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# LINEAR PROGRAMMING BOUNDS FOR HYPERBOLIC SURFACES

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I will discuss joint work with Bram Petri in which we obtain new upper bounds on several geometric and spectral invariants associated with closed hyperbolic surfaces, both in low and high genus. The proofs are based on finding good test functions to use in the Selberg trace formula (a strategy heavily inspired by work of Cohn and Elkies on the density of Euclidean sphere packings).