

# Moduli spaces of spherical surfaces with conical singularities

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A spherical surface with  $n$  conical singularities is a surface  $S$  with cone points  $x_1, \dots, x_n$  and a metric  $g$ , such that  $g$  has curvature 1 on the complement  $S \setminus (x_1, \dots, x_n)$  and has a conical singularity of angle  $2\pi\theta_i$  at each  $x_i$ . Moduli spaces of spherical metrics with fixed angles are intriguing objects. Up to very recently the most basic questions about these spaces were open, in particular it was not known for which angles such spaces are non-empty, whether they can be disconnected, whether they project surjectively to the moduli space of curves with  $n$  marked points. I'll speak about solutions of such questions, the talk is based on a joint work with Gabriele Mondello.

## References

- [1] G. MONDELLO, D. PANOV, *Spherical surfaces with conical points: systole inequality and moduli spaces with many connected components*, To appear in GAFA