Abdus Salam 1926-1996

Salam and SUSY

SUPERGAUGE TRANSFORMATIONS IN FOUR DIMENSIONS

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Karlsruhe University

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SUPER-GAUGE TRANSFORMATIONS

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Introducing: SUPERFIELDS AND SUPERSPACE!!!

Superfields and Fermi-Bose symmetry

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Extended Supersymmetry

UNITARY REPRESENTATIONS
OF SUPER-GAUGE SYMMETRIES

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Abstract: A method is given for constructing some of the unitary irreducible representations of the Wess–Zumino super-gauge symmetry. Application of this symmetry to the analysis of S-matrix elements is considered. A new super-gauge symmetry which includes isospin is introduced and some of its representations are constructed.

The Name: SUPERSYMMETRY!!!

SUPER-SYMMETRY AND NON-ABELIAN GAUGES

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* These authors [1], following the usage in dual model theory where the concept originated [2], designate this Fermi-Bose symmetry by the expression "super-gauge". Since the word "gauge" has come to be associated more commonly with "gauges of the second kind" or local symmetries, it is confusing to use super-gauge to describe what is indeed a global symmetry of fermions and bosons. We suggest therefore that the expression "super-symmetry" might be more appropriate for the global concept and reserve the word "gauge" for local symmetries.

Salam-Pati Model

❑ Salam-Pati Model; a very important Grand Unified Model which predicts four color charges instead of the well known three colors

➢ This model plays important role in Grand Unified Theories