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Charles Donald Briddell* (donbriddell@fieldstructure.org), 8002-A Dollyhyde Rd., Mount Airy, MD 21771. *Structural Skew Topology (SST): geometric topology. three-dimensional linkages and knots, a new paradigm for the meaning and interpretation of structure and fields.*

Reporting on new explorations into how loops of action link and knot to form three-dimensional hierarchies of structure producing a new family of topological form called Field Structures. Anyone interested in loop structure may find this research interesting particularly as it relates to fundamental mass and energy forms. SST investigates the meaning of structure finding that structure is a field property at all scales of experience suggesting that our difficulty with understanding Nature has been a systemic misunderstanding of structure. SST is a field topology. Previous attempts to apply knots to particles and atoms failed. Structural Skew Topology (SST) shows how to apply links and knots to mass and energy forms. It predicts the known values of particle mass. SST organizes loops into a Sierpinski triangle fractal from which mass values can be derived. Particles evolve within the hierarchy but are measured when separated from the hierarchy. Without knowing the mass values as they evolve in the hierarchy, it has not been obvious why the independent particles masses are what they are. SST first constructs the mass values in terms of loops in the hierarchy so that when the particles are removed from the hierarchy there known mass values appear. (Received January 17, 2008)