

Shmelev, A. S.**Some properties of symplectic and hyper-Kählerian structures.** (English. Russian original)

Zbl 0842.53019

[Russ. Acad. Sci., Dokl., Math. 49, No. 3, 511-514 \(1994\)](#); translation from [Dokl. Akad. Nauk, Ross. Akad. Nauk 336, No. 3, 304-306 \(1994\)](#).

It is well known, that the Poincaré series for the moduli space of solutions of the gravitational field equations in empty space is a rational function, because its coefficients are polynomials. The author shows that a similar result holds for Kähler and hyper-Kählerian structures. The technique used by the author is as follows. Given the natural action of the group of germs of diffeomorphisms at a point on the space of jets of a geometric object (for instance, the Kähler form), the dimension of the foliation determined by the orbits is computed.

Reviewer: [M.de León \(Madrid\)](#)**MSC:**

- [53B35](#) Local differential geometry of Hermitian and Kählerian structures
- [53C15](#) General geometric structures on manifolds (almost complex, almost product structures, etc.)
- [32Q15](#) Kähler manifolds
- [53C12](#) Foliations (differential geometric aspects)

Keywords:[Kähler structures](#); [hyper-Kähler structures](#); [moduli space of metrics](#)