

Fuzzy Noncommutative Spheres in Diverse Dimensions

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In this talk I'll present a unified definition for fuzzy spheres in diverse dimensions, S_{fuzzy}^n in terms of two matrix equations. In our construction of fuzzy spheres, we make use of the $SO(n+1)$ isometry of the n -sphere and the only two invariant tensors of this isometry group. This naturally leads us to the Nambu brackets and their quantization. We construct explicit solutions to the two matrix equations for $n = 2, 3, 4, 7, 8$ using the Hopf fibration.