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### **Differential Invariants of Maximally Symmetric Submanifolds**

Let  $G$  be a Lie group acting smoothly on a manifold  $M$ . A closed, nonsingular submanifold  $S \subset M$  is called *maximally symmetric* if its symmetry subgroup  $G_S \subset G$  has the maximal possible dimension, namely  $\dim G_S = \dim S$ , and hence  $S = G_S \cdot z_0$  is an orbit of  $G_S$ . Maximally symmetric submanifolds are characterized by the property that all their differential invariants are constant. In this paper, we explain how to directly compute the numerical values of the differential invariants of a maximally symmetric submanifold from the infinitesimal generators of its symmetry group. The equivariant method of moving frames is applied to significantly simplify the resulting formulae. The method is illustrated by examples of curves and surfaces in various classical geometries.

**Keywords:** Differential invariant, homogeneous space, infinitesimal generator, jet, maximally symmetric, moving frame.

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