Семинар «Геометрические структуры на многообразиях»

Семинар состоится 23 сентября 2021 года

Семинар пройдет **в аудитории 306, Усачёва 6.** Начало в 18:30.

Миша Вербицкий "C-symplectic structures and their applications: a new proof of Bogomolov's and Voisin's theorem"

A C-symplectic structure is a closed complex-valued 2-form which is holomorphically symplectic for an appropriate complex structure. A C-symplectic structure uniquely determines a complex structure, and can be characterized intrinsically in terms of linear algebra.

I will give an introduction to the C-symplectic structures, and apply the C-symplectic structures to prove some classical theorems of holomorphically symplectic geometry. I would give a self-contained proof (independent from Kodaira-Spencer and Kuranishi) of Bogomolov's local Torelli theorem and use it to prove Voisin's theorem on deformations of holomorphically Lagrangian subvarieties.

The students would need some understanding of Kahler geometry (the Hodge decomposition and dd^c-lemma) and the basic theory of manifolds (Cartan's formula, de Rham differential, cohomology). I would strive to keep the exposition elementary and self-contained.