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Stanislav Dubrovskiy* (dubr@math.keio.ac.jp), COE - Mathematics, Keio University - Yagami Campus, 3-14-1 Hiyoshi, Kohoku, 223-8522 Yokohama, Japan. *Differential Invariants of Geometric Structures*.

In this talk we investigate the moduli spaces of two geometric structures: the symmetric connection and the Fedosov structure.

We consider the action of the group of origin-preserving diffeomorphisms on the space of germs of generic symmetric connections at a point. The resulting moduli space gives rise to a *Poincaré series*. We calculate the series using information from the corresponding moduli spaces of k -jets of symmetric connections.

We then apply this technique to the Fedosov structure. A Fedosov manifold is a natural generalization of a Kähler manifold. There is a canonical deformation quantization for Fedosov manifolds.

The Poincaré series of both structures are shown to be rational functions, just as the ones given by a finite number of functional invariants.

This confirms the long-standing *finiteness* assertion that algebras of invariants of “natural” differential-geometric structures are finitely generated. (Received June 19, 2005)