

# Report on:RADEMACHER'S INFINITE PARTIAL FRACTION CONJECTURE IS (almost certainly) FALSE

This is an interesting paper. It presents substantial computational evidence concerning certain coefficients of the partial fraction expansion of the product

$$\prod_{j=1}^N \frac{1}{1-x^j}.$$

This evidence makes it very unlikely that Rademacher's conjecture that, for fixed  $h, k, l$  with  $\gcd(h, k) = 1$ , the coefficient of  $(x - e^{2\pi i h/k})^{-l}$  tends to a limit as  $N \rightarrow \infty$ , is correct. However, it does not disprove it, nor does it describe analytically the behaviour of these coefficients for large  $N$ . (It is strongly suggested from the graphs presented in the paper that this behaviour should be describable.)

This paper should certainly be published somewhere, but, in view of its inconclusive nature, I do not think that it meets the high standards of Math. Comp.