Planetary Sciences**Sarbani Patranabis-Deb**

Professor and Head, Geological Studies Unit,
Indian Statistical Institute
Kolkata-700108
Email : patranabis@gmail.com
sarbani@isical.ac.in
Mobile : 9830239494

Leading
sedimentologist in India;
commendable work on the sedimentation and
tectonics of the Proterozoic cratonic basins
and geochronology.

**Sukanta Dey**

Professor and Head, Dept. Earth Sciences
Indian Institute of Science Education and
Research (IISER)
Kolkata, Monahpur-741246
Email : sukanta.dey@iiserkol.ac.in
Mobile : 9431503788, 7044147263

Fundamental contribution in
understanding of the formation and evolution
of the early continents, outstanding petrologist
and a meticulous geochronologist

Section VI : Plant Sciences**Shubho Chaudhuri**

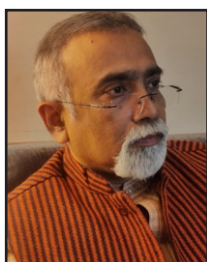
Professor, Division of Plant Biology
Bose Institute
Kolkata-700054
Email : shubho@jcbose.ac.in
Mobile : 9674445984

Chromatin conformation changes
during plant development

Section VII : Animal Sciences**Koel Chaudhury**

Professor, School of Medical Science and Technology,
Indian Institute of Technology Kharagpur
Kharagpur-721302
Email : koel@smst.iitkgp.ac.in, koeliitkgp@gmail.com
Mobile : 9434341334

Reproductive physiology

**Sibnath Mazumder**

Professor, Faculty of Life Sciences & Bio-technology
South Asian University, New Delhi -110 021
Email : shibnath@sau.int
Mobile : 9999251575

Immunology using fish as a model

Section VIII : Medical and Veterinary Sciences



Partha Chakrabarti

Principal Scientist,
Indian Institute of Chemical Biology
Kolkata-700 032
Email : partha.iicb@gmail.com
Mobile : 9007326245

Metabolic diseases (Diabetes, Cancer
and Non-alcoholic fatty liver disease)



Sulagna Basu

Scientist F, National Institute of Cholera & Enteric Diseases (NICED)
Kolkata-700010
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Antimicrobial resistance

Section IX : Biochemistry & Biophysics



Ranjan Sen

Head, Laboratory of Transcription
Centre for DNA Fingerprinting and Diagnostics (CDFD)
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Hyderabad – 500 039, Telangana State
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Biology of bacterial
transcription termination
and anti-termination.



Anindita Ukil

Assistant Professor, Department of Biochemistry
University of Calcutta
Kolkata-700019
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Mechanism of Leishmania mediated
host defense breakdown.



Sanjay Ghosh

Professor, Department of Biochemistry
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sgbioc@caluniv.ac.in
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Nitric Oxide biology in vertebrates
and invertebrates.

Section X : Agriculture and Forestry



Rintu Banerjee

Head, Agricultural & Food Engineering Department,
Indian Institute of Technology, Kharagpur
Kharagpur-721 302
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Production technology for industrial-enzymes
related to food and bio-energy.

**Koushik Banerjee**

Principal Scientist
ICAR-National Research Centre for Grapes
Pune-412307
Email : kaushik.banerjee@icar.gov.in
kbgrape@yahoo.com;
Mobile : 9890940914

Efficient protocols of pesticide residues
and mycotoxins in food matrices.

**Swarup K. Chakraborty**

Vice-Chancellor, Uttar Banga Krishi Viswavidyalaya,
Pundibari, Cooch Behar-736165
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Plant-pathogen diagnostics tools &
quality potato seed production.

Section XI : Social Sciences**Kaushik Sankar Bose**

Professor, Department of Anthropology
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Midnapore – 721 102
Email : kaushikbose@cantab.net
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Socially relevant issues.

Section XII : Environmental Sciences**Ashok K. Gupta**

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agupta@civil.iitkgp.ac.in
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Adsorption thermodynamics,
Water-wastewater treatment,
Geogenic pollutant scavenging

List of Associates 2021



Palash Dey

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Indian Institute of Technology Kharagpur
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Computer Science and Engineering



Saumik Bhattacharya

Department of Electronics and
Electrical Communication Engineering,
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Electronics and
Electrical Communication Engineering



Somsubhra Nath

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Cancer Research



Shovik Deb

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Soil Science and Agricultural Chemistry



Sanjit Maiti

Dairy Extension Division
ICAR-National Dairy Research Institute, Haryana
Email : sanjit.maiti@icar.gov.in
sanjit.ndri@gmail.com

Agro-Socio Climatology



Dibyendu Chatterjee

Crop Production Division,
ICAR-National Rice Research Institute, Cuttack, Odisha
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dibyenducha@gmail.com

Hill Agriculture along with
Integrated Farming System

Minutes of the 30th AGM held on May 7, 2021 in a virtual mode

The 30th Annual General Meeting (AGM) of the Academy was held on May 7, 2021 in a virtual mode under the Chairmanship of Prof. Partha Pratim Majumder, President, of WAST. The following resolutions were adopted.

- Item 1.0** : The Minutes of the 29th AGM of the Academy held on December 17, 2019 at CSIR-IICB were confirmed
- Item 2.0** : The Annual Report of the Academy for the year 2020 was placed in the meeting for confirmation and was adopted after discussion.
- Item 3.0** : The Auditor's Report for the financial year 2019-2020 was presented by the Treasurer and was approved after discussion.
- Item 4.0** : The same Auditor was appointed for the year 2020-2021 without any change in fees payable.
- Item 5.0** : In view of the pandemic situation, the house requested the council to continue even after the completion of its 2 term at the end of 2020. Prof. P. P. Majumder, President WAST expressed his reservation in continuing and proposed to elect a new council with the help of a suitable search committee within July 2021. His proposal was accepted by the house.
- Item 6.0** : The names of the newly elected Fellows and Associates of the Academy for the year 2020 were announced with warm congratulations to all of them. The certificates were kept ready for handing over to them on a suitable opportunity.

The General Body appreciated the efforts made by the Council and supported the initiatives mentioned above. The meeting ended with a vote of thanks to the Chair.

Concluding Note from the Secretary

The activities of the West Bengal Academy of Science and Technology undertaken during 2021-2022 have been presented in the preceding pages of the annual report. It is my pleasant duty to present this Report to the distinguished Fellows attending the 31st Annual General Body Meeting today. We are happy to conduct the AGM this time again in a physical mode. The Audit Reports for 2020-2021 and 2021-2022 will be presented by the Treasurer.

This year, for the obvious reasons caused by the covid-19 related restrictions, the activities of the academy were restricted to its basic mandates. Accordingly, conducted Dr. Sunil Chandra Bose Memorial Oration on 15 November 2021 and J. C. Sengupta Endowment Lecture on 26 November 2021. Both lectures were organized in hybrid mode at IICB Board room and were attended by quite a good number of participants which included fellows of the academy and many young researchers from the various institutes of the country. The hard copy of WAST Year Book 2020 is available. The next edition has been planned to be grossly revised and the editing of the same is under progress.

The nomination process for fellows and associates of the Academy has been successfully transformed to online mode since 2021 and that facilitated functioning of the Sectional Committees smooth and efficient.

I am happy to share with you a couple of outstanding international honours of our Fellows earned this year. Dr Mitali Chatterjee, Professor of Pharmacology, Institute of Postgraduate Medical Education & Research (IPGMER), Kolkata, has been elected Fellow of the World Academy of Sciences (TWAS) in 2021 and Dr. Subhasish Dey, Professor, Indian Institute of Technology Kharagpur has been awarded the prestigious 2022 Hans Albert Einstein Award from the American Society of Civil Engineers (ASCE) in recognition of his outstanding contributions to fluvial hydrodynamics.

We look forward to many such exciting news, events and vibrant activities of the academy in the coming years.

May 27, 2022

Debatosh Guha

Secretary



*Statement of Accounts
&
Auditor's Report
Year :
2020 - 2021
&
2021 - 2022*



INDEPENDENT AUDITOR'S REPORT

To the members of WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY

Opinion

We have audited the financial statements of **WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY**, 4, Raja S. C. Mallick Road, Kolkata - 700032, which comprises of the Balance Sheet as on 31st March 2021 and the Income and Expenditure Account for the year then ended and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the entity as at March 31, 2021, and of its deficit for the year then ended in accordance with the Accounting Standards issued by the ICAI.

Basis of Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the entity in accordance with the ethical requirements that are relevant to our audit of the financial statements under West Bengal Act XXVI of 1961, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the aforesaid Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so. Those charged with governance are responsible for overseeing the entity's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

For DEBASIS BANDYOPADHYAY & CO.
Chartered Accountants
[Firm Registration No. - 324338E]


Debasis Bandyopadhyay, Proprietor
(M. No. - 057861)
Place : Kolkata
Dated : 28/02/2022
UDIN - 22057861ADVIZ6458



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY
4, Raja S. C. Mallick Road, Kolkata - 700032

Balance Sheet as on 31st March 2021

Liabilities	Amt(Rs.)	Amt(Rs.)	Assets	Amt(Rs.)	Amt(Rs.)
General Fund			Fixed Assets		
As per last a/c	342,509.44		Furnitures (as per last a/c)	448.00	
Add : (Deficit) for the year	-75,057.00	267,452.44	Less : Depreciation @ 10%	45.00	403.00
Corpus Fund					
As per last a/c		177,760.00	Cash and Bank Balance		
			Cash in hand		1,263.00
			Cash at Bank		
Current Liabilities			i) Current a/c with SBI		
Grant from Jagadish Bose Science Centre	60,000.00		(A/c No. 11079700023)	105,240.44	
(Pending Utilization)			ii) Fixed Deposit (WAST)	228,306.00	
			iii) Fixed Deposit	170,000.00	503,546.44
			(Endowment Fund)		
		<u>505,212.44</u>			<u>505,212.44</u>

Place : Kolkata

Dated : 28/02/2022

Somnath Dasgupta

For WB Academy of Science and Technology
President

[Signature]

For WB Academy of Science and Technology
Secretary

For WB Academy of Science and Technology
Treasurer

डॉ. मृणाल कान्ति घोष / Dr. Mrinal Kanti Ghosh, PhD, FNASc, FAScT

वरिष्ठ प्रधान वैज्ञानिक (एफ) एवं प्रोफेसर, AcSIR
Sr. Principal Scientist (F) & Professor, AcSIR

विभाग प्रमुख, कैंसर जीवविज्ञान एवं सूजन-प्रतिक्रिया विकार (सोबाईआईडी)
Head, Division of Cancer Biology and Inflammatory Disorder (CBID)
आर्य साईन्स-भारतीय रासायनिक जीवविज्ञान संस्थान (आईआईसीएन)
AcSIR-Indian Institute of Chemical Biology (IICB)
Salt Lake Campus (TR-1E), CH-5, Sector-V Salt Lake, Kolkata-700 064

In terms of our report of even date

[Signature]
Debasis Bandyopadhyay, Proprietor
For Debasis Bandyopadhyay & Co.
Chartered Accountants
Membership No. - 057861



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY

4, Raja S. C. Mallick Road, Kolkata - 700032

Income and Expenditure Account for the year ended 31st March 2021

Expenditure	Amt(Rs.)	Income	Amt(Rs.)
To, Salary to Staff (Part Time)	60,000.00	By, Interest on Fixed Deposit	14,488.00
" Bank Charges	649.00	" Life Membership Subscription	-
" Website maintenance	28,851.00		
" Depreciation on Furnitures	45.00		
" Excess of expenditure over income (deficit) transferred to General Fund	(75,057.00)		
	<u>14,488.00</u>		<u>14,488.00</u>

Place : Kolkata

Dated : 28/02/2022

Somnath Dasgupta

For WB Academy of Science and Technology
President

[Signature]

For WB Academy of Science and Technology
Secretary

For WB Academy of Science and Technology
Treasurer

[Signature]

डॉ. मृणाल कान्ति घोष / Dr. Mrinal Kanti Ghosh, PhD, FNASc, FAScT
वरिष्ठ प्रधान वैज्ञानिक (एफ) एवं प्रोफेसर, AcSIR
Sr. Principal Scientist (F) & Professor, AcSIR
विभाग प्रमुख, कैंसर जीनोमिक्स एवं सूक्ष्म-संवेदी विकार (सीबीआईडी)
Head, Division of Cancer Biology and Inflammation Disorder (CBID)
सीएसआईआर-भारतीय रासायनिक जैव विज्ञान संस्थान (आईसीबी)
CSIR-Indian Institute of Chemical Biology (IICB)
Salt Lake Campus (TRUE), CN-6, Sector-V, Salt Lake, Kolkata-700 091
& 4, Raja S.C. Mallick Road, Jadavpur, Kolkata-700 032, India

In terms of our report of even date

[Signature]

Debasis Bandyopadhyay, Proprietor
For Debasis Bandyopadhyay & Co.
Chartered Accountants
Membership No. - 057861



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY

4, Raja S. C. Mallick Road, Kolkata - 700032

Receipts and Payments Account for the year ended 31st March 2021

Receipts	Amt(Rs.)	Payments	Amt(Rs.)
To, Opening Balance		By, Salary to Staff (Part Time)	60,000.00
Cash in hand	1,263.00	" Bank Charges	649.00
Cash at Bank		" Website maintenance	28,851.00
i) Current a/c with SBI (A/c No. 11079700023)	120,252.44		
ii) Fixed Deposit (WAST)	228,306.00		
iii) Fixed Deposit (Endownm)	170,000.00		
	518,558.44		
* Interest on Fixed Deposit	14,488.00	" Closing Balance	
* Life Membership Subscription	-	Cash in hand	1,263.00
* Grant from Jagadish Bose Science Centre	60,000.00	Cash at Bank	
		i) Current a/c with SBI (A/c No. 11079700023)	105,240.44
		ii) Fixed Deposit (WAST)	228,306.00
		iii) Fixed Deposit (Endownm)	170,000.00
			503,546.44
	<u>594,309.44</u>		<u>594,309.44</u>

Place : Kolkata

Dated : 28/02/2022

Somnath Dasgupta

For WB Academy of Science and Technology
President

[Signature]

For WB Academy of Science and Technology
Secretary

West Bengal Academy of Science and Technology
For WB Academy of Science and Technology
Treasurer

In terms of our report of even date

[Signature]
Treasurer
Dr. Minnal Kanti Ghosh, PhD, FACS, FRCR
वरिष्ठ प्रधान वैज्ञानिक (एफ) एवं प्रोफेसर, AcSIR
Sr. Principal Scientist (F) & Professor, AcSIR
Head, Division of Cancer Biology and Inflammatory Disorder (CIBI)
CSIR-Indian Institute of Chemical Biology (IICB)
Salt Lake Campus (TRUE), CN-6, Sector-V, Salt Lake, Kolkata-700 032
4, Raja S.C. Mallick Road, Jadavpur, Kolkata- 700 032, India

[Signature]
D. Bandyopadhyay, Proprietor
M. No.- 057861
for DEBASIS BANDYOPADHYAY & CO.
Chartered Accountants

WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY

Notes attached to and forming part of the Accounts for the year 2020-2021

A. SIGNIFICANT ACCOUNTING POLICIES

1. Accounting Concepts

The society follows the cash system of accounting and recognizes the income and expenditure on cash basis, whenever received or paid as the case may be, are being recorded.

The accounts are being prepared on historical cost and going concern concept. Accounting policies referred to otherwise are consistent with generally accepted accounting principles.

2. Fixed Assets and Depreciation

Fixed Assets have been shown at written down value, after charging depreciation. Depreciation has been charged under written down valued method and at the rates specified under Income Tax Act, 1961 with effect from the financial year 2013-2014.

3. Membership Subscriptions

Membership fees received has been treated as revenue receipts as per accounting policy continuously followed;

4. Investments

Investments in fixed deposits has been recorded at face value being invested; interest accrued and not due are not being accounted for as the accounting method followed by the society is cash basis accounting.

B. NOTES TO ACCOUNTS

Grant received from Jagadish Bose Science Centre; pending utilization the same is being considered as current liability





INDEPENDENT AUDITOR'S REPORT

To the members of **WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY**

Opinion

We have audited the financial statements of **WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY**, 4, Raja S. C. Mallick Road, Kolkata - 700032, which comprises of the Balance Sheet as on 31st March 2022 and the Income and Expenditure Account for the year then ended and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the entity as at March 31, 2022, and of its surplus for the year then ended in accordance with the Accounting Standards issued by the ICAI.

Basis of Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the entity in accordance with the ethical requirements that are relevant to our audit of the financial statements under West Bengal Act XXVI of 1961, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the aforesaid Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so. Those charged with governance are responsible for overseeing the entity's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

For DEBASIS BANDYOPADHYAY & CO.
Chartered Accountants
[Firm Registration No. - 324338E]


Debasis Bandyopadhyay, Proprietor
(M. No. - 057861)
Place : Kolkata
Dated : 14/04/2022
UDIN - 22057861AHLSX6900



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY
4, Raja S. C. Mallick Road, Kolkata - 700032

4, Raja S. C. Mallick Road, Kolkata - 700032

Balance Sheet as on 31st March 2022

Liabilities	Amt(Rs.)	Amt(Rs.)	Assets	Amt(Rs.)	Amt(Rs.)
General Fund			Fixed Assets		
As per last a/c	267,452.44		Furnitures (as per last a/c)	403.00	
Add : (Deficit) for the year	<u>194,285.00</u>	461,737.44	Less : Depreciation @ 10%	<u>40.00</u>	363.00
Corpus Fund			Cash and Bank Balance		
As per last a/c		177,760.00	Cash in hand		1,263.00
			Cash at Bank		
			i) Current a/c with SBI		
			(A/c No. 11079700023)	239,565.44	
			ii) Fixed Deposit (WAST)	228,306.00	
			iii) Fixed Deposit	<u>170,000.00</u>	637,871.44
			(Endowment Fund)		
		<u>639,497.44</u>			<u>639,497.44</u>


Place : Kolkata

Dated : 14/04/2022

Somnath Dasgupta

For WB Academy of Science and Technology
President

For WB Academy of Science and Technology
Secretary

For WB Academy of Science and Technology
Treasurer 

In terms of our report of even date

Debasis Bandyopadhyay, Proprietor
For Debasis Bandyopadhyay & Co.
Chartered Accountants
Membership No. - 057861

डॉ. मृणाल कान्ति घोष / Dr. Mrinal Kanti Ghosh, PhD, FNASc, FAScT

वरिष्ठ प्रधान वैज्ञानिक (एफ) एवं प्राध्यापक, AcSIR
Sr. Principal Scientist (F) & Professor, AcSIR

भारत, गुवाहाटी, केन्द्रीय जीवविज्ञान एवं सूक्ष्म-संघर्षी विकार (सेलीआईसी)
Head, Division of Cancer Biology and Inflammatory Disorder (CBII)
राज्यसंघर्षीआईसी-भारतीय रासायनिक जीवविज्ञान संस्थान (आईआईसी)
CSIR-Indian Institute of Chemical Biology (IICB)
Salt Lake Campus (TRUE), CN-6, Sector-V, Salt Lake, Kolkata-700 074
& 4, Raja S.C. Mukherjee Road, Beliaghata, Kolkata-700 037, India



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY
4, Raja S. C. Mallick Road, Kolkata - 700032

Income and Expenditure Account for the year ended 31st March 2022

Expenditure	Amt(Rs.)	Income	Amt(Rs.)
Salary to Staff (Part Time)	35,000.00	By, Interest on Fixed Deposit	14,488.00
Allowance out of JBSC grant	36,000.00	" Life Membership Subscription	312,100.00
Printing and Publication	69,564.00	" Grant from Jagadish Bose Science Centre	60,000.00
Bank Charges	649.00		
Website maintenance	36,580.00		
Stationery, Printing, Refreshments etc.	8,070.00		
Audit Fees (for FY 2019-20)	5,900.00		
Conveyance	500.00		
Depreciation on Furnitures	40.00		
Excess of income over expenditure (surplus) transferred to General Fund	194,285.00		
	<u>386,588.00</u>		<u>386,588.00</u>

Place : Kolkata

Dated : 14/04/2022

Somnath Dasgupta

For WB Academy of Science and Technology
President

[Signature]
For WB Academy of Science and Technology
Secretary

For WB Academy of Science and Technology
Treasurer

[Signature]

डॉ. मृणाल कान्ति घोष / Dr. Mrinal Kanti Ghosh, PhD, FNASc, FAScT

वरिष्ठ प्रधान वैज्ञानिक (एफ) एवं प्रोफेसर, AcSIR
Sr. Principal Scientist (F) & Professor, AcSIR

विभाग प्रमुख, कैंसर जीवविज्ञान एवं सूजन-संबंधी विकार (सीसीआईडी)
Head, Division of Cancer Biology and Inflammatory Disorder (CBID)
संयोजक, आर-पारसीय रासायनिक जीवविज्ञान संस्थान (आईआईसीबी)
AcSIR-Indian Institute of Chemical Biology (IICB)
Lake Campus (TRUE), CN-6, Sector-V, Salt Lake, Kolkata-700 091
4, Raja S.C. Mallick Road, Jadavpur, Kolkata- 700 032, India

In terms of our report of even date

[Signature]

Debasis Bandyopadhyay, Proprietor
For Debasis Bandyopadhyay & Co.
Chartered Accountants
Membership No. - 057861



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY
4, Raja S. C. Mallick Road, Kolkata - 700032

Receipts and Payments Account for the year ended 31st March 2022

Receipts	Amt(Rs.)	Payments	Amt(Rs.)
Opening Balance		By, Salary to Staff (Part Time)	35,000.00
Cash in hand	1,263.00	" Allowance out of JBSC grant	36,000.00
Cash at Bank		" Printing and Publication	69,564.00
i) Current a/c with SBI (A/c No. 11079700023) 105,240.44		" Bank Charges	649.00
ii) Fixed Deposit (WAST) 228,306.00		" Website maintenance	36,580.00
iii) Fixed Deposit (Endownm) 170,000.00	503,546.44	" Stationery, Printing, Refreshments etc.	8,070.00
Interest on Fixed Deposit	14,488.00	" Audit Fees (for FY 2019-20)	5,900.00
Life Membership Subscription	312,100.00	" Conveyance	500.00
		" Closing Balance	
		Cash in hand	1,263.00
		Cash at Bank	
		i) Current a/c with SBI (A/c No. 11079700023) 239,565.44	
		ii) Fixed Deposit (WAST) 228,306.00	
		iii) Fixed Deposit (Endownr) 170,000.00	637,871.44
	<u>831,397.44</u>		<u>831,397.44</u>

Place : Kolkata
Dated : 14/04/2022

Somnath Dasgupta

For WB Academy of Science and Technology
President

[Signature]

For WB Academy of Science and Technology
Secretary

West Bengal Academy of Science and Technology
WB Academy of Science and Technology

Treasurer

[Signature]

Treasurer

Dr. Minati Kant Ghosh, PhD, FNASc, FAScT
वरिष्ठ प्रधान वैज्ञानिक (एफ) एवं प्रोफेसर, AcSIR
Sr. Principal Scientist (F) & Professor, AcSIR
कैंसर जीवविज्ञान एवं सूजन-संबंधी विकार (सीबीआईडी)
Division of Cancer Biology and Inflammatory Disorder (CBID)
भारतीय रासायनिक जीवविज्ञान संस्थान (आईआईसीबी)
Indian Institute of Chemical Biology (IICB)
True Campus (TRUE), CN-6, Sector-V, Salt Lake, Kolkata-700 091
4, Raja S.C. Mullick Road, Jadavpur, Kolkata- 700 032, India

In terms of our report of even date

[Signature]

Debasis Bandyopadhyay, Proprietor
For Debasis Bandyopadhyay & Co.
Chartered Accountants
Membership No. - 057861



WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY

Notes attached to and forming part of the Accounts for the year 2021-2022

A. SIGNIFICANT ACCOUNTING POLICIES

1. Accounting Concepts

The society follows the cash system of accounting and recognizes the income and expenditure on cash basis, whenever received or paid as the case may be, are being recorded.

The accounts are being prepared on historical cost and going concern concept. Accounting policies referred to otherwise are consistent with generally accepted accounting principles.

2. Fixed Assets and Depreciation

Fixed Assets have been shown at written down value, after charging depreciation. Depreciation has been charged under written down valued method and at the rates specified under Income Tax Act, 1961 with effect from the financial year 2013-2014.

3. Membership Subscriptions

Membership fees received has been treated as revenue receipts as per accounting policy continuously followed;

4. Investments

Investments in fixed deposits has been recorded at face value being invested; interest accrued and not due are not being accounted for as the accounting method followed by the society is cash basis accounting.

B. NOTES TO ACCOUNTS

Grant received from Jagadish Bose Science Centre received during the year 2020-2021, being utilized in the current financial year 2020-2022.



INTERNATIONAL RECOGNITION

Received by WAST Fellows



Dr. Mitali Chatterjee, Professor of Pharmacology, Institute of Postgraduate Medical Education & Research (IPGMER), Kolkata has been elected **Fellow of the World Academy of Sciences (TWAS)** in 2021.



Subhasish Dey, Professor at Indian Institute of Technology Kharagpur has been awarded the prestigious **2022 Hans Albert Einstein Award** from the American Society of Civil Engineers (ASCE) in recognition of his outstanding contributions to fluvial hydrodynamics. Citing Dey's contributions, the Award Committee noted that Dey has been awarded this recognition for 'his fundamental contribution to the fluvial sediment transport, turbulence mechanism, local scour, and alluvial river dynamics from the perspectives of research, education and practice.' Dey is the 3rd recipient of Hans Albert Einstein Award outside the USA.

