

The visit of Liviu Ornea to Moscow, April 16-22 of 2009: a short report

The short visit of Liviu Ornea in Moscow, scheduled for April 16-22 of 2009, was very fruitful. The main product of his visit was a paper "Topology of locally conformally Kahler manifolds with potential", by Liviu Ornea, Misha Verbitsky (arXiv:0909.3362), finished in Moscow, and a new paper (provisionally titled "Automorphisms of locally conformally Kahler manifolds"), which is being written now.

In our arXiv:0909.3362 paper we managed to show that any locally conformally Kaehler manifold with a vanishing Bott-Chern class is homeomorphic to an elliptic fibration over a projective orbifold. This theorem has numerous applications in topology of locally conformally Kaehler manifolds. In particular, recent results of Kotschick and Kokarev (obtained using a theory of harmonic maps) were reinterpreted in terms of Morse-Novikov cohomology and re-proven using algebraic arguments.

In addition to this collaboration, Liviu Ornea gave a 3 hour long talk at the Steklov Institute's "Algebraic varieties" seminar (April 22, 13:00-16:00), under a title "Generalized complex manifolds".

Misha Verbitsky, April 30, 2009