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*Non-linear geometry of Banach spaces*

A Banach space is in particular a metric space. Is it so that isomorphism really changes when linearity is dropped? In other words, if two Banach spaces are Lipschitz isomorphic, does it follow that they are linearly isomorphic? This natural question turns out to be very hard to answer. Some progress has been made in the last fifteen years towards a better understanding of this problem (and of the corresponding embedding problem) but the subject is still in its infancy. This talk will present some recent results and simple-to-state but exciting open questions. An effort will be made for dispensing as much as possible with technicalities.