

Institut Ruđer Bošković
ZAVOD ZA TEORIJSKU FIZIKU
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SEMINAR ZAVODA ZA TEORIJSKU FIZIKU

(Zajednički seminari Zavoda za teorijsku fiziku,
Zavoda za eksperimentalnu fiziku IRB-a i Fizičkog odsjeka PMF-a)

UV Complete Composite Higgs Models

Oleg Antipin

IRB, Zavod za teorijsku fiziku

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Vrijeme : **14 sati c.t.**

Mjesto: IRB, predavaona I krila

Abstract:

I will discuss confining gauge theories that produce a Higgs doublet as a Nambu-Goldstone boson. In this framework, Dark Matter candidates arise as composite states of a new confining gauge force, stable thanks to accidental symmetries. Restricting to renormalizable theories compatible with $SU(5)$ unification, I will present models based on $SU(N)$ and $SO(N)$ gauge groups. The two gauge groups lead to distinctive phenomenologies including potentially observable electric and magnetic dipole moments of the DM candidate that lead to peculiar spin-independent and spin-dependent cross sections. Models allowing for Yukawa couplings give rise to electric dipole moments for the electron. Each model predicts a specific set of lighter composite scalars, possibly observable at colliders.

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