



Department of
Mathematical Sciences

Colloquium

Dr. Alex Kontorovich

Professor of Mathematics

Rutgers University

Friday,
April 29th, 2022 @
2:00pm

Online via. Microsoft
Teams



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Asymptotic Length Saturation for Zariski Dense Surfaces

The lengths of closed geodesics on a hyperbolic manifold are determined by the traces of its fundamental group. When the latter is a Zariski dense subgroup of an arithmetic group, the trace set is contained in the ring of integers of a number field, and may have some local obstructions. We say that the surface's length set "saturates" (resp. "asymptotically saturates") if every (resp. almost every) sufficiently large admissible trace appears. In joint work with Xin Zhang, we prove the first instance of asymptotic length saturation for punctured covers of the modular surface, in the full range of critical exponent exceeding one-half (below which saturation is impossible).

**This event will be streamed online via. Microsoft Teams.
Link to online event: <https://bit.ly/3vwTsxE>**



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