

Bled'11 - 7th Slovenian International Conference on Graph Theory

Contribution ID : 146

Asymptotic Enumeration of Reversible Maps Regardless of Genus

Content :

We derive asymptotic expansions for the numbers $U(n)$ of isomorphism classes of sensed maps on orientable surfaces with given number of edges n , where we do not specify the genus and for the numbers $A(n)$ of reflexible maps with n edges. As expected the ratio $A(n)/U(n) \rightarrow 0$ for $n \rightarrow \infty$. This shows that almost all maps are chiral. Moreover, we show $\log A(n) \sim \frac{1}{2} \log U(n) \sim (n/2) \log n$. Due to a correspondence between sensed maps with given number of edges and torsion-free subgroups of the group $\Gamma = \langle x, y | y^2 = 1 \rangle$ of given index, the obtained results give an information on asymptotic expansions for the number of conjugacy classes of such subgroups of given index.

Primary authors : Prof. NEDELA, Roman (Matej Bel University) ; Prof. DRMOTA, Michael (Vienna University of Technology)

Co-authors :

Presenter : Prof. NEDELA, Roman (Matej Bel University)

Session classification : --not yet classified--

Track classification : Maps and Symmetries

Type : Oral presentation