Multiparameter dyadic BMO and estimates for little bmo commutators

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In this talk, based on joint work with Komla Domelevo, Spyridon Kakaroumpas and Stefanie Petermichl, we will recall some basic properties of the classical John-Nirenberg BMO space, focusing in particular on the characterisation given by Nehari's Theorem and its real variable version due to Coifman, Rochberg and Weiss. We will then see different multiparameter generalisations of BMO and their corresponding version of Nehari's Theorem.

At this point, we will specialise to the so called little bmo space and the lower norm estimates for commutators of functions in this space with certain Haar shifts. We will discuss two different methods to obtain such estimates. Finally, if there is enough time, we will also mention the weighted version of this result.