

**ABSTRACT****TAUBERIAN CONDITIONS FOR WEIGHTED MEAN SUMMABLE  
INTEGRALS**

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The main topic of this study, which consists of four chapters, is to investigate Tauberian conditions for weighted mean summable integrals.

The first chapter is devoted to the introduction.

In the second chapter, Tauberian conditions for  $(C, 1)$  summable integrals were given. First, for real valued functions one-sided Tauberian theorem was given. Then the concept of slow decreasing (increasing) was shown. Second, for complex valued functions two-sided Tauberian theorem was given. The concept of slow oscillation was introduced.

In the third chapter, necessary and sufficient Tauberian conditions in the case of weighted mean summable integrals over  $\mathbb{R}_+$  were given. In this section first, for real valued function one-sided Tauberian theorem was given too. Later second, for complex valued functions two-sided Tauberian theorem was given.

In the fourth chapter, necessary and sufficient Tauberian conditions in the case of weighted mean summable integrals over  $\mathbb{R}_+$  II were given. The weight function was introduced.  $(W, P)$  summability method was introduced. At the end of the section particular choices of the weight function were given.

**Key words:** Lebesgue integral, Riemann-Stieltjes integral, weighted mean methods of summability, Cesàro method, harmonic mean method, necessary and sufficient Tauberian conditions, slow decrease, slow increase, slow oscillation, Landau type and Hardy type Tauberian conditions.