

1139-14-33

Sándor J Kovács* (skovacs@uw.edu). *A new approach to rational singularities.*

I will discuss a new point of view on rational singularities. This consists of two essential elements: replacing the use of resolutions of singularities with Macaulayfication (which is known to exist under very mild assumptions) and a Kempf-type criterion for rational singularities using these Macaulayfications. This new view-point allows the study of rational singularities in situations where resolution of singularities is not known to exist and it agrees with the traditional approach when resolutions do exist. In particular, this leads to new results in both zero and positive characteristic. (Received January 12, 2018)