On the essential numerical range in Banach spaces

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It is well known that the numerical range of any Hilbert space operator is convex. On the other hand, the numerical ranges of operators on Banach non-Hilbert spaces are practically never convex. We show that, rather surprisingly, there is a large class of Banach spaces where the essential numerical range is always convex. The class includes the ℓ_p -spaces $(1 , <math>c_0$, Orlicz sequence spaces and other sequence spaces. Moreover, the essential numerical ranges of operators on such spaces exhibit many properties analogous to Hilbert space operators.

This talk is based on joint work with Yu. Tomilov.