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Theorem, Let  $(u_i)$  be a square in  $\mathbb R$  must that  $u_i>0$  for all  $u\in\mathbb N$ . Then following dissertions on equivalent: (1) the series  $\sum u_{ij}$  converges, (2) the series  $\sum u_{ij}^{\dagger}$  converges for all bounded sequence( $v_{ij}$ )  $u\in\mathbb R$ : (3) the sames

Dedicated to Costică MUSTATA on his 60th anniversary

ON THE CONVERGENCE OF THE SERIES  $\sum a_n^{1+x_n/\log(1+\eta_0)}$ 

## Gergely PATAKI

or all  $x \ge y_0$ . Hence, since the series  $\sum y_0$  and  $\sum (1+y)^{-2}$  converge it follows that

Abstract. We show that, for any sequence  $(a_n)$  of positive numbers and any bounded sequence  $(x_n)$  of real numbers, the series  $\sum a_n$  and  $\sum a_n^{1-x_n/\log(1+n)}$  either both converge or both diverge.

MSC 1991: 40A05 Keywords: Series, convergence