Symbolic Computations in Differential Geometry

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In this talk I will describe a new suite of Maple packages for symbolic computations in Differential Geometry, Lie Groups and Lie Algebras. The talk will begin with an overview of the functionality of this software. I will then give a brief demonstration of the basic features of the software and conclude by presenting applications to the equivalence problem for Riemannian metrics and to the integration of systems of ODE of Lie type.