

INTER DEPARTMENTAL LECTURE SERIES

APPLICATIONS OF STATISTICS IN PHYSICS BY DR. N. MADHAVI LECTURER IN STATISTICS

As a part of INTER DEPARTMENTAL LECTURE SERIES organized by Department of Physics and Electronics, Dr. Madhavi spoke on the topic, “*Applications of Statistics in Physics*” on 3.2.2017.

Emphasizing on Statistical modeling, she said that it is used to relate the 'macroscopic view' and 'microscopic view'. Statistical mechanics provides a framework for relating the microscopic properties of individual atoms and molecules to the macroscopic or bulk properties of materials that can be observed in everyday life, therefore explaining thermodynamics as a natural result of statistics, classical mechanics, and quantum mechanics at the microscopic level. Because of this history, the statistical physics is often considered synonymous with statistical mechanics or statistical thermodynamics.

Dr. Madhavi also stated that Statistical physics allowed us to explain and quantitatively describe superconductivity, superfluidity, turbulence, collective phenomena in solids and plasma, and the structural features of liquid. It underlies the modern astrophysics. It is statistical physics that helped us to create such intensively developing study of liquid crystals and to construct a theory of Phase Transition and Critical phenomena. Many experimental studies of matter are entirely based on the statistical description of a system.

The interaction with Students cleared doubts relating to the scattering of cold neutrons, X-ray, visible light, and more

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PUSHPAVILAPAM - DR. N. NAGARAJESWARI LECTURER IN TELUGU

Dr. Ch. Nagarajeswari Lecturer in Telugu gave a talk on 10.2.2017 on the topic “*Pushpavilapam*” as a part of INTER DEPARTMENTAL LECTURE SERIES arranged by Department of Physics and Electronics.

Initially she gave brief note on the writer of Pushpavilapam, Sri. Jandhyala Papayya Sastry garu. She said that he was an eminent Telugu writer and lyricist and popularly known as Karunasri because his writings expressively show compassion (Karuna or Kāruṇyam), one of the Nine Rasas. His famous kavyas include Pushpa Vilapam and Kunthi Kumari. The title given to him “Kuranasri” - means Epitome of compassion.

She told the students under what circumstances Karunasri Jandhyala Papayya Sastry garu wrote “Pushpa Vilapam” - (Lamentation of Flowers).

The writer once wakes up early in the morning to worship the Almighty. He bathed in Ganges, wore washed clothing and went to flower garden to collect flowers. As he stood near a plant and was about to pluck a flower, he sensed that the flowers opened their mouths and cried in anguish “do you take our lives”, and questioned him what sin have we done to you? You human beings are so disheartened that you terminate our young life for your need. At that moment something gleamed in the author’s mind which became a great work - floral lamentation.

Dr. Naga Rajeswari with her sweet voice sung all the stanzas of Pushpavilapam and explained each sentence to the students so well that at the end of a very thought provoking session, their hearts were filled with mixed emotion of sadness and guilt.

All the students interacted with the speaker and expressed their joy for learning a totally new subject which made them think twice before they pluck flowers or do anything which would hurt the nature around them.

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RESEARCH FRONTIERS IN MATHEMATICS - Smt. I. GAYATHRI LECTURER IN MATHEMATICS

Smt. I.GAYATHRI, LECTURER IN MATHEMATICS gave an interesting lecture on

“*Research Frontiers in Mathematics*” on 1.2.2017 as a part of INTER DEPARTMENTAL LECTURE SERIES organized by Department of Physics and Electronics.

At the outset Smt.Gayathri, pointed out that the slogan mathematics for mathematics' sake should be avoided.

She said, Mathematics being the Queen of Science should be learnt in depth and application oriented curriculum should be designed and branches of mathematics such as differentiation, integration are must to learn.

She said that current research is highly specialized and is difficult to prioritize one field over another. Even highly abstract fields like topology have important applications to other theoretical fields. Theoretical physics has borrowed heavily from group theory and topology. Mathematicians like to ask questions about things without regard to practical application.

She specifically underlined that understanding mathematics is enormously useful to frame problems in physics and other sciences. Students participated in interaction very enthusiastically and clarified their doubts.

National Science Day Celebrations
Department of Physics
28.02.2017

The National Science Day with the theme, “*Science and Technology for Specially Abled Persons*” was celebrated by the Department of Physics on 28.02.2017. The Principal, Dr. David Kumar acted as the Chair Person and Vice-Principal, Sri. K. Ramesh Babu garu Co-Chaired the occasion. Dr. Ramani, Retd. Principal of SKR Women’s College, Rajamahendravaram was the Chief Guest and Sri. YVRR.Chaitanya, CEO, Sweya IT Solutions, Rajamahendravaram, acted as the Guest of Honour.

The function started with garlanding the statues of eminent scientists Sir. C.V.Raman, Albert Einstein and Dr. APJ Abdul Kalam located in the Science block amidst huge gathering by the members of the Department, Research scholars, faculty of the college and students.

Speaking on the occasion, the Chief Guest, Dr. Ramani, emphasized on the importance of celebrating the National Science Day. She underlined relevance among various branches of physics and highlighted the importance of applications of physics in our day to day life. She touched upon the achievements of great physicists and their contribution to the development of basic concepts in arriving at various formulae and equations. Her interaction with students highlighting the advantages in being members of reputed national level boards and in taking up talent tests conducted by various organizations such as IAPT was very motivating.

The Guest of Honour, Sri. Chaitanya also went on in an interactive mode. A number of questions from students on computer science and its applications, software programming, creating of Apps, etc., proved highly rewarding to the students. He enlightened the students on the difference between animation and graphics. He also spoke on GPS, Google, Facebook etc.

The Principal, addressing the gathering reiterated the relation between Mathematics and Physics. Congratulating the students who gave excellent explanations to his witty questions, the Principal, suggested the departmental club to come-up with innovative activities which enhance the IQ of the students.

The programme concluded by prize distribution to students who excelled in various competitions conducted by the departmental club such as, Memory Test, Crossword Puzzle, Spot the Answer, Picture Description, Best ideas in Science etc.,

OBSERVING HIROSHIMA DAY 8 August 2016

In Remembrance of the bombing on the two Japanese cities of Hiroshima and Nagasaki, in August, 1945, Hiroshima Day was observed by Department of Physics on 8 August 2016.

Commemorating the 70 year old disaster, a guest lecture by Dr. V. Raja babu, Lecturer in History, SKVT Degree College, Rajamahendravaram was arranged. Speaking on the occasion Dr. Babu, gave a brief history of Manhattan Project, the new strategies adopted by various nations in the World War II, Mass destruction and the horror and grief faced by the people due to radiation. Interacting with students he said it is the young generation, which has to take right decisions, shoulder the responsibility of spreading the message of threats, negativity and dangers of nuclear weapons and importance of human life. He also urged the students to organize meetings through social media about peace and compassion towards their fellow human beings.

Earlier the Physics Club organized Student Seminars, Group discussions, Painting Competition, on various issues related to the theme “Lessons learnt from 70 year Old Disaster – the Bombing of Hiroshima”. Prizes were given to the students who excelled in the competitions. The Students and Staff of the Department of Physics, NCC cadets participated in the event.