

## On manifolds with a degree of kinship

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### Abstract:

In 1956, John Milnor exhibited the first examples of manifolds homeomorphic, but not diffeomorphic to 7-spheres, since then called exotic spheres. Interesting results on exotic manifolds were obtained through explicit geometric constructions. Here we present a new construction that relates exotic manifolds, such as exotic spheres, flag manifolds and connected sums of them, to their standard counterparts. Such relation is established through a Morita equivalence of action groupoids and is used to prove/recover positive Ricci and almost non-negative curvature. Joint work with L. Cavenaghi.

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