SSES Amt's Science College, Congress Nagar, Nagpur
Guest Lecture
On
"Fermi Condensate: The sixth state of matter?"
Session 2021-2022

"I never teach my pupils, I only attempt to provide the conditions in which they can learn."

–Albert Einstein

Following the words of Albert Einstein, Physics Society, Shri Shivaji Education Society Amravati's Science college Congress Nagar, Nagpur organized a **Guest Lecture** on the topic **"Fermi Condensate: The sixth state of matter?"** for UG & PG students of the Physics department on 8th April 2022 at 11:00 am in Physics Department. The Guest Speaker for the session was **Dr Subhash Kondawar, Professor** in the Post Graduate teaching Department of Physics, Rashtrasant Tukdoji Maharaj Nagpur University. Prof Subhash Kondawar was heartily welcomed with a bouquet as a token of love by Principal Dr M P Dhore. Dr S W Anwane, Professor and Head of the Department of Physics introduced the purpose of Physics Society and the activities conducted so far. The Programme was conducted by Ms Shweta Iyer (M Sc Sem-II) while the guest speaker was introduced by Ms Niharika Saxena (B Sc Sem VI) and Mr Viplov Dhoke (M Sc Sem II) proposed a Vote of Thanks. Dr Mrs R J Dhokne, Coordinator Physics Society, and all faculty members worked hard for the success of the programme.

Prof Subhash Kondawar began the lecture by stating the basics of statistical mechanics. He introduced elementary particles in view of statistical mechanics. The fifth

state of matter is Bose-Einstein Condensate like other states that we know; solid, liquid, gas, and plasma. The guest lecture initially focused on equipping students with the theory of Bose-Einstein Condensate. Then the speaker solemnly elucidated the reasons for the BEC to be called the fifth state of matter. He delivered an enriching argument about the BEC and the Fermi Condensate and drew everyone's attention toward the actual understanding of Fermi condensate. At last, he effortlessly concluded that Fermi Condensate is not called the sixth state of matter by beautifully bestowing the reasons. His strategy to build up the understanding of students about the topic by making them climb through stairs of different concepts one at a time leading them to click "why Fermi Condensate isn't the sixth state of matter?" was appreciable.

After his lecture, the students were given time to interact with him. The students engaged thoroughly with him in getting their concepts clear and he creatively provided them with the explanation that they were looking for. His lecture proved to be a very informative and interactive session.