Seminar/Talk

Four cusps of caustics by reflection

Gil Bor
CIMAT

Host: Kaloshin Group

This talk is concerned with a billiard version of Jacobis Last Geometric Statement and its generalizations. Given a point O inside an oval billiard table (or mirror), one considers the family of rays emanating from O and the caustic (or envelope) of the reflected family of rays after n reflections off the walls of the table. I will describe two related statements:(1) Theorem: for a generic O this caustic has at least 4 cusps for each positive integer n. (2) Conjecture: for an elliptic table there are exactly four (ordinary) cusps. I will describe a proof of (1) and partial results concerning (2). This is joint work with Mark Spivakovsky (Toulouse) and Serge Tabachnikov (Penn State). References:* https://arxiv.org/abs/2112.07852* https://arxiv.org/abs/2406.11074.

Tuesday, February 4, 2025 02:00pm - 03:30pm
Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.