



मौलिक विज्ञान प्रकर्ष केन्द्र

Tuesday, 15 February 2011 at 4.30 p.m.
Seminar Room, PF AG 14, Near Annabhau Sathe Bhavan
University of Mumbai, Vidyanagari Campus, Kalina

Tuesday COLLOQUIUM

Knot Theory: A happy hunting ground for Group Theorists and Topologists

Abstract: Knot Theory is a subarea of Topology of 3-manifolds. The fundamental group of the complement of the knot in R^3 (or S^3), called the Knot Complement, is a very important invariant of the knot. This group and the knot complement have some very special properties.

In the lecture we will first introduce the notions of fundamental group and covering space of a nice topological space and discuss the relation between these notions. These notions are then applied to the knot complement. We will also illustrate how knots arise naturally in the study of algebraic curves. One striking application of Knot Theory for proving the famous result of Abhyankar-Moh-Suzuki on embeddings of an affine line in C^2 will be mentioned.

Professor R.V. Gurjar obtained his M.Sc. From the University of Pune and Ph.D. from the University of Chicago, USA. He is a Fellow of the Indian National Science Academy, New Delhi and The National Academy of Sciences, Allahabad. He is also a Trustee of the Bhaskaracharya Pratishthana, a Pune based mathematics research institute.

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