Sergey Fomin and Pavlo Pylyavskyy* (pylyavskyy@gmail.com). Webs on surfaces, rings of invariants, and clusters.

We construct and study cluster algebra structures in rings of invariants of the special linear group action on collections of three-dimensional vectors, covectors, and matrices. The construction uses Kuperberg's calculus of webs on marked surfaces with boundary. (Received September 15, 2014)