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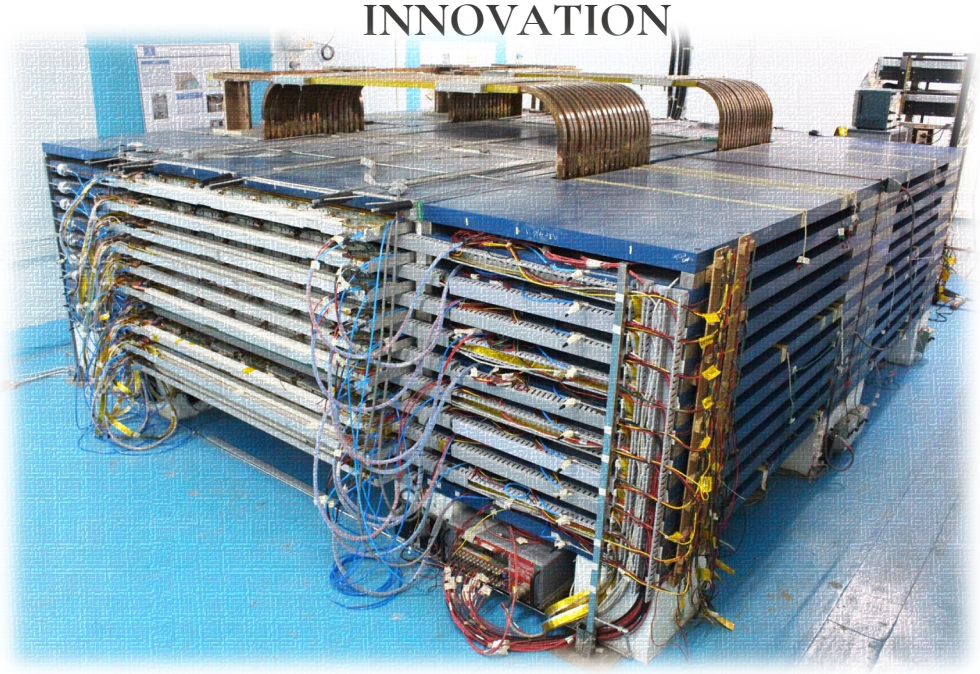

# Unprecedented detector and instrumentation R&D for an Indian mega science experiment


B. Satyanarayana

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**JUNE** | **26th** | **2024**

TIFR H Auditorium 11:30 Hrs

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# Unprecedented detector and instrumentation R&D for an Indian mega science experiment

B. Satyanarayana

TATA INSTITUTE OF FUNDAMENTAL RESEARCH
MUMBAI

A pan-India collaboration comprising of about 25 institutes and Universities had embarked on building a network of underground laboratory caverns, an ambitious neutrino physics experiment, a centre for high energy physics and a graduate school for training future high energy and nuclear physicists. The project is known as India-based Neutrino Observatory (INO). A dedicated detector and instrumentation R&D programme was initiated towards building the 51 kt magnetised iron calorimeter (ICAL) in one of these caverns, to study neutrino oscillations and related physics. Unfortunately, in spite of the huge academic, engineering and outreach efforts that went into the project, it couldn't be materialized. The talk will give an overview of the project and describe the design, development and validation of ICAL detector as well as its instrumentation and electronics systems and also its support to young scientists and students.

**JUNE | 26th | 2024**

TIFR H Auditorium 11:30 Hrs

Tea/Coffee 11:15 Hrs