



A tauberian approach to RH

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The aim of this paper is twofold. Firstly we present our main discovery arising from experiments which is the tauberian concept of functions of good variation (FGV). Secondly we propose to use these FGV for proving RH is true via some conjectures. More precisely we give an implicit definition of FGV and we provide several smooth and nontrivial examples from experiments. Then using a conjectured family of FGV approaching the function $x \mapsto x^{-1} \lfloor x \rfloor$ we derive RH is true. We make also a tauberian conjecture allowing us to prove RH is true for infinitely many L -functions and we discuss the linear independence conjecture. The method is inspired by the Ingham summation process and the experimental support is provided using pari-gp.

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