

PRESS RELEASE

Alumni Research Talks (ART) 2020 organised by BITS Pilani, K K Birla Goa Campus

“Our chief want is someone who will inspire us to be; what we know we could be” Ralph Waldo Emerson
PHILOSOPHER, POET, AUTHOR, ESSAYIST

This truly resonated as the message at the second edition of **Alumni Research Talks (ART)**. Conducted on the 15th of February, 2020, the event featured interactive sessions by **six eminent alumni of BITS Pilani**, who shared their stories of success, and delved a bit into their research interests, and how they could affect the future as we know it. The event was graced by the Director of the campus, Prof Raghurama G. and Associate Dean of Alumni Relations Cell, Prof. Veeky Baths.

A series of talks were given by these eminent alumni of BITS Pilani namely: **Prof. Y.N. Mohapatra**, Professor of Physics and Materials Science, IIT Kanpur; **Prof. Jugal Kishore Verma**, Professor of Mathematics, IIT Bombay; **Dr. Shruthi Sridhar Vembar**, Faculty Scientist, Institute of Bioinformatics and Applied Biotechnology, Bangalore; **Prof. Subrat Kar**, Professor & Head, SeNSE, IIT Delhi; **Prof. Subramanian Yashonath**, Professor of Solid State and Structural Chemistry Unit, IISc Bangalore and **Prof. Patrick Das Gupta**, Professor of Physics and Astrophysics, University of Delhi.

Beginning at 2pm, these talks were given to enlighten the students attending by dipping toes into their research interests, and inspiring them with their tales of successes.

Prof. Y.N. Mohapatra, a professor and a physicist of material sciences at IIT Kanpur; through his invigorating talk, he made us realize the difference in electronics then and now and how it might change in the coming years. He concluded his talk by discussing the products of the future, and left the audience with ample knowledge about his field to pique their interest and motivate them to pursue research in it.

Professor Jugal Kishore Verma, a Professor of Mathematics at IIT Bombay began by discussing the decomposition of matrices and analysis of data, describing its applications in low rank approximation (in images), data compression, and the computation of matrix norms in linear algebra. As he went further into his discussion, he spoke of principal component data and the history of singular value decomposition (SVD); techniques that originated years earlier but took a while to perfect an algorithm. Today, it is used widely in data science. He concluded of how his interest in was initially found in mathematics and later shifted towards physics.

Dr. Shruthi Vembar, a professor at the Institute of Bioinformatics and applied Biotechnology, Bengaluru; took us through her research of elucidating novel modes of epigenetic and post-transcriptional gene regulation in malarial parasites. Malaria, caused by intracellular protozoan parasites of the genus Plasmodium, remains a major threat to global health, with half of the world's population at risk. She enriched the audience with her published work and projects of the lab which works on the discovery of new drug and vaccine given the lack of an effective anti-malarial vaccine, and the emergence of parasite drug resistance to first line therapies.

Prof. Subrat Kar, an Electrical Engineer, a teacher and the head faculty member at the SenSE laboratory, IIT-Delhi; gave a refreshing talk on academic life as a student in any field. He started his talk by a small thought that the only thing worthy of learning is the ability to learn and continued to build upon the curious nature of students. He further elaborated on student life giving numerous analogies from practical life and technical fields. He ended his talk with a moving poem titled 'If', by Rudyard Kipling, based on self-confidence, pride and persistence.

Not many scientists find themselves in the same conversation as Albert Einstein. Even fewer can claim to have proved him wrong. Hence it comes as no surprise that silence grips a room full of students every time Professor Yashonath Subramanian speaks. Although they may not all realise it, in this silence is embedded

with a deep sense of respect and awe, maybe even humility. A faculty member of IISc, Bangalore, Prof. S Yashonath specialises in the area of theoretical chemistry: new computational techniques, phase transformations in solids, diffusion and its variation with radius of the diffusant, pressure, density, etc in different condensed matter phases. During his lecture at the Alumni Research Talks, he spoke about one of his key discoveries, the implications of which included a breakdown in the Stokes-Einstein relationship; the Levitation Effect, i.e. the discovery of anomalous dependence of diffusivity on radius of the diffusant.

Prof. Patrick Das Gupta, a professor of Physics and Astrophysics at the University of Delhi spoke on understanding the cosmos; he managed to take the audience with him through his journey in his field and gave us inspiring insights into his world of the stars. Taking the packed room with him, he raised the existential question of whether we are the only planet with life in the Milky Way. Speaking about how gravitation is the main source of energy, he wrapped his galactic journey about the mysteries of the universe, leaving the audience with a hunger to learn more.

The event came to a conclusion with Prof. Veeky Baths thanking the alumni speakers, audience and the Institute for extending the support in organizing this event and also ensured that this will continue for years to come in order for the students to have a long lasting impact in their lives and studies at BITS.

Numerous colleges and universities throughout Goa were invited to attend, including IIT Goa, GEC, Agnel Polytechnic and the Padre Conceicao College of Engineering.

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