ALGORITHM INTFACT : An Algorithm to Factorize Integers of arbitrary size in real time.

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1 Abstract

This document talks about a revolutionary Integer Factorization Algorithm and/or Formal Procedure. However, no rigorous mathematical proof is provided as the basis of the procedure is related to the distribution of primes, digit sequences of e and π and also the distribution of non-trivial Riemann zeros. This is still an open problem. However this procedure might throw some light on how to go about solving the unsolved mathematical conjecture as list on the website of Clay Mathematical Institute. I have not read any more than the trial division process for Integer Factorization but I am aware that some sophisticated algortihms exist like GNFS (Global Number Field Sieve). Nothing beyond that. For people, looking for rigorous proofs, this article could be a starting point for further research. I am being humble, honest and generous here !!

2 Reading the Number as a String

I am not going into the nitty gritty of the code. At this point of the flow, we read the number to be factorized from a file and store it in memory as a string. At this point, we need not bring into play GNU-MP libraries for arbitrary precision math, yet.

3 Deriving the Riemann Symmetry Relations from the Number and Its Reverse

We write the number and its reverse stacked one above the other. It does not matter which is stackeb above which one. What matters is the relative symmetry between the Riemann Zeros if they exist in the digit patterns of the two vectors. As an example, if N = 4251161764252561, The stack, 4251161764252561 1652524671611524 In column #2 and #3, We have,
25
65

3.1 Observations

1. 25 and 65 are Riemann zeros and hence symmetrical.
2. 52 and 56 are Riemann zeros and hence symmetrical.
3. 25 and 56 are Riemann zeros and hence anti-symmetrical.
4. 52 and 65 are Riemann zeros and hence anti-symmetrical.