Stefan O. Tohaneanu* (tohaneanu@uidaho.edu), Department of Mathematics, University of Idaho, Moscow, ID 83844, and Mehdi Garrousian and Ben Anzis. Generalized Star Configurations. Preliminary report.
Generalized star configurations are projective subschemes of $\mathbb{P}^{k-1}$ with defining ideal generated by all the $a$-fold products of $n$ given linear forms. If any $k$ of the given linear forms are linearly independent, then this ideal will define a (usual) star configuration. The defining ideals of star configurations have very nice homological features, and most of the time these are conjecturally preserved when studying generalized star configurations. The main conjecture is that the defining ideal of any generalized star configuration has linear graded minimal free resolution. In our opinion, the conjecture is very challenging, and once resolved it will also answer some questions that are related to the linear codes associated to generalized star configurations. (Received February 16, 2016)

