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*Sub-Finsler Geometry in Dimension Three.*

The notion of *sub-Finsler geometry* is a natural generalization of sub-Riemannian geometry with applications to dynamical systems and optimal control theory. We compute a complete set of local differential invariants for sub-Finsler contact three-manifolds, geodesic equations, and the Jacobi operator and investigate homogeneous examples, including a worked example on the Heisenberg group. (Received September 28, 2005)