

# Complete integrability of the subriemannian geodesic flows over the seven-dimensional sphere

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This talk deals with the complete integrability of the subriemannian geodesic flows over the 7-dimensional sphere. Besides the well-known contact and quaternionic Hopf distributions, trivializable (bracket-generating) subriemannian structures of different ranks are given by means of Clifford representations. The geodesic flows are formulated as Hamiltonian systems on the cotangent bundle to the sphere and their complete integrability is discussed on the basis of Thimm's method proposed around 1980. The talk is based on the collaborations with Wolfram Bauer and Abdellah Laaroussi (Leibniz Univ. Hannover).

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