Семинар Лаборатории Алгебраической геометрии и ее приложений

20 августа 2021г (пятница)

в 17:00

На семинаре выступит

Андрей Солдатенков

(Берлин, МИАН)

с докладом:

Moser's lemma for C-symplectic structuresand holomorphic Lagrangian fibrations.

Abstract: Let X be a smooth manifold of real dimension 4n.

A complex 2-form \Omega on X is called a C-symplectic form if it satisfies 3 conditions:

1) \Omega is closed;

2) \Omega^{n+1} = 0;

3) \Omega^n \wedge \bar{\Omega}^n is non-zero pointwise on X.

Given a C-symplectic form \Omega, it is easy to see that there exists unique complex structure I on X such that \Omega is holomorphic symplectic with respect to I. Therefore the form \Omega alone encodes both the complex and symplectic structures on X.

In this talk, based on joint work with Misha Verbitsky, we will discuss some analogues of Moser's lemma for C-symplectic structures. In classical (real) symplectic geometry Moser's lemma is used to construct local models of symplectic manifolds and their Lagrangian submanifolds. In the context of C-symplectic structures the lemma is useful when X admits a holomorphic Lagrangian fibration. We will discuss some applications of this idea.

Приглашаются все желающие!