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**Stephen Sturgeon\*** ([stephen.sturgeon@uky.edu](mailto:stephen.sturgeon@uky.edu)) and **Uwe Nagel**. *Cellular Resolutions of some Gorenstein Rings*. Preliminary report.

Cellular resolutions are a way of giving a geometric structure to the resolution of a monomial ideal. Although several general methods have been investigated, the resulting resolutions are rarely minimal. Our work has focused on the Stanley-Reisner rings of some simplicial polytopes. These rings are Gorenstein. We construct cell complexes which are cellular decompositions of balls that support the minimal free resolutions of these ideals. The structure of our cell complex is very explicit and the relationships among cells is easy to see. In some cases we can show these cell complexes are actually polytopes and we give an embedding. We also propose a method for constructing cellular resolutions that we believe will generalize to a larger family of ideals. (Received August 07, 2013)