

Nonlinear Supersymmetry(NLSUSY) and General Relativity(GR)

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NLSUSY GR theory has been constructed by the geometrical arguments on new space-time just inspired by NLSUSY. NLSUSY GR equipped with space-time origin spontaneous SUSY breaking produces the fundamental action(SGM action) in ordinary Riemann space-time, i.e. the Einstein Gravity, Nambu-Goldstone fermions and the cosmological term. The vacuum of SGM action is realised when NG fermions constitute the supermultiplet of the familiar LSUSY theory as SUSY-composites. Physical significances characteristic of SGM scenario are presented, which gives new insights into the origin of mass, dark energy, Yukawa-gauge coupling constants, etc.

NLSUSY GR predicts the 4 dimensional space-time.

Primary author: Prof. SHIMA, Kazunari (Saitama Institute of Technology)

Co-author: Dr TSUDA, Motomu (saitama Institute of Technology)

Presenter: Prof. SHIMA, Kazunari (Saitama Institute of Technology)

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