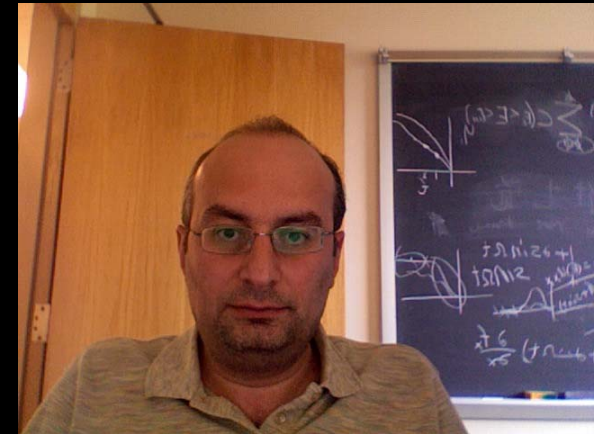


# Theory Seminar

Monday, October 5, 2009 2:10 PM 831 Pupin Hall

## Yukawa Unification and Sparticle Spectroscopy

We consider a left-right symmetric  $SU(4)_c \times SU(2)_L \times SU(2)_R$  (4-2-2) model with gravity mediated supersymmetry breaking. We find that with 4-2-2 compatible non-universal gaugino masses, t-b- $\tau$  Yukawa coupling unification is consistent with neutralino dark matter abundance and with constraints from collider experiments. The gluino mass lies close to that of the lightest neutralino, so that the gluino co-annihilation channel plays an important role in determining the neutralino relic abundance. We also explore regions of the parameter space in which the little hierarchy problem is partially resolved.



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