

Kerckhoff's lines of minima in Teichmüller space

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Abstract In 1992, Kerckhoff introduced the idea of a line of minima in the Teichmueller space of a surface S , namely a line along which a convex combination of the lengths of a pair of geodesic laminations on S are minimised. This survey will introduce the basic facts about lines of minima and then discuss their connection with quasifuchsian groups which are almost Fuchsian and their relationship to Teichmueller geodesics.

The talk was based on the survey article

C. Series, *Lines of minima in Teichmüller space*, to appear in *Handbook of Teichmüller theory Vol. III*, A. Papdopoulos ed., IRMA Lectures in Mathematical Physics, EMS Publishing House, 2010.

The article can also be found at

<http://www.warwick.ac.uk/masbb/Papers/56-lmin.pdf>

It contains a comprehensive list of references; here are just a few of the most important:

1. S. Kerckhoff, Lines of Minima in Teichmüller space, *Duke Math J.* 65 (1992), 187–213.
2. F. Bonahon, Kleinian groups which are almost Fuchsian, *Journal für die reine und angewandte Mathematik* 10 (2005), 1–15.
3. Y. Choi, K. Rafi, and C. Series, Lines of minima and Teichmüller geodesics, *Geom. Funct. Anal.*, GAFA, 18 (2008), 698–754.
4. C. Series, Limits of quasifuchsian groups with small bending, *Duke Mathematical J.* 128 (2005), 285–329.