# **Physics Department Newsletter**

## **Special Lectures:**

 Title: "Access to Innovation : Research and Development" Speaker : Sri Amiya Kumar Kalidaha, Senior Scientific Officer, Department of Higher Education, Govt. of West Bengal Date & Time: 16th February, 2018 at 12:00 hrs. Onwards Venue : LT4 (science Building)

In this lecture, Sri Kalidaha emphasized the importance of innovation in scientific research and informed about various schemes and funding offered by the Government in research and development.



Sri Amiya Kumar Kalidaha speaking at the Gokhale Memorial Girls' College during a special lecture

(2) Title: "Warming Cryosphere: Atmospheric Investigations over Antarctica"

Speaker : Dr. Sanat Kumar Das, Professor, Bose Institute Date & Time: 24 th April, 2019 at 1:00 p.m. Onwards Venue : LT4 (science Building)

Prof. Das emphasizes why studying the changing pattern of climate is so important for the existence of mankind. Aerosol is one of the main components of climate change study. Indirectly aerosols can influence the cloud formation and thereby take part in the lifetime of cloud, cloud albedo and water content in it, which directly affects rainfall. So aerosols have an important role on climate change and thereby on human society. The seminar came to an end after an enlightening question-answer session.



Dr. Das speaking to the audience at GMGC

(3) Title: "Monstrous Black Hole"

Speaker : Dr. Tapas Das, Professor, Harish Chandra Research Institute, Prayagraj (Allahabad) Date & Time: 25th April, 2023 at 2:00 p.m. Onwards Venue : LT4 (science Building)

Dr. Das started his pedagogical lecture by introducing the Black holes which are ultra-dense concentrations of matter. Its gravity is so strong that nothing, not even light, can escape from it. There are strong reasons to believe that each galaxy in our universe harbors a huge black hole at its center as massive as several millions masses of the Sun. In his lecture he talked about the brief history of such monstrous black holes and elaborated non-technically the astrophysical properties of such objects. After such an enlightening talk, the students came up with their questions and Prof. Das patiently responded to all. It was really overwhelming to see the enthusiasm and inquisitiveness of students from all science backgrounds. All the participants were given e-certificates.



#### **WEBINAR:**

- (1) A one day National webinar on "Academic and Professional Career Advancement opportunities after Graduation in Pure Science" jointly organized by Departments of Chemistry, Physics and Mathematics on 10th, July 2021. The aspiration behind the programme was to make the students conversant with the diverse career opportunities and prospects both in academic and non-academic sectors after graduating in various science streams. The distinguished invitees from Physics were Dr. Ushoshi Maitra, Associate, Model Risk Quant, Morgan Stanley, Mumbai and Mrs. Debarati Mukhopadhyay, WBCS Officer, Govt. of West Bengal.
- (2) Two-Days National Level Webinar on "Emerging Trends in Chemical and Material Sciences" organized jointly by the Department of Chemistry and Physics on 28th and 29th June, 2020 and was conducted using Cisco WebEx Meet platform.

Speaker: 1) Dr. Susmita Kundu, Scientist, CSIR-Central Glass and Ceramic Research Institute (CSIR-CGCRI).

2) Dr. Aritra Banerjee, Assistant Professor, Department of Physics, University of Calcutta.

3) Dr. S. N. Khatua, Assistant Professor, Department of Chemistry, North Eastern Hill University (NEHU).

4) Dr. U.N. Maiti, Assistant Professor, Department of Physics, IIT Guwahati.

**Career opportunities:** The Department of Physics is very much aware of the changing times of the society and is proactive in making

their students adapting and flexible in choosing future career paths. To achieve this, the department has undertaken a number of steps.

Farhana Khatoon, Senior Resident in Medical Physics in Dr. RML Institute of Medical Sciences, Lucknow came and met with the departmental students to discuss opportunities and career prospects in Medical Physics. The event was held on 5/4/23 at 3:00 p.m. at the Departmental classroom.



Farhana Khatoon speaking with the students on Medical Physics

# Alumni Speak:

The Department of Physics, Gokhale Memorial Girls' College has organized a series of "Alumni Speak" programs, an informal meeting and discussion session with the departmental alumni and current students.

The first of such meetings was held on 26/03/2022 at 12:30 pm.

The idea for arranging such a program is to use the knowledge and experiences of departmental ex-students who have ventured into varied career options, thereby making the present students aware of various career opportunities. Alumni shared their experiences and also guided the students towards their future endeavors.

- Ms. Swagata Das who was pursuing Masters in Physics met the then current batches in an offline meeting.
- Ms. Sumana Mondal and Ms. Roshmi Bhattacharya also discussed opportunities in Govt. service examinations and in various technical sectors.
- Ms. Srinjana Rout and Ms. Oishi Bhattacharya, who are pursuing PhD in reputed institutions in India, informed about research opportunities in India and abroad.
- Nitusree Saha and Sreeja Pal, both of whom are Masters students, interacted with the students in an offline meeting.
- Mrs. Ushree Banerjee who currently works under the Ministry of Home Affairs spoke with the students in an online meeting regarding such Central Govt. examinations.





Glimpses of Alumni Meet program

## Academic Visit:

The department took its students to various laboratory facilities within the city limits. The purpose of such visit is to arouse research interest among the students and make them acquainted with various research facilities.

Students of semester VI and semester IV attended an academic visit at Variable Energy Cyclotron Centre (VECC, Kolkata) arranged on 22nd April, 2022 where they got hands-on experience of the functioning of Cyclotrons. An academic visit to the High Energy and Particle Physics Research Laboratory at Jadavpur University, Kolkata was also arranged in 28th November 2022.



Students of semester IV and Semester VI of the Department of Physics, Gokhale Memorial Girls' College were taken to the Surface Physics and Material Sciences (SPMS) Division and Condensed Matter Physics (CMP) Division of Saha Institute of Nuclear Physics (SINP), Kolkata on 29<sup>th</sup> March, 2023. Students learnt about the working of Scanning Tunneling Microscope (STM). The students were also shown images of electron diffraction in reciprocal space, how diffraction pattern changes with temperature, and the real time imaging of the crystals. Afterwards, students also visited the photo-emission spectroscopy (ARPES) lab. The students participated enthusiastically in Q & A sessions.



Students with the members of the SPMS division and Condensed Matter Physics division of SINP, Kolkata