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Self-gravitating Skyrmion

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A self-gravitating Skyrmion is an analytic and globally regular solution of the Einstein- Skyrme system with nonvanishing topological charge. The spacetime metric is the direct product $R \times S^3$ and the Skyrmion is the self-gravitating generalization of the static hedgehog solution of Manton and Ruback. This solution can be promoted to a dynamical one in which the spacetime is a cosmology of the Bianchi Type-IX, and through an analytic continuation it can be turned into a transversable asymptotically AdS wormhole.