Analysis Seminar

Richard Smith

will speak on

A topological characterization of dual strict convexity in Asplund spaces II

Tue 30th April 2019 at 4:00PM

Location: Seminar Room SCN 1.25

In 1975 Lindenstrauss asked whether it is possible to characterize Banach spaces X that admit an equivalent strictly convex norm, in terms of other linear or topological properties of X. We provide a partial answer to this problem in the case of dual spaces, by showing that if X is an Asplund space, then it admits an equivalent norm having a strictly convex dual norm if and only if the dual unit sphere S_{X^*} (equivalently X^*), endowed with the w^*-topology, possesses a certain topological property. It follows that this ostensibly geometric property of the space can in fact be characterised in purely non-linear, topological terms. In the second of two talks we will sketch the proof of this characterization.

This talk is part of the **Analysis** series. For more, see
https://maths.ucd.ie/seminars