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**Yairon Cid-Ruiz** and **Jonathan Montaña\*** (jmon@nmsu.edu). *Mixed multiplicities of graded families of ideals.*

We show the existence (and define) the mixed multiplicities of arbitrary graded families of ideals under mild assumptions. In particular, our methods and results are valid for the case of arbitrary  $\mathfrak{m}$ -primary graded families. Furthermore, we provide a “Volume = Multiplicity formula” for the mixed multiplicities of graded families of ideals. This is joint work with Yairon Cid-Ruiz. (Received February 13, 2021)