ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

6. Topology

1991 MS Classification: 22,51,57

Mednykh, Alexander, Institute of Mathematics, Novosibirsk, Russia

The volumes and isometries of Heegaard genus two hyperbolic three manifolds

The volumes and isometry groups of Heegaard genus two hyperbolic three manifolds are investigated. In particular, it is shown that the volumes of infinite family of closed Fibonacci manifolds correspond to the limit ordinals in the Thurston–Jørgensen ω^ω– theorem and there are Heegaard genus two manifolds with an arbitrary large volume and isometry group. Examples of arithmetic and non-arithmetic manifolds with equal volumes are constructed. Three dimensional analogue of the Accola-Farkas theorem on hyperellipticity of two-fold coverings over genus two Riemann surface is obtained. The hyperelliptic manifolds with more than one hyperelliptic involution are described.
This is joint work with A. Vesnin