



PHYSICS SEMINAR



Friday, April 5, 2002
2:00PM, SETB 1.350

CLASSICAL AND QUANTUM GRAVITY: THE CHARM OF BEING DISCRETE

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Abstract: Discretizations are commonly used in classical and quantum gravity. We point out that most discretizations used up to now are inconsistent, both in numerical relativity and in quantum gravity. We suggest how to correct the inconsistency and this leads us to formulate a generalized mechanics of discrete systems. When applied to general relativity, this produces a way of setting up the theory on a lattice that can be consistently quantized bypassing the problem of the algebra of constraints. We exhibit a model quantum cosmological calculation.

Refreshments will be served.