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Properties of the Temperley-Lieb algebra of type B obtained from its Morita-equivalent bound path algebra

The family of Temperley-Lieb algebras TLb_n of type B originates from the description of statistical physics models. Its close ties to the Hecke and the KLR algebras transform its representation theory into a mathematically rich laboratory. Alexis Leroux-Lapierre, Théo Pinet and I used Soergel modules to construct bound quiver algebras that are Morita-equivalent to the blocks of TLb_n. I shall describe some of the properties of these bound path algebras (their center, the existence of a largest projective, their grading) and their consequences for the algebras TLb_n.