

OBITUARY

Professor R P Agarwal (15-06-1925 to 09-02-08)

Professor R.P.Agarwal was a very distinguished mathematician of India. He has published about sixtyfive research papers. He had many honours like President of the Indian Mathematical Society and Vice-Chancellor of Lucknow University and he has helped the society very much. The three volumes entitled "Resonance of Ramanujan's Mathematics" are great contributions to mathematics. He was influenced very much by Ramanujan and W.N.Bailey (who is a great expert on topics like hypergeometric series).

TWO REMARKS BY PROFESSOR A.SCHINZEL

1. **FIRST REMARK** : Earlier to A.O.Gelfond and Th.Schneider, R.Kuzmin had proved that $2^{\sqrt{2}}$ is transcendental.
2. **SECOND REMARK**: Nearly around the same time as S.S.Pillai, the results on Waring's Problem were published also by L.E.Dickson.

AN IMPORTANT RESULT (TO APPEAR) WORTH ATTENTION
ON THE MOMENTS OF THE RIEMANN
ZETA-FUNCTION IN SHORT INTERVALS

ALEKSANDAR IVIC

ABSTRACT. Assuming the Riemann Hypothesis it is proved that, for fixed $k > 0$ and $H = T^\theta$ with fixed $0 < \theta \leq 1$,

$$\int_T^{T+H} \left| \zeta\left(\frac{1}{2} + it\right) \right|^{2k} dt \ll H (\log T)^{k^2(1+O(1/\log_3 T))},$$

where $\log_j T = \log(\log_{j-1} T)$. The proof is based on the method of K.Soundararajan [8] for counting the occurrence of large values of $\log |\zeta(\frac{1}{2} + it)|$, who proved that

$$\int_0^T \left| \zeta\left(\frac{1}{2} + it\right) \right|^{2k} dt \ll_\epsilon T (\log T)^{k^2+\epsilon}.$$

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