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**Vinoth Nandakumar\*** (vinoth.90@gmail.com), Apt 605, The Landing Apartments, 470 S 1300 E, Salt lake city, UT 84112, and **Rina Anno** (bitango@gmail.com). *Modular representations for two-block nilpotents.*

Bezrukavnikov, Mirkovic and Rumynin have shown that the category of modular representations with a fixed nilpotent  $p$ -character arises as the heart of a certain  $t$ -structure on the (derived) category of coherent sheaves on the corresponding Springer fiber. Inspired by work of Cautis and Kamnitzer, we specialize to the case of a two-block nilpotent in type  $A$ , and construct a representation of the affine tangle calculus using these categories. Using this, we describe the coherent sheaves that that corresponds to the irreducible representations, and describe the Ext groups between them. As an application, we give (conjectural) character formulae, and a description of the category as modules over a diagram algebra. (Received August 09, 2015)