

1160-13-223

Andrew R. Kustin, Rebecca R.G.* (rrebhuhn@gmu.edu) and **Adela Vraciu**. *The resolution of (x^N, y^N, z^N, w^N) over the hypersurface $k[x, y, z, w]/(x^n + y^n + z^n + w^n)$.*

We find the minimal graded resolution of $R/(x^N, y^N, z^N, w^N)$ over the hypersurface ring $R = k[x, y, z, w]/(x^n + y^n + z^n + w^n)$ as well as the related resolution of $P/(x^N, y^N, z^N, w^N) : (x^n + y^n + z^n + w^n)$ over $P = k[x, y, z, w]$, where k is a field of characteristic zero. To compute these resolutions, we make some useful reductions to the case of fewer variables and apply results on compressed Gorenstein rings. This is joint work with Andrew R. Kustin and Adela Vraciu. (Received August 10, 2020)