SPHERICAL SURFACES AND THEIR MODULI SPACES

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A spherical surface is a Riemann surface with a curvature 1 metric and a finite number of conical singularities. It can always be glued from a collection of spherical triangles by isometric identification of their sides. Contrary to the hyperbolic case, when the theory is almost identical to the theory of Riemann surfaces, the case of spherical surfaces is wide open. I will speak about recent results in the area, such as a full description of the moduli space of spherical metrics with one conical singularity on a torus (joint work with Gabrielle Mondello and Alex Eremenko), the description of possible conical angles of a spherical metric on a 2-sphere, disconnectedness of the moduli spaces and their unboundedness (joint work with Gabirelle Mondello),