RAMAIAH UNIVERSITY OF APPLIED SCIENCES

VIGYAN SOCIETY RUAS

INSTITUTION'S INNOVATION COUNCIL (Ministry of HRD Initiative)

Invited Speaker

Prof. Joseph Samuel
Professor
Raman Research Institute & ICTS-TIFR Bengaluru

Topic:- "Space, Time and Disorder"

14th MARCH, 2024
11 AM Onwards

Venue: A206, RT Campus, Peenya
Bengaluru, Karnataka

About

Joseph Samuel is a theoretical physicist with an interest in popularising Science. His interests are in geometry and topology in physics. He likes to keep in touch with mathematics as well as experiments.
He studied physics at IIT Kanpur and at the IISc, Bangalore and then joined the Raman Research Institute. He is now at the International Centre for Theoretical Sciences (ICTS), Bangalore and contributes to their outreach effort, teaching and research.

Abstract

Einstein's theory of relativity revolutionised our ideas of space and time. The theory predicts the existence of gravitational waves and led to the big bang model of an expanding Universe. The theory also predicts that sufficiently massive stars will collapse under their own weight into black holes. Astrophysicists have been able to confirm all these predictions. Black holes are known to exist in our Universe. This brings up serious conceptual questions which are at the forefront of current research. There are well established laws of thermodynamics governing the working of steam engines, which tell us that the Universe gets progressively more disordered. Do black holes break this law? This talk will try to bring out the excitement of the subject, using almost no mathematics. Instead, I will use simple physics demonstrations to bring out the main conceptual ideas. No background beyond high school physics is needed to follow the talk.

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Department of Physics, FMPS

The Department of Physics was established under the Faculty of Mathematical and Physical Sciences in the year 2014 with an emphasis on courses and project work to equip undergraduate and postgraduate students with necessary skills to navigate the rapid changes in science and technology. The faculty members are well qualified and actively engaged in academic programmes and research.

The department has currently funded projects from DST-SERB amounting to over ₹1 crore. The department Offers B.Sc. (Hons.) in Physics and M.Sc. programmes in Physics with specialization in Applied Solid state Physics and Nuclear Physics & Technology. The department also offers Ph.D. programme in Physics.

We take pride in the achievements of our students, who consistently excel in national-level examinations such as JAM and JEST, securing commendable All India Rankings (AIR). Many of our alumni pursue higher education in esteemed universities and research institutes both nationally and internationally.

Our postgraduate students tackle advanced research problems as part of their dissertation work in the fourth semester and publish their findings in reputable peer-reviewed journals. This provides them with abundant opportunities to pursue careers in renowned universities and research institutes worldwide.

vigyan – the physics club

"Vigyan" is the esteemed student Physics Club of FMPS, RUAS, where the essence of scientific exploration finds its home. Derived from Sanskrit, the name "Vigyan" encapsulates the spirit of inquiry and the relentless pursuit of knowledge and understanding of nature's mysteries. As a hub for passionate students with a curiosity for the workings of the universe, Vigyan serves as a platform for intellectual exchange, experimentation, and discovery. Through engaging discussions, hands-on experiments, and academic initiatives, members of Vigyan delve into the depths of physics, exploring fundamental principles and their applications in the world around us. With a commitment to fostering a community of enthusiastic learners, Vigyan provides a platform for students to ignite their passion for physics and embark on a journey of intellectual discovery.

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