

## GAUGE SYMMETRY AND DISCRETE-SPACE DYNAMICS

I. Dadić and K. Pisk

Rudjer Bošković Institute, Zagreb,  
Yugoslavia

We introduce a charge matter field on the discrete space defined in the framework of quantum mechanics of graphs. This procedure is similar to that of the Wilson discrete lattice. The interaction of graph dynamics (i.e. of self-generating discrete-space structure) with this field is formulated in a gauge-independent way. It turns out that this gauge symmetry is then the symmetry of the whole dynamics. Some consequences of this model are discussed.