

## Some results in approximation theory by means of linear operators and generalized convergence

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In [4] P. Garrancho established general conditions to move different notions of generalized convergence to the setting of approximation theory by means of linear operators, and where the object of the approximation is certain generalized derivative of a function. In this talk, we show how we have continued the study, by facing to quantitative aspects. We also study the saturation class providing assuming that some asymptotic condition holds true. Finally, as applications of the previous results, we show how the notion of the recent weighted statistical convergence, due to Abdu Awel Adem and Maya Altinok [2], is a particular case of the generalized convergence analyzed here.

### References

- [1] Francisco Aguilera, Daniel Cárdenas-Morales, Pedro Garrancho, *Optimal simultaneous approximation via A-summability*, Abstr. Appl. Anal. 2013, Art. ID 824058, 5 pp.
- [2] Abdu Awel Adem, Maya Altinok, *Weighted statistical convergence of real valued sequences*, Facta Univ. Ser. Math. Inform. 35 (2020), no. 3, 887–898.
- [3] Cárdenas-Morales, Daniel, Garrancho, Pedro, *B-statistical A-summability in conservative approximation*. Math. Inequal. Appl. 19 (2016), no. 3, 923–936.
- [4] P. Garrancho, *A General Korovkin Result Under Generalized Convergence*, Constr. Math. Anal. 2 (2019), no. 2, 81–88.