Geometry of Riemann Surfaces

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Title: Spherical surfaces of genus 1 with 1 conical point.

Abstract: For punctured surfaces with negative Euler characteristic every complex structure is induced by a unique hyperbolic metric: this establishes an identification between the moduli space of punctured Riemann surfaces and the moduli space of hyperbolic Riemann surfaces with cuspidal ends. One has a similar correspondence for hyperbolic or flat surfaces with conical points. On the other hand, the situation with spherical surfaces (i.e. with a metric of constant curvature 1) with conical points is in general completely different. In this talk we will describe the topology of the moduli space of spherical surfaces of genus 1 with 1 conical point. This is joint work with Alexandre Eremenko and Dmitri Panov.