Atelier
« Atelier : Méthodes probabilistes en topologie »
14-18 novembre 2016

Workshop
"Workshop: Probabilistic methods in topology"
November 14—18, 2016

The space of triangulations of a compact 4-manifold

Boris Lishak*

borstalk@gmail.com

The number of triangulation of a compact 4-manifold grows at least exponentially with the number of simplices. Furthermore, we can make sure that the distance between any pair of the exponentially many triangulations is larger than the tower of exponents of a fixed height. The distance between two triangulations here is defined to be the minimal number of Pachner moves needed to bring one triangulation to the other. This result follows from a similar result about balanced presentations of the trivial group: There exists exponentially many such presentations as a function of the length of the presentation, such that the distance between any two of them is larger than a tower of exponents. The distance here is the minimal number of Andrews-Curtis moves in a sequence connecting one presentation to the other.

*Max-Planck-Institut für Mathematik, P.O.Box: 7280, 53072 Bonn, GERMANY