

# DISCRETE '08: Symposium on Prospects in the Physics of Discrete Symmetries



Contribution ID: 51

Type: **not specified**

## Gravity from Spontaneous Breaking of Local Lorentz Symmetry

*Friday, 12 December 2008 19:00 (20 minutes)*

We present a model of gravity based on spontaneous Lorentz symmetry breaking. We start from a model with spontaneously broken symmetries for a massless 2-tensor with a linear kinetic term and a nonderivative potential, which is shown to be equivalent to linearized general relativity, with the Nambu-Goldstone (NG) bosons playing the role of the gravitons. We apply the bootstrap procedure to the model based on the principle of consistent coupling to the total energy-momentum tensor. It is shown that the resulting lagrangian for the NG modes is equivalent to General Relativity in a fixed gauge.

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**Session Classification:** Parallel Session B. P, T, CPT symmetries, Lorentz violation and Decoherence-II

**Track Classification:** CPT in Quantum Gravity and String Theory, Decoherence, Lorentz Violation