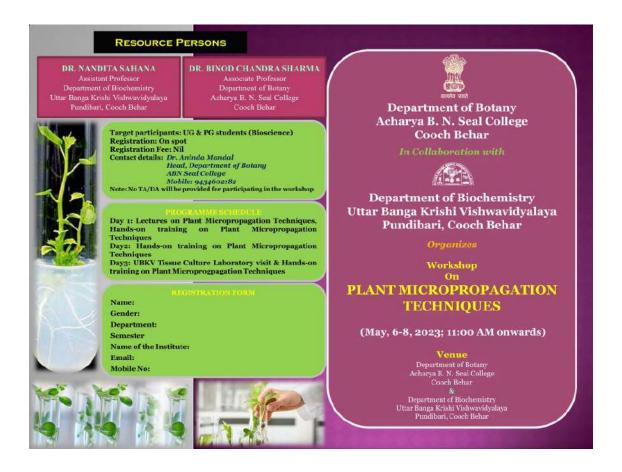
# **Report on Seminars and Workshops organized by Science Departments:**

# Department of Botany

# **3-DAYWORKSHOP ON**

# PLANT MICROPROPAGATION TECHNIQUES

(May 6-8, 2023)



# **SUMMARY REPORT**

A three day long workshop was jointly organised by Department of Botany, ABN Seal College, Cooch Behar and Department of Biochemistry, Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar from 6<sup>th</sup> to 8<sup>th</sup> May, 2023. The objectives of the workshop were to inculcate the basic knowledge of plant tissue culture among the students of this region and its applications. A good number of students from host institution and surrounding colleges actively participated in the workshop including hands on training on plant micropropagation techniques.

A total of 47 UG students from different colleges (36 – ABNSC, 10 – Tufanganj Mahavidyalaya, 1 – Dinhata College) were participated in this.

#### Day 1 (06/06/2023)

The inaugural session was commenced from 11:00 am in presence of Dr. Nilay Ray (Principal, ABN Seal College); Sri Chandra Sekhar Pandit (Secretary, Teachers' Council, ABNSC); Dr. Arijit Chakraborty (Coordinator, IQAC, ABNSC); Dr. Nandita Sahana (Resource person, Department of Biochemistry, UBKV), Dr. Aninda Mandal (Head, Department of Botany, ABNSC); faculty members and students. Dr. Binod Chandra Sharma welcomed all the dignitariesand students. Dr. Nilay Ray (Principal, ABNSC) highlighted the importance of imparting hands on training programmes for the overall development of students.

**Technical Session 1:** Dr. Nandita Sahana discussed the history & development of plant tissue culture, various aspects & techniques, scope of micropropagation at regional as well as national level. She also highlighted on the ongoing research projects on micropropagation at UBKV. The lecture was followed by interactive session where Dr. Sahana replied to all queries made by students related to micropropagation of potato and other cash crops of the region.

**Technical Session 2:** Dr. Binod Chandra Sharma began the session with brief introduction on the requirements of tissue culture facility. Then the students were brought to laboratory and demonstrated the process of media preparation, sterilisation and *in vitro* inoculation.

#### Day 2 (07/05/2023)

**Technical Session 1:** Hands on training on media preparation and sterilisationtechniques were imparted to all the students by Dr. Sharma. All the students actively involved themselves in the preparation of Murashige and Skoog (MS) agar medium, autoclaving and preparation of stabs.

**Technical Session 2:** MS medium stab, leaf explant, surface sterilants were provided to the students. Each of them inoculated the leaf explant following all the protocols using the laminar airflow cabinet available in the department. The inoculated stabs were placed inside the plant growth chamber for growth and development.

#### Day 3 (08/05/2023)

**Institutional Visit:** All the students and faculty members assembled in the college at 10:30 am and reached the Directorate Research Building of Uttar Banga Krishi Viswavidyalaya. Dr. Nandita Sahana welcomed all of us and guided to Micropropagation Room. The culture room was full of well-developed*in vitro* clonal population of banana, gerbera, cinchona, potato, citrus, mainly. The students were made aware difficulties in plant micropropagation showing the contaminated bottles. The students were also acquainted with the orientation of media preparation room and inoculation room as well as the different types instruments like laminar airflow cabinet, autoclaves, dissecting microscopes etc. Then we were guided to hardening facility and shown successfully hardened (ready to transplant) plantlets.

**Conclusion:** The workshop could impart the knowledge of plant micropropagation among the participants along with the hands on training. The preliminary training of tissue culture including inoculation in ABN Seal College and the observation of expected results in UBKV generated interest among the participants. They can utilise the skills learnt during the workshop leading themselves to successful and self-reliant entrepreneurs.

Future: Well established tissue culture facility may be established in the institution so that we can impart long term training to the students as well as local entrepreneurs. More works can be initiated taking endangered medicinal as well as timber plants for the conservation of biodiversity in this ethnobotanically rich region of India.





**Participants** 

**Participants** 

### **Department of Botany**

# A. J. C. BOSE MEMORIAL LECTURE ON "Insights into Citrus: Domestication and Cultivation"

## Organized by Department of Botany, A. B. N. Seal College, Cooch Behar, West Bengal 736 101

The Department of Botany, ABN Seal College, Cooch Behar has been organizing Lecture series called as AJC Bose Memorial Lecture on annual basis inviting resource persons working on the field of applied Botany. In continuation of the lecture series this academic session (2022-2023) we approached Dr. Kishore Kumar Thapa, Head, Department of Botany, Dinhata College, Dist. Cooch Behar, West Bengal and he kindly gave his consent for delivering a popular lecture entitled "Insights into Citrus: Domestication and Cultivation" on 12/05/2023. The students of the different Departments of the College registered themselves for the lecture at 2:30 pm on 12/05/2023 at Vidyasagar Sabhagriha (Seminar Hall) of the College. The programme started at 3:00 pm with welcome address by Dr. Binod Chandra Sharma, Associate Professor of the Department of Botany in presence of Dr. Nilay Ray (The Principal, ABNSC), Dr. KIshore Kumar Thapa (Resource person), Dr. Aninda Mandal (Head, Department of Botany, ABNSC), Sri Ajoy Das (Assistant Professor of Botany, ABNSC), Dr. Bapi Ghosh (Assistant Professor of Botany, ABNSC), Smt. Mousikha Lala (Assistant Professor of Botany, ABNSC), Smt. Javita Debnath (SACT of Botany, ABNSC) and students from Department of Botany, Zoology, Physiology. Dr. Nilay Ray, Principal, ABN Seal College addressed the gathering highlighting the importance of holding such kind of memorial lectures in the College as a whole to aware the students on modern scientific developments and ignite their interest in the field of research. Dr. Thapa began his deliberation with brief introduction on plantation crops of North Bengal. Then he discussed the origin and distribution of citrus in the world. According the studies so far China is considered as the centre of origin of citrus. In India basically there are four cultivars of Citrus reticulata (mandarin orange) namely, Khasi Mandarin, Darjeeling Mandarin, Nagpur mandarin and Coorg Mandarin. In addition to these a number of different varieties of lime and lemon are cultivated and marketed in India. Dr. Thapa also highlighted on the present constraints in mandarin cultivation due to heavy loss of citrus crops owing to bacterial, fungal, viral, nematode and insect diseases. Citrus greening disease (a bacterial disease) and a viral disease caused by *Citrus tristeza* virus are the main cause of concern for Darjeeling mandarin. Dr. Thap a suggested for a proper quarantine facility and integrated disease management involving all the stakeholders. The students actively participated by placing a number of queries related to varieties and diseases of citrus and Dr. Thapa was able to convince them with appropriate examples. The lecture series ended with a vote of thanks.

Brief details of the eminent speaker and nature of participants are given below:

| Name of the Speaker     | Designation & Affiliation  |
|-------------------------|--|
| Dr. Kishore Kumar Thapa | Head, Department of Botany, Dinhata College, Dinhata, West Bengal – 736 135, India |

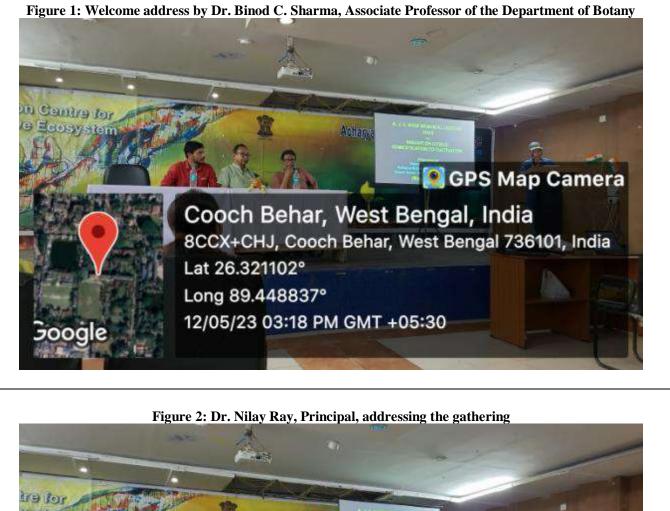
| Nature of Participants      | In house | External | <b>Total Nos. of Participants</b> |
|-----------------------------|----------|----------|-----------------------------------|
| No. of teacher participants | 08       | Nil      | 08                                |
| No. of student participants | 47       | Nil      | 47                                |





Certificate will be issued to the registered participants after successful participation

### **PHOTO GALLERY**





## **PHOTO GALLERY**

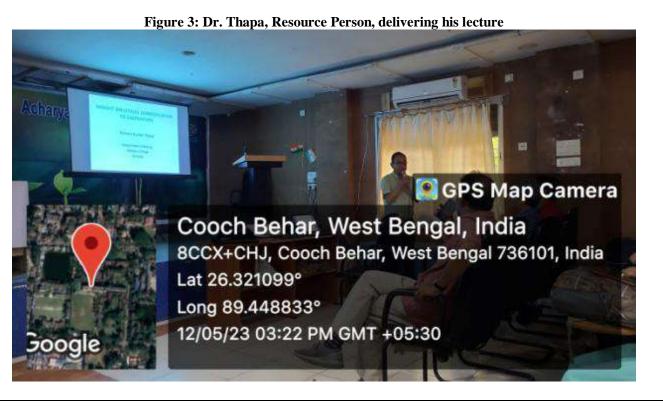
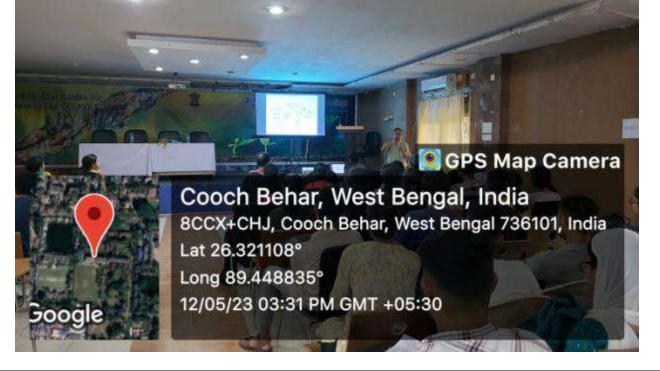


Figure 4: Dr. Thapa, Resource Person, delivering his lecture

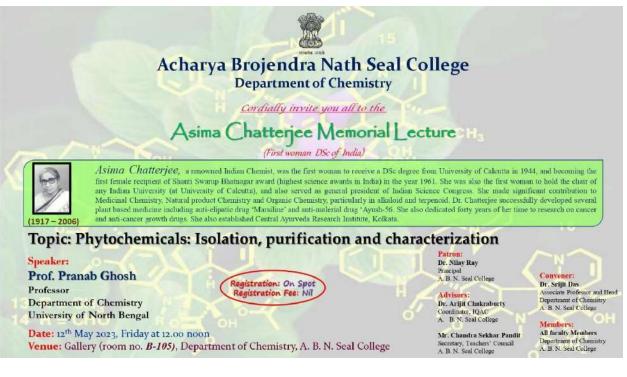


### **Department of Chemistry:**

### **Report on Asima Chatterjee Memorial Lecture**

### Background

The Department of Chemistry, A. B. N. Seal College is one of the prestigious departments run since long. In each year department come in contact with a branch of creamy students of the Cooch Behar and Alipurduar District. Those who opt for pursing their course in this department are generally highly ambitious. Since the ambition of the student are highly focus, as compared to the other institute of nearby; therefore, we always think not to restricted our student with conventional lecture, rather promote to give them exposure. In this connection we will always looking for opportunities to break down such barriers and the Department of Chemistry has arranged a memorial lecture on 12/05/2023 by the name of Dr. Asima Chatterjee (1<sup>st</sup> woman DSc of India) to tribute her contribution in the field of Chemistry particularly in Medicinal Chemistry and Prof. Pranab Ghosh, dignitary Organic Chemist, University of North Bengal was the resource person.



| Торіс        | Phytochemicals: Isolation, purification and characterization                  |
|--------------|---|
| Participants | All faculty members and All UG Students                                       |
| Speaker      | Prof. Pranab Ghosh, Professor, Dept. of Chemistry, University of North Bengal |
| Date         | 12/05/2023  |
| Time         | 12:00 noon  |
| Venue        | Gallery room, Dept. of Chemistry, A. B. N. Seal College                       |

### Objective

Choosing the title of memorial lecture by the name of Asima Chatterjee is mainly introduce her grace contribution in the field of science among the students. Although her remarkable contribution is endless, even her involvement is not that much familiar to UG students. Therefore, first objective Strick on our mind to familiarize the motivational journey of the lady chemist. Further this will give an extra courage to the female students too. Moreover, we strongly feel that such kind of lecture or seminar give the student a different kind of flavor which may sometimes open a new window for them. Student even get an idea of the research level work. Also, the interactive session with the dignitary renounced faculty of another institute provide them another level confidence. Another core purpose of the lecture series was mainly motivating our student on the field of Chemical science.

### **Breakthrough and outcomes**

We all the faculty member of the department had eagerly participate in the lecture. The student attendance was almost 100 %. The speaker starts the deliberation by remembering the life journey of Dr. Asima Chatterjee, and thereby her contribution in the field of Organic Chemistry and Medicinal Chemistry. With then this short motivating inspiring story of Dr. Chatterjee, speaker enter into the main topic of deliberation about Phytochemicals. Prof. Ghosh deliver the talk for about 2 hours with his own style. Prof. Ghosh present the topic in a very lucid and simplest way, which make digestible for all graded. The aforementioned topic was very much connecting and relevant with the UG students. It was observed that all of the listener was enjoying the whole session. Remarkably Prof. Ghosh related the topic of his deliberation with availability of medicinal plant and its medicinal need in North Bengal, especially with the interior region. He shared some of his own practical day to day experience regarding this topic. More interestingly, after the completion of the long two hours deliberation, the interactive session was run about more than half an hour. The curiosity among the students was enormously high. Students also shared their willingness of higher study and take some suggestion from the speaker. It was a friendly and very much effective interactive session. Overall, it was very fruitful for the students in their carrier advancement.

Some Glimpses are as follows:



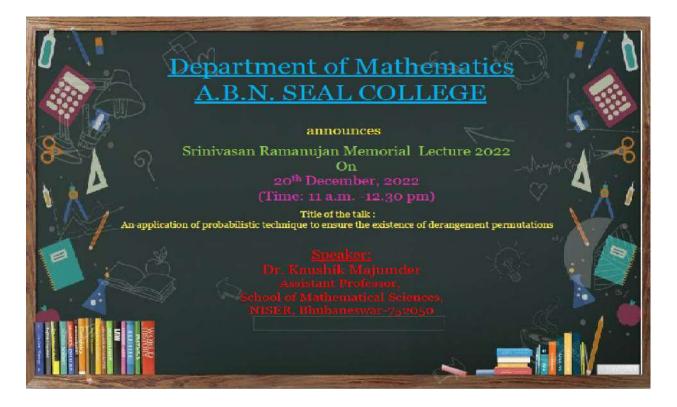




### **Department of Mathematics:**

# Report on Srinivasan Ramanujan Memorial Lecture 2022, organized by Department of Mathematics, ABN SEAL College Topic: An application of probabilistic technique to ensure the existence of derangement permutations Speaker: Dr. Kaushik Majumdar Date: 20.12.2022 No. of participants: 60

Department of Mathematics, ABN Seal College organized Srinivasan **Ramanujan Memorial Lecture 2022** on 20.12.2022 in the Seminar hall of our department. Head of the Department and convener Dr. Tausif Sk. organized this event as Departmental Lecture in memory of great Indian mathematician Dr. S. Ramanujan. The Principal of the college, Dr. Kalyan Sinha, Dr. Amar Sha and Mr. Milan Singha shared their knowledge on this great mathematician. The chief Guest of the event was Dr. Kaushik Majumdar. He is currently an Associate Professor of NISER Bhubaneswar. Dr. Tausif Sk., welcomed the Chief Guest, Principal and the audience. Dr. Kalyan Sinha gave the introduction of Dr. K. Majumdar. He delivered his lecture on the topic "An application of probabilistic technique to ensure the existence of derangement permutations". He explained in an interesting manner how we got derangement ideas from our daily life. He elaborated the circumstances and events step by step leading to the topic on the basis of our daily life. This generated a plethora of excitement among the audience. At the end Dr. Amar Sha proposed the vote of thanks to the organizers and the college administration. It was an enriching experience for the students and the event was executed flawlessly by the student team of Mathematics Department. We the teachers and students thank our principal who gave this opportunity to organize such an event.



#### 12/22/22, 11:45 AM

Gmail - Invitation letter

附 Gmail

A B N Seal College Department of Mathematics <math.abnsc@gmail.com>

10 December 2022 at 13:56

11 December 2022 at 09:45

14 December 2022 at 17:22

Invitation letter

3 messages

A B N Seal College Department of Mathematics <math.abnso@gmail.com> To: "kaushikmajumder@niser.ac.in" <kaushikmajumder@niser.ac.in>

Dear Sir, Please consider this email as an invitation letter for our departmental upcoming webinar. Formal invitation letter is attached to this mail.

We hope that our students will learn some new interesting topics from your lecture. With regards. Dr. Kalyan Sinha, Assistant Professor, Department of Mathematics, ABN Seal College, Coodhbehar

DOC-20221210-WA0004\_.pdf

, Kaushik Majumder <kaushikmajumder@niser.ac.in> To: A B N Seal College Department of Mathematics <math.abnso@gmail.com>

Dear Dr Sinha,

I am glad to visit your department on December 19-20, 2022. Here I am attaching the title and abstract of the talk. The talk is aimed at undergraduate students with knowledge of permutation mapping.

Title:: An application of probabilistic technique to ensure the existence of derangement permutations

Abstract: Randomness is a valuable tool for solving problems in Mathematics. In this talk, we discuss a technique to understand existence without constructing a derangement permutation. This technique has a lot of impact in Mathematics and such technique is known as the first-moment probabilistic method.

Thanks and regards Kaushik Majumder Assistant Professor School of Mathematical Sciences National Institute of Science Education and Research Bhubaneswar P.O. Jatni, Khurda-752050, Odisha, India [Quidel text Inden]

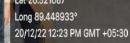
A B N Seal College Department of Mathematics <math.abnso@gmail.com> To: Kaushik Majumder <kaushikmajumder@niser.ac.in>

Dear Sir, Please find the attachment with regards, Kalyan Sinha [Quoted text Nidden]

Palecture.pdf

https://mail.googie.com/mail/v/0/?lk=64508bd724&view=pt&search=ail&permthid=thread=a%3Ar4402260179393014196&simpl=msg=a%3Ar44039126... 1/1





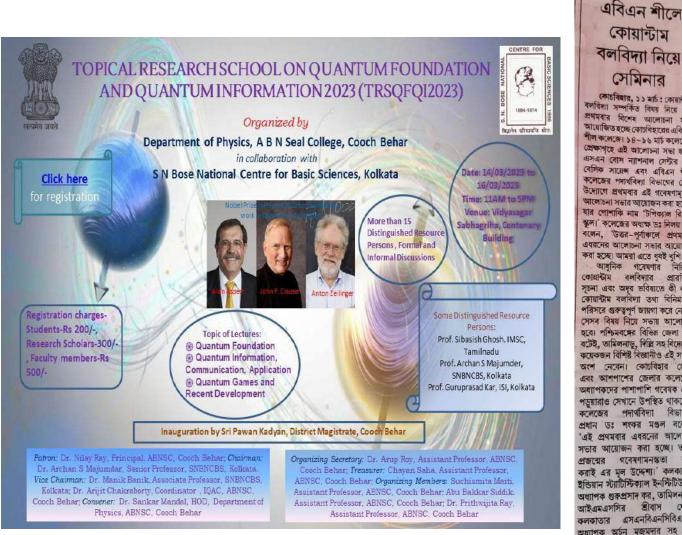
Joogle



### **Department of Physics:**

# **"TOPICAL RESEARCH SCHOOL ON QUANTUM FOUNDATION AND QUANTUM INFORMATION 2023** (TRSQFQI2023)"

A "TOPICAL RESEARCH SCHOOL ON QUANTUM FOUNDATION AND QUANTUM INFORMATION 2023 (TRSQFQI2023)" was organised by the Department during 14/3/2023-16/3/2023 in collaboration of S N Bose National Centre for Basic Sciences, Kolkata. SNBNCBS, Kolkata also partially funded for the Research School. As many as 15(fifteen scientist from various Academic Institutes such as SNBNCBS;Kolkata; Bose Institute,Kolkata; ISI,Kolkata; Calcutta University, IMSC, Tamilnadu; University of Hongkong; Harimohan Ghosh College, Kolkata delivered their lecture on different topic of Quantum Foundation and Quantum Information. Studnets, Research Scholars and Faculty members of ABN Seal College, Cooch Behar College, Alipurduar University etc of the region participated in the Research School. As many as 72 participant attended the Research School.



কোয়ান্টাম দ্যা নিয়ে কোচৰিহার, ১১ মার্চ : কোরান্টাম বলবিন্না সম্পর্কিত বিষয় নিয়ে এই প্রথমবার বিশেষ আলোচনা সভা আয়োজিত হচ্ছে কোচবিহারের এবিএন শীল কলেজে। ১৪-১৬ মার্চ কলেজের প্রেক্ষাগৃহে এই আলোচনা সন্তা হবে। এসএন বোস ন্যাশনাল সেন্টার কর বেসিক সায়েন্স এবং এবিএন শীল কলেজের পদার্থবিদ্যা বিভাগের যৌথ উদ্যোগে প্রথমবার এই গবেষণাস্তলক আলোচনা সভার আয়োজন করা হচ্ছে। যার পোশাকি নাম 'টপিক্যাল রিসার্চ স্কুল।" কলেজের অধ্যক্ষ ডঃ নিলয় রায বলেন, উত্তর-পূর্বাঞ্চলে প্রথমবার এধরনের আলোচনা সভার আয়োজন

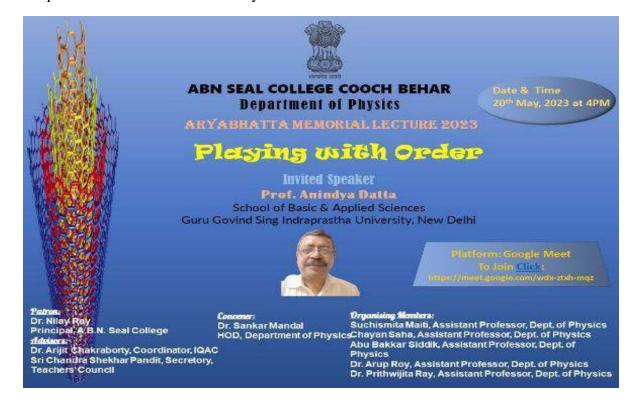
করা হচ্ছে। আমরা এতে থুবই খুশি।' আধুনিক গবেষণার নিরিখে কোয়ান্টাম বলবিদ্যার প্রারন্তিক স্চনা এবং অদূব ভবিষাতে কী করে কোয়ান্টাম বলবিদ্যা তথা বিনিময়ের পরিসরে গুরুত্বপূর্ণ জায়গা করে নেবে, সেসৰ বিষয় নিয়ে সভায় আলোচনা হবে। পশ্চিমবঙ্গের বিভিন্ন জেলা তো বটেই, তামিলনাড়, দিল্লি সহ বিদেশের কয়েকজন বিশিষ্ট বিজ্ঞানীও এই সভায় অংশ নেবেন। কোচবিহার জেলা এবং আশপাশের জেলার কলেজের অধ্যাপকদের পাশাপাশি গবেষক এবং পদ্রয়ারাও সেখানে উপস্থিত থাকবেন। কলেজের পদার্থবিদ্যা বিভাগের প্রধান ডঃ শংকর মণ্ডল বলেন, 'এই প্রথমবার এধরনের আলোচনা সভার আয়োজন করা হচ্ছে। তরুণ বৃদ্ধি প্রজন্মের গবেষণামনস্ততা করাই এর মূল উদ্দেশ্যা কলকাতার ইন্ডিয়ান স্ট্যাটিস্টিক্যাল ইনস্টিটিউটের অধ্যাপক গুরুপ্রসাদ কর, তামিলনাডুর শ্রীবাস বোৰ, আইএমএসসির কলকাতার এসএনবিএনসিবিএসের অধ্যাপক অচন মজুমদার সহ ১৫ জন বিস্তানী আলোচনা সভায অংশ নেবেন।

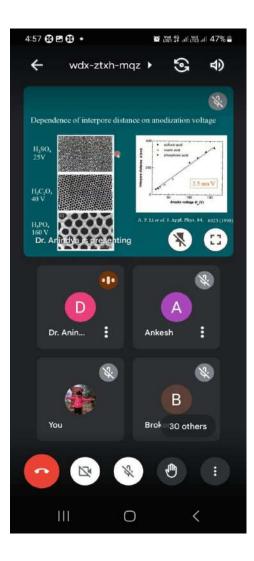


### **Department of Physics:**

# "Aryabhatta Memorial Lecture 2023

"Aryabhatta Memorial Lecture 2023" was organised on 20/5/2023 in online mode on Google Meet platform. Professor Anindya Datta of School of Basic & Applied Sciences Guru Govind Singh Indraprastha University, New Delhi delivered a lecture on "Playing with Order." Dr. Datta who has worked extensively on nanomaterials delivered an interesting lecture on the emerging field of nanoscience including its synthesis and different application in devices. As many as 46 students and faculty members attended the online seminar. The seminar ended with a questionnaire session followed by vote of thanks.





| 4:54 🕀   | <b>⊡⊕</b> •                |            | 19 al 👷 al | 49%       |
|----------|----------------------------|------------|------------|-----------|
| ←        | About this call            |            |            |           |
| Peop     | ole Informa                | ition      | Activ      | rities    |
|          | Chayan Saha (Y             | ou)        |            |           |
| <b>@</b> | Sankar Man<br>Meeting host | S.         | д          | :         |
| 2        | Abubakkar S                | Ś          | д          | :         |
| A        | Ankesh Saha                | S.         | д          | :         |
| 02       | Arup Roy                   | Š          | д          | :         |
|          | Avirup Das                 | ŝ          | д          | :         |
| ۹.       | Ayan Dutta                 | Si,        | д          | :         |
|          | Ayan Sutrad                | S.         | д          | :         |
| <b>@</b> | Bishal Kund                | S.         | д          | :         |
| B,       | Broken Arna                | <b>*</b> * |            | 8a<br>144 |
| D.       | Deb Ghimira                | You        | Dr. Anir   | nd +34    |
|          |                            | )          | <          |           |

# One-day Jyoti Prakash Haldar Memorial Lecture, 2023 on "Nutrition in Health and Disease"

Department of physiology conducted **One-day Jyoti Prakash Haldar Memorial Lecture**, 2023 on "*Nutrition in Health and Disease*" on 19<sup>th</sup> June, 2023. Speaker Dr. A. B. H Itagi, Assistant Professor, AIIMS, AP beautifully delivered information on common nutritional health problems.



| 6/19/23, 12:31 PM                          | Meet - aly-yiks-jew  |                                    |               |
|--|--|------------------------------------|---------------|
| Pasang Tshering Dukpa is presenting        |  | People                             | ×             |
| III NOT DE REVIEI - Gaint Lestine (1) (201 |  | 🎒 Ankita Barman                    | % I           |
| WPO-DP Advance - Louise Average (12,200    | According to the CHEMICAL NATURE ACCORDING TO THE  | Ankita Chakraborty                 | & :           |
|  | Energy giving foods<br>The carbohydra<br>protein are con<br>nutrients, so th   | Ashaf Al Amin Hoque                | % I           |
|  | Image: Section of the sectio                                  | Barnali Barua                      | \$i :         |
|  | terror and the fact according to the fact ac           | B Brototi Roy                      | <i>\$</i> ; : |
|  | Martin or same advancement advancement<br>With the same advancement advancement<br>With the same advancement advancement<br>Martin of the same advancement advancement advancement<br>Martin of the same advancement advancement advancement<br>Martin of the same advancement advanceme | Captain Rup                        | \$k ::        |
|  | I HATTO  | Dakshayani Mahapatra               | <i>\$</i>     |
|  |  | DEBARATI BHATTACHA                 | * :           |
|  |  | Dipannita Chakdar                  | \$ I          |
| Dr Affeen Bert- Nashrin Mitu               |  | Disha Saha                         | \$ : <b>T</b> |
| La place trade-                            | Urbeehl Barmen Sangit Mitra Pe   | Dr Afreen Begum Hasan              | 1             |
|  |  | Dr. Tridib Chakraborty             | \$ :          |
|  |  | Gourav Roy                         | ¥ :           |
|  |  | Iswari Ray                         | \$~ I         |
|  |  | Jaba Biswas                        | * :           |
|  |  | Jayshree Roy                       | \$k :         |
|  |  | Joyeets Barman                     | % :           |
|  |  | Mamoni Karjee                      | \$4 I         |
|  |  | Mithisat Narjinary                 | ¥ I           |
|  |  | Nashrin Mitu                       | \$4. I        |
|  |  | Neha Y                             | \$ <u>.</u> : |
|  |  | Nilay Ray                          | \$4 I         |
|  |  | nisheeth sarkar                    | \$ <u>.</u> : |
|  |  | Pasang Tshering Dukpa Meeting host | & i           |
|  |  | Pasang Tshering Dukpa Meeting host | \$ <u>.</u> : |
| 12:31 PN 📼 😳 🗭                             | : 🐢 (j 🚆 🖻 🎰   |                                    |               |

# **Department of Physiology**

# **Career Counselling and Motivational Speech**

Career Counselling and Motivational Speech was conduct by the physiology department on 30<sup>th</sup> March, 2023.







### **Department of Zoology**

## **Report on the Commemorative Lecture**

This is the utmost pleasure to inform that the Post Graduate Department of Zoology of Acharya Brojendra Nath Seal College and the Department of Zoology of Cooch Behar Panchanan Barma University have collaboratively organised a commemorative lecture on the occasion of 70 years of discovery of molecular structure of DNA by Watson, Crick and Wilkins.

Dr. Pradip Kumar Kar, Professor and Head, Department of Zoology, Cooch Behar Panchanan Barma University (CBPBU) has delivered the welcome address to all present in the lecture.

Dr. Tapas Kumar Kundu, eminent scientist of the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore has delivered a lecture on the occasion on epigenetics at 10.30 A. M. on 05. 02. 2023 (Sunday) in the seminar hall of CBPBU followed by an interactive session where students, scholars and teachers have taken part.

Dr. Nilay Ray (WBSES), Principal, Acharya Brojendra Nath Seal College has spoken a few words about epigenetical disorders.

Faculty members of both the departments were present in the lecture.

Dr. Kar has ended the lecture with vote of thanks at 1.00 P. M.



# **Department of Zoology**

# **Report on Alumni Interaction-cum-Motivational Talk**

# Conducted by

# Dr. Sanjib Ray, Professor, Department of Zoology, The University of Burdwan, West Bengal

Alumni interaction programme begun at 2.00 P.M. on 30. 03. 2023

Felicitation of alumni was done by the departmental teachers.

Welcome address was given by Sri Hemen Biswas, Head of the Post Graduate Department of Zoology and he talked about the importance of alumni interaction.

Dr. Sanjib Ray, Professor, The University of Burdwan, West Bengal, discussed about career building copes and opportunities in Life Sciences in general and in Zoology in particular. He recalled his days as a Zoology Honours student in this Department from 1992-1995. He talked about the skills and methods to develop the scientific temperament of the present day students. He discussed about the trends of changes in education, research and job in the last few decades.

He also highlighted about the crystallization and galvanization of mind set of the youngsters in building their career and how that will make them responsible and successful citizens.

The participating students were really enriched and encouraged and they put forwarded a handful of relevant questions to the alumnus. Hopefully they became happy enough after getting the answers from the alumnus-speaker.

The talk was ended at 4.00 P. M.

# **Department of Zoology**

### Report on Har Gobind Khorana Memorial Lecture Series, 2023 Title: Ecology is a Permanent Economy; The Soul of Sustainable Development by Dr. Narayan Ghorai, Professor, Department of Zoology, West Bengal State University, Barasat, West Bengal

Registration begun at 2.30 P.M. on 04. 04. 2023. Programme was inaugurated by lighting of the lamp. Felicitation of guests was done by the departmental teachers. Welcome address was given by Sri Hemen Biswas, Head of the Post Graduate Department of Zoology and he talked about the importance of Ecosystem and its sustainability.

Dr. Nilay Ray, Principal A. B. N. Seal College discussed about the need and role of sustainable development. Dr. Narayan Ghorai, Professor, Department of Zoology, West Bengal State University, Barasat, West Bengal, discussed about the sustainable development, how we can fulfil our needs of current generation without compromising the needs of future generations and how we use our natural resources. He talked about the various environmental movements across India and the world. He discussed about the 4 types of ecosystem services like provisioning services, regulating services, cultural services and supporting services of ecosystem. He talked about how our culture and natures are interlinked.

He also highlighted about the natural and physical capital of the environment and to emphasize on the utilization of natural resources by exemplifying several case studies.

After the wonderful audio-visual lecture, the programme was ended with vote of thanks given by Dr. Debojyoti Dutta, Associate Professor, Post Graduate Department of Zoology, A. B. N. Seal College.

