1121-35-277 **Lia Bronsard*** (bronsard@mcmaster.ca), 1280 Main St W, McMaster Univ, Dept of Math and stats, Hamilton, ON L8S 4K1, Canada, **Stan Alama** (alama@mcmaster.ca), 1280 Main St W, Hamilton, ON L8S 4K1, Canada, and **Xavier Lamy**. *Minimizers of the Landau-de Gennes energy around a spherical colloid particle.*

We consider energy minimizing configurations of a nematic liquid crystal around a spherical colloid particle, in the context of the Landau-de Gennes model. The nematic is assumed to occupy the exterior of a ball, and satisfy homeotropic weak anchoring at the surface of the colloid and approach a uniform uniaxial state far from the colloid. We study the minimizers in two different limiting regimes: for balls which are small compared to the characteristic length scale, and for large balls. The relationship between the radius and the anchoring strength is also relevant. For small balls we obtain a limiting quadrupolar configuration, with a "Saturn ring" defect for relatively strong anchoring, corresponding to an exchange of eigenvalues of the Q-tensor. In the limit of very large balls we obtain an axisymmetric minimizer of the Oseen—Frank energy, and a dipole configuration with exactly one point defect is obtained. This is joint work with Stan Alama and Xavier Lamy. (Received July 19, 2016)