

# ON ZEROS OF DERIVATIVES OF THE PRIME ZETA-FUNCTION

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ABSTRACT: In this talk, for  $0 \leq l \leq k$ , we show that the  $l$ -th derivative of the prime zeta-function  $P^{(l)}(s) := \sum_p (-\log p)^l p^{-s}$  has more than  $C_{1l}T$  zeros in  $\sigma > 1$  and  $0 < t < T$  for some constant  $C_{1l} > 0$  and sufficiently large  $T$ . Moreover, we prove that there exists a constant  $C_{2l} > 0$  such that for sufficiently large  $T$ , the  $l$ -th derivative of the prime zeta-function  $P^{(l)}(s)$  has more than  $C_{2l}T$  non-trivial zeros in the rectangle  $1/2 < \sigma < 1$ ,  $0 < t < T$ .