

LSAA: Seminars

In search of a functional representation of the free Banach lattice with upper p -estimates

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The free Banach lattice generated by a Banach space is a free object that associates to every Banach space a Banach lattice satisfying the following universal property: every bounded operator from the Banach space to an arbitrary Banach lattice extends uniquely to a lattice homomorphism defined on the free Banach lattice, with uniform control of the norm. This definition can be generalized in order to construct free Banach lattices associated to more constrained classes of Banach lattices, such as p -convex Banach lattices or Banach lattices with upper p -estimates. However, an explicit functional representation of the norm of the corresponding free Banach lattice is not always guaranteed. The aim of this talk is to provide such representation when the class considered is that of Banach lattices with upper p -estimates. To do so, we will rely on a factorization theorem due to Pisier that will lead us to $L_{p,\infty}$, the model space for upper p -estimates. This is a joint work with D. Leung, M. A. Taylor and P. Tradacete.
