**Istituto Nazionale di Fisica Nucleare Laboratori Nazionali di Frascati**

Avviso di Seminario Teorico

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**Beyond Neutrino Mass: Observable $n$–$\overline{n}$ Oscillations in UV Complete Seesaw Models**

Next-generation experiments like DUNE and NNBAR will greatly enhance sensitivity to neutron--antineutron oscillations, a direct probe of baryon number violation ($\Delta B = 2$) beyond the Standard Model. This talk discusses such oscillations in unified frameworks that also explain fermion and neutrino masses via seesaw mechanisms. Two scenarios will be discussed: (1) Type II seesaw with two color-sextet scalars, realizable in $SO(10)$/Pati--Salam models, and (2) Type III seesaw with a sextet scalar and color-octet fermion, naturally embedded in $SU(5)$. In both cases, the same dynamics linking fermion masses induces baryon violation, tying oscillations to flavor structure. Upcoming searches can probe new colored states up to $10^{11}$ GeV---far beyond collider reach---making $n$--$\overline{n}$ oscillations a rare low-energy window into grand unification and ultra-heavy new physics.

## Martedi’ 18/11 ore 11:30 Aula Seminari

https://agenda.infn.it/event/48468/

L'invito è esteso a tutto il personale interessato, che è caldamente invitato a partecipare.