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Asuman G. Aksoy* (aaksoy@cmc.edu). *Factorization of Q -compact operators*. Preliminary report.

The theory of compact linear operators between two Banach spaces X and Y has a classical core and is familiar to many. Perhaps lesser known is the factorization of compact maps through a closed subspace of c_0 [2]. This factorization theorem has a number of important connections and consequences analogous to how the ideals of continuous linear operators factoring compactly through ℓ^p -spaces ($1 \leq p < \infty$) were studied by many authors (see [1] and the references therein). In this talk, we consider a Banach space X and another Banach space $(Y, \{A_n\})$ where $\{A_n\}$ is a linear approximation scheme with $\dim A_n < \infty$ on Y . We study compactness with respect to an approximation scheme Q and get characterization and factorization theorems for Q -compact maps. Joint work with Yunied Puig De Dios.

References

- [1] J. H. Fourie, *Injective and surjective hulls of classical p -compact operators with applications to unconditionally p -compact operators*, *Studia Math.*, **240** (2018), 147–159.
- [2] T. Terzioğlu, *A characterization of compact linear mappings*, *Arch. Math.* **22** (1971), 76-78.

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