

Preonic Grand Unification and Quantum Gravitation

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Preliminary Draft

## ABSTRACT

Through the decomposition of real Fermions and vector Bosons into complex "preons," in much the same way that real spacetime is decomposed using spinor calculus into complex spinors, it is possible to arrive at a greatly simplified classification of the elementary real particles, which includes all of the electromagnetic, weak, strong color and quantum gravitational interactions, and which accounts through preonic horizontal symmetry for all of the observed generations of Fermion, and associated Cabibbo mixing. Also reviewed is the Q.E.D. Dirac equation and its various finite symmetry groups C, P, T and the chiral operator  $\gamma^5$ , and arguments are presented to establish that chirality, from a geometric viewpoint, is most naturally regarded as a fifth spacetime dimension.

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