



Subject Talk: Observing atomic interactions using X-rays

The Department of Physics organized a talk by **Dr. Venkatesha R. Hathwar**, UGC- Assistant Professor, Department of Physics, Goa University on 10th August 2019. He explained how the microscopic arrangement of atoms in a functional material governs the macroscopic properties of it. In this context, X-ray diffraction is the most reliable method to determine accurate atomic positions in crystalline materials.

In his talk, he highlighted the development of X-ray diffraction method over the years, recent improvements in X-ray scattering techniques and the relationship between structure and property of functional materials. He concluded his talk using selected examples of materials. Around 50 students and 5 teachers attended his talk.



Subject Talk: The Charm and Beauty of Nature

The Department of Physics organized a talk by **Dr. Santosh Kumar Das**, an Assistant Professor in the Physics at IIT Goa, on 31st August 2019. He explained how the entire universe is built on few elementary particles, specifically, quarks and leptons whose interactions are governed by the four fundamental forces: strong force, weak force, electromagnetic force, and gravitational force.



The lecture was then confined to the discussion of quark-quark interactions and the strong nuclear force. Lastly, he concluded his talk by pointing out the large number of research opportunities available in this exciting branch of Physics. 30 students and 5 teachers attended his talk. (Srinidhi and Nikhil)

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Congratulation Dr. Ashish

Dr. Ashish M. Desai presented a poster entitled “Numerically solving the Schrödinger Equation for a Double Potential Well using Eight order Numerov Method” and was awarded the Best Poster Presentation in the International Conference on “Functional Materials and Simulation Techniques”;



jointly organized by Chandigarh University, University of Mauritius, Mauritius and Concordia University, Canada held on 7th and 8th June 2019 at Chandigarh University. This paper is an extension of Third Year B. Sc. Project undertaken by Siddhart Naik, Pooja Talwar and Sudhindra Shanbag under the guidance of Ashish M. Desai.

Research Grants

Dr. Ananya Das, Associate Professor, Department of Physics has been sanctioned an amount of Rs. 4,30,000/- under promotion of Science Education Scheme of DHE, Goa for her project titled “Study of Bose-Hubbard Model Using Real Space Renormalization Group Method”. Dr. Das will be setting up Computer cluster to implement her research project.

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Fresher's Party 2019



The freshers of the physics department were welcomed by the students of the SY and TY on the 11th of July with a lot of enthusiasm. The programme, held in the Lower Auditorium, was quite the sight to behold, as the newbies, dressed in the colours of the visible spectrum, introduced themselves and then participated in various games organised, which included dumb charades, a talent show and a small quiz. The SYs and TYs also put up a small musical performance to mesmerise everyone's ears. The new faculty, Mr. Mohan Mali and Ms. Pearl Oliveira were welcomed to the department with roses. The winners of the talent show, **Hrishikesh** and **Aloma**, were crowned Mr and Ms Fresher. At the end, all the students were presented with mementos. The memories made that day will surely last a lifetime! (Reported by S. Y. B.Sc Students)

New Faculty: Ms. Pearl Isabella Oliveira

Pearl is our alumna. We teachers remember her as a smart, sincere, and systematic learner, who is now back to our department as a confident, and responsible young teacher. She has completed her master's degree in Physics at Goa University in 2018 and is all set to play her new role as an Assistant Professor in Physics. We extend warm welcome to Ms. Pearl.



In words of Pearl: I feel very humbled to start my journey from the institution that sowed THE SEED OF PHYSICS within me. I'm confident that within this one year's time I'm going to grow a lot more in my physics related concepts. I want to be able to change the minds of young people in a positive way, to see the ever fascinating beautiful world of physics.

Hrishikesh @ Sweden

The journey from Goa to Stockholm was a nice and comfortable one. My hosts, **Elsa** and **Fillipa** were waiting for me at the airport. The time I spent with those families will be cherished forever. Every morning, we had to attend lectures pertaining to Swedish: history, language, society, culture, education system, scientists, and scientific inventions. Every evening, we would be taken to different places in and around Stockholm. We visited Skansen (an open air Museum), the island Nambdo in Archipelago, the city hall, the Noble Museum and the Vasa Museum. We had to perform the India Day, at the Tullinge and Bromma gymnasium.

I do not know how well we fared on both these occasions, but nonetheless, we were proud of ourselves for doing what we otherwise wouldn't have. The exchange Programme should continue to attract people, not for its prospects, but for its essence.



Research Publication

Dr. Ananya Das, Associate Professor, Department of Physics co-authored a research paper titled 'Spin-1 Bosons in optical superlattice' in AIP Conference Proceedings 2115, 030016; (2019). To know the details of the work done in the published paper, visit <https://doi.org/10.1063/1.5112855>

Welcome Suvarna!

Faculty members of Department of Physics along with students welcome Ms. Suvarna Patil, a new entry to our department. She did her M.Sc at Goa University.



She was working at PES's College of Arts and Science during the year 2018-19 as an Assistant Professor in Physics, on lecture basis. She has keen interest in Indian classical music. She loves to travel new places and likes to read. Suvarna has cleared JEST 2019 examination and CSIR NET 2019 lectureship examination with AIR 20. We congratulate Ms. Suvarna for her academic achievements.