SEMINAR NOTICE

On 31st March (Thursday), 2022

Time: 3:00 PM

VENUE- PAMU Seminar Room (offline)

Physics and Applied Mathematics Unit
Indian Statistical Institute, Kolkata- 700108

Speaker: MR. RAMKUMAR RADHAKRISHNAN

National Institute of Technology, Surat, India

TITLE: Is "0.0=0" true or false?: A dilemma concerning quadratic equation.

ABSTRACT: Given "ab = 0", considering the arithmetic truth "0.0 = 0" we conclude that one possibility is "both a = 0 and b = 0". Consequently, the roots of a quadratic equation appear to be mutually inclusive. However, the situation can be viewed as a 'decision problem' (Hilbert-Ackermann). Working with mutual inclusivity of the two roots, by choice, the concerned variable can acquire multiple identities in the same process of reasoning or, at the same time. The law of identity gets violated, which we call the problem of identity. In current practice such a step of reasoning is ignored by choice, resulting in the subsequent denial of "0.0 = 0". Here, we deal with the problem of identity without making such a choice of ignorance. We demonstrate that the concept "identity of a variable" is meaningful only in a given context and does not have any significance in isolation other than the symbol, that symbolizes the variable, itself. We demonstrate visually how we actually realize multiple identities of a variable at the same time, in practice, in the context of a given quadratic equation. In this work we lay the foundations, based on which we intend to bring forth some hitherto unattended facets of reasoning concerned with the classical harmonic oscillator and the principle of superposition.

All are Cordially Invited to Attend

(Head, PAMU)