

ZEROS OF THE SELBERG ZETA FUNCTION FOR NON-COMPACT SURFACES

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Abstract: It is well known (since 1956) that the Selberg Zeta function for compact surfaces satisfies the “Riemann Hypothesis”: any zero in the critical strip $0 < \Re(s) < 1$ is either real or $\Im(s) = 1/2$. In 2014 David Borthwick observed, with a help of computer, that the Selberg Zeta function associated to a non-compact surface with a rich symmetry group has a similar property. We give an analytic argument which justifies this empirical result.