1146-11-203 **Siddhi S Pathak*** (siddhi@mast.queensu.ca). *On a conjecture of Erdős regarding the non-vanishing of $L(1, f)$.*

In the spirit of Dirichlet's theorem that $L(1, \chi) \neq 0$ for a non-principal Dirichlet character χ, S. Chowla initiated the study of non-vanishing of $L(1, f) = \sum_{n=1}^{\infty} f(n)/n$ for any q-periodic arithmetical function f whenever the above series converges. This question was extensively studied by S. Chowla, Baker-Birch-Wirsing, T. Okada, R. Tijdeman, M. R. Murty, N. Saradha and many others in different settings. One of the special cases of this study is a conjecture of Erdős. In a written correspondence with A. Livingston, Erdős conjectured that $L(1, f) \neq 0$ provided $f(n) = \pm 1$ when $q \nmid n$ and $f(n) = 0$ when $q \mid n$. This conjecture remains unsolved in the case $q \equiv 1 \bmod 4$ or alternatively, when $q > 2\phi(q) + 1$. In this talk, we discuss a density theoretic approach towards this conjecture. (Received January 22, 2019)