DEFENSE OF THE DOCTORAL DISSERTATION

DEPARTMENT OF MATHEMATICS

"Bounding Shortest Closed Geodesics with Diameter on Compact 2-Dimensional Simply-Connected Orbifolds"

UNIVERSITY OF
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Thursday, April 4, 2024
Time: 2:00 PM
Location: 330 DeBartolo Hall

Examination Committee:
Matt Gursky, Advisor
Nick Edelen
Marco Radeschi - Univ of Turin
Pavel Mnev

Abstract:

Length bounded sweepouts give a way to bound the length of the shortest closed geodesic of a closed manifold. In this paper, we generalized to the case of simply-connected compact 2-dimensional orbifolds as well as compact 2-dimensional orbifolds with finite orbifold fundamental groups. We proved an inequality for the length of the shortest closed orbifold geodesic in terms of the diameter.