Localization techniques in renorming theory
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We present localization techniques for the construction of norms with good convexity properties in a Banach space. For instance, despite that R. Haydon constructed the first examples of Banach spaces with Kadec norm but without equivalent locally uniformly rotund norm, we are able to show that the uniform structure of a normed space $(X, \|\cdot\|)$ with a Kadec norm always admits a description with an (F)-norm $\|\cdot\|_1$ such that weak and norm topologies coincide on

$$\{x \in X : \|x\|_1 = \rho\}$$

for every $\rho > 0$ and moreover

$$\lim_{n \to \infty}[2\|x\|_1^2 + 2\|x_n\|_1^2 - \|x + x_n\|_1^2] = 0$$

implies that $\lim_{n \to \infty} \|x_n - x\| = 0$. More results for pointwise-LUR and rotund norms will be presented in the talk.