

**BIANCHI-VII GEODESIC PROBLEM, MATHIEU
EQUATION AND ARITHMETIC**

Alexander Veselov

ABSTRACT. I will discuss classical and quantum integrability of the geodesic flows on 3D manifolds with the Riemannian metric of Bianchi-VII type. In the quantum case the eigenfunctions can be expressed in terms of the classical Mathieu functions with parameters determined by the arithmetic of binary quadratic forms.

The talk is based on a joint work with Yiru Ye.