

Семинар «Геометрические структуры на многообразиях»

Семинар состоится **11 октября 2018 года**

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

Анна Абашева Prime geodesics and prime ideals

We'll be working in two different settings which will come up to be rather analogous. In the first setting we look at hyperbolic surfaces and prime geodesics on them, in the second - on prime ideals in the rings of integers of number fields. One realizes that they behave in a similar way under covering maps/extensions of fields and many constructions from number theory can be reinterpreted in the hyperbolic setting. Moreover, we'll establish the bijection between the set of prime geodesics on a hyperbolic surface and the certain subset of conjugacy classes of its fundamental group. For each conjugacy class of this kind we'll construct a quadratic extension of number fields and see that the splitting behavior of prime ideals in this extension can be understood using only the length of the corresponding geodesic. The talk will be completely elementary and will consist principally of examples. I'll remind all necessary definitions and constructions from number theory and riemannian geometry.