

THE UNIVERSITY



OF HONG KONG

Department of Mathematics

COLLOQUIUM

The Riemann Hypothesis

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Abstract

In 1859 Bernhard Riemann delivered an address “On the number of primes less than a given magnitude” to the Prussian Academy of Sciences in Berlin. In the course of the lecture he considered a meromorphic function of the complex variable $s = \sigma + it$, now known as Riemann’s zeta function, whose non-real zeros all lie in the infinite strip $0 \leq \sigma \leq 1$ and, as Riemann showed, have an intimate connection with the distribution of prime numbers. Riemann expressed the opinion that, “very probably”, all these zeros actually lie on the line $\sigma = 1/2$. This is the Riemann Hypothesis (RH). The aim of this talk is to sketch what is known about RH and to describe such evidence as there is for and against it. It will touch briefly on the nature of current activity related to RH.

Date: June 17, 2002 (Monday)

Time: 4:00 – 5:00pm

Place: Room 209, Run Run Shaw Bldg.

All are welcome