

AN EXTENDED TAUBERIAN THEOREM FOR THE WEIGHTED MEAN METHOD OF SUMMABILITY

İBRAHİM ÇANAK, ÜMİT TOTUR

In this paper, we prove a new Tauberian-like theorem to retrieve slow oscillation of a real sequence out of the weighted mean summability of its generator sequence and some conditions.

REFERENCES

- [1] İ. Çanak, Ü. Totur, *Some Tauberian theorems for the weighted mean methods of summability*, Comput. Math. Appl. **62** (2011), 2609–2615.
- [2] İ. Çanak, Ü. Totur, *Some Tauberian theorems for Borel summability methods*, Appl. Math. Lett. **23** (3) (2010), 302–305.
- [3] İ. Çanak, Ü. Totur, *A condition under which slow oscillation of a sequence follows from Cesàro summability of its generator sequence*, Appl. Math. Comput. **216** (5) (2010), 1618–1623.
- [4] İ. Çanak, Ü. Totur, B. P. Allahverdiev, *Tauberian conditions with controlled oscillatory behavior*, Appl. Math. Lett. **25** (3) (2012), 252–256.
- [5] İ. Çanak, Ü. Totur, M. Dik, *One-sided Tauberian conditions for (A, k) summability method*, Math. Comput. Modelling **51** (5-6) (2010), 425–430.
- [6] Č . V. Stanojević, *Analysis of Divergence: Control and Management of Divergent Process, Graduate Research Seminar Lecture Notes*, edited by İ. Çanak, University of Missouri- Rolla, Fall 1998, p.56.
- [7] G. H. Hardy, *Divergent series*, Clarendon Press (Oxford, 1949).
- [8] H. Tietz, *Schmidtsche Umkehrbedingungen fr Potenzreihenverfahren*, Acta Sci. Math. **54** (3-4) (1990), 355–365.
- [9] H. Tietz, K. Zeller, *Tauber-Bedingungen fr Verfahren mit Abschnittskonvergenz*, Acta Math. Hungar. **81** (3) (1998), 241–247.
- [10] F. Móricz, B. E. Rhoades, *Necessary and sufficient Tauberian conditions for certain weighted mean methods of summability*, Acta Math. Hungar. **66** (1-2) (1995), 105–111.
- [11] İ. Çanak, *An extended Tauberian theorem for the $(C, 1)$ summability method*, Appl. Math.Lett. **21** (1) (2008), 74–80.

DEPARTMENT OF MATHEMATICS, EGE UNIVERSITY, 35100 İZMİR, TURKEY
E-mail address: ibrahimcanak@yahoo.com

DEPARTMENT OF MATHEMATICS, ADNAN MENDERES UNIVERSITY, 09010 AYDIN, TURKEY
E-mail address: utotur@yahoo.com