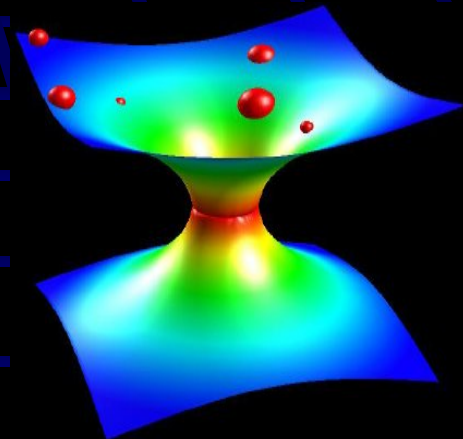


Theory Seminar

Monday, October 18, 2010 2:10 PM 831 Pupin Hall

Non-relativistic Quantum Gravity

I will review the recent proposal to make general relativity renormalizable in 4D at the expense of breaking Lorentz invariance. After introducing the original idea by P. Horava through a toy model, I will present the realization for the gravitational field where an extra degree of freedom with respect to general relativity will appear. Depending on the behavior of the extra mode, the theory may become unstable or strongly coupled. I will finally show that, despite of this, one can construct a phenomenologically viable theory free from these blatant problems.



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