COMPUTATION OF MAXIMAL PROJECTION CONSTANTS

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Abstract. The relative linear projection constant $\Pi(E, F)$ of two Banach spaces $E \subset F$, $\dim(E) < +\infty$, is the smallest norm of a linear projection of F onto E. The exact value of many non-linear Lipschitz extension moduli may be obtained by computing certain relative linear projection constants. In the talk, we derive a formula for the maximal value Π_n of $\Pi(E, \ell_\infty(\mathbb{N}))$ amongst n-dimensional Banach spaces E. By means of this formula, we give an alternative proof of $\Pi_2 = \frac{4}{3}$, and compute the exact value of the absolute Lipschitz extendability constant of three-point metric spaces.