

## HERMITE-TYPE GENERALIZED EXPONENTIAL SAMPLING OPERATORS

Sadettin KURSUN<sup>1,\*</sup>, Tuncer ACAR<sup>2</sup>

<sup>1</sup>Department of Basic Sciences, Turkish Military Academy, National Defence University, 06420 Cankaya, Ankara, Türkiye 
<sup>2</sup>Department of Mathematics, Faculty of Science, Selcuk University, 42003 Selcuklu, Konya, Türkiye

## ABSTRACT

In this talk we first introduce a new operator, the generalized exponential sampling operator of Hermit type. This type of operators is inspired by the remaining part of the Mellin-Taylor formula. Then we give the convergence results of these operators in logarithmically weighted spaces of continuous functions. Finally, we mention a few well-known kernel examples that support our results and we also provide a numerical result and a graphical representation.

**Keywords** Hermite-type exponential sampling series · Logarithmic weighted spaces · Kernel examples

## References

- [1] Aral, A., Acar, T., and Kursun, S., Generalized Kantorovich forms of exponential sampling series. Anal. Math. Phys., 12(2), 2022.
- [2] Bardaro, C., Faina, L., and Mantellini, I., A generalization of the exponential sampling series and its approximation properties., Math. Slovaca, 67(6): 1481–1496, 2017.
- [3] Corso, R., Generalized sampling operators with derivative samples, J. Math. Anal. Appl., 547(1), 2025.

<sup>\*</sup>Corresponding Author's E-mail: sadettinkursun@yahoo.com