$$\partial_\mu T^{\mu\nu} = 0$$

$$P^\mu \left(\frac{\partial}{\partial x^\mu} - g\,\mathrm{tr}\left(\mathbb{Q} G_{\mu\nu} \right) \frac{\partial}{\partial p_\nu} - ig \left[\mathbb{Q}, \frac{\partial}{\partial \mathbb{Q}} \right] \right) f(x,p,\mathbb{Q}) = 0$$

INDIA-JINR WORKSHOP ON PARTICLE, NUCLEAR, NEUTRINO PHYSICS AND ASTROPHYSICS

National Institute of Science Education and Research (NISER), Bhubaneswar, India

$$R_{\mu\nu} - \frac{1}{2} R\, g_{\mu\nu} + \Lambda\, g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu}$$

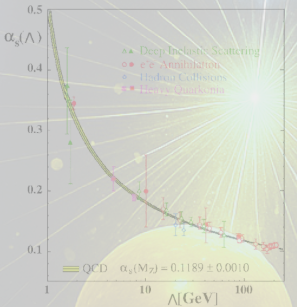
10-12 NOV, 2025

Local Organiser:

Amaresh Jaiswal (NISER)

Najmul Haque (NISER)

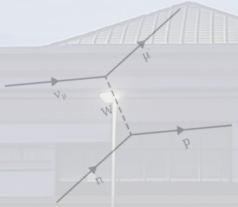
Narayan Rana (NISER)



Scientific Secretaries:

Aniruddha Dey, JINR

Deeptak Biswas, NISER



$$L = -\frac{1}{4} G^a_{\mu\nu} G^{a\mu\nu} + \bar{q}\left(i\gamma^\mu D_\mu - m \right) q; a = 1, \cdots, 8$$

$$\sigma = \int |\mathcal{M}|^2 \, d\Omega$$

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2025
2023, 2024
2023
2021
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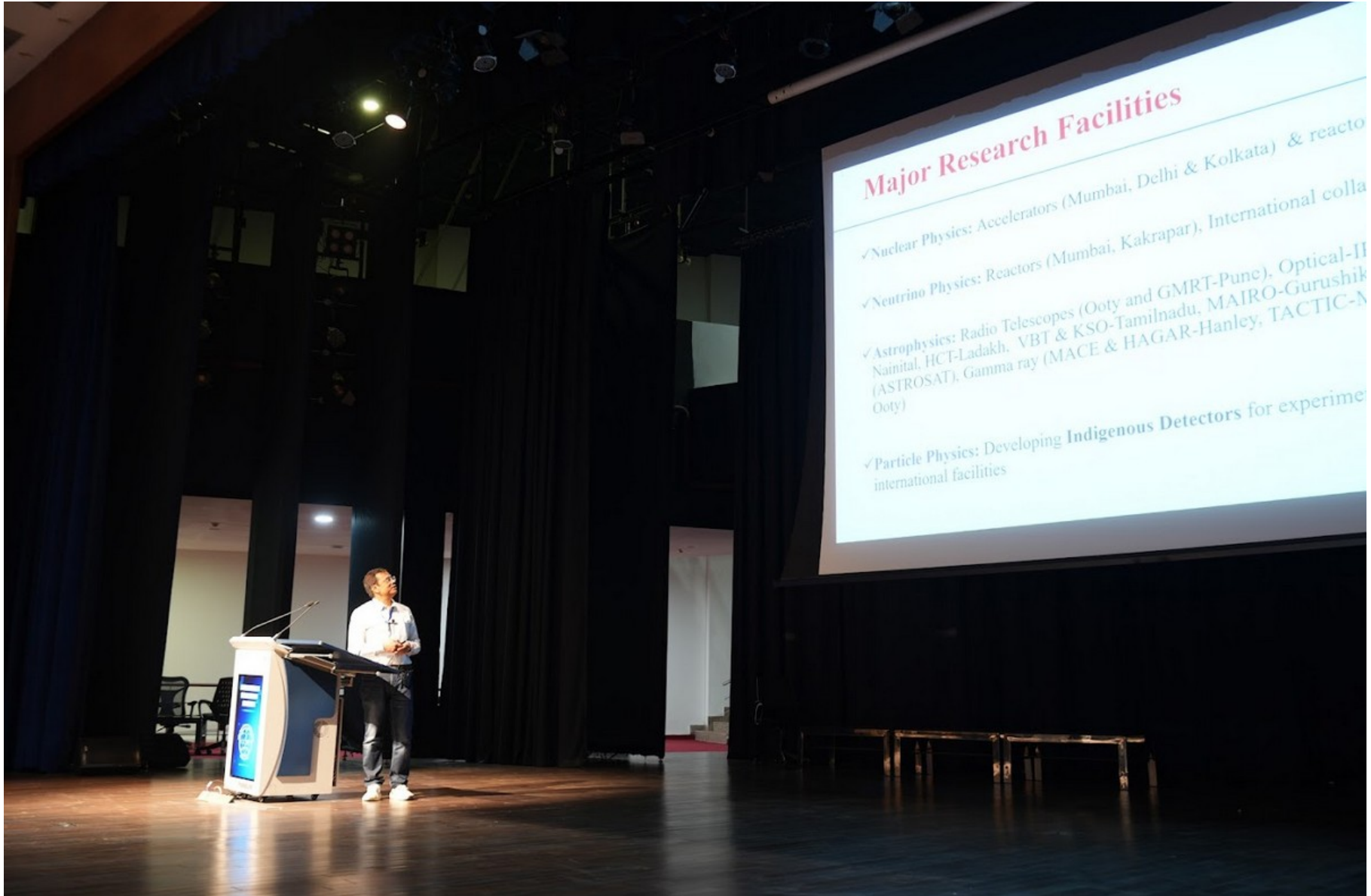
Major Research Facilities
✓Nuclear Physics: Accelerators (Mumbai, Delhi & Kolkata) & reacto
✓Neutrino Physics: Reactors (Mumbai, Kakrapar), International colla
✓Astrophysics: Radio Telescopes (Ooty and GMRT-Pune), Optical-IR
Nainital, HCT-Ladakh, VBT & KSO-Tamilnadu, MAIRO-Gurushik
(ASTROSAT), Gamma ray (MACE & HAGAR-Hanley, TACTIC-N
Ooty)
✓Particle Physics: Developing Indigenous Detectors for experime
international facilities


Muon neutrinos/antineutrinos from high-powe
1.2 MW from day one; upgradeable to 2.
A Massive Liquid Argon TPC Far Detector in Sc
underground in a former gold mine.
4 modules, 70 kton of liquid Argon.
A Near detector complex with multiple dete
the neutrino source at Fermi Lab
Characterize the beam with 100s of mi
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