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Aida Maraj* (aida.maraj@uky.edu) and **Uwe Nagel**. *Filtrations of Ideals Arising from Hierarchical Models*. Preliminary report.

One can realize hierarchical models via a simplicial complex that describes the dependency relationships among random variables and a vector that records the number of states for each random variable. Moreover, Diaconis and Sturmfels have constructed toric ideals that provide useful information about the model. The goal of this talk is to study the invariance properties of families of ideals arising from hierarchical models with the same dependency relations among variables and varying number of states. We will see that these families of ideals form a filtration under some group action, and we will compute an equivariant Hilbert series for some classes of such filtrations. (Received September 03, 2019)