1146-13-43   **Kuei-Nuan Lin*** (`kul20@psu.edu`), **Tai Ha**, **Susan Morey**, **Enrique Reyes** and **Rafael Villarreal**. *Edge ideals of oriented graphs.*

We start with the definitions of the weighted oriented graph, D, and the edge ideal, $I(D)$, associated to the D. We will then talk about why we are interested in this type of ideals. We provide several equivalent conditions for the Cohen-Macaulayness of $I(D)$. As an application, we give a complete characterization for the Cohen-Macaulayness of $I(D)$ when the underlying (undirected) graph of D is obtained from an arbitrary graph by adding a whisker at every vertex. (Received December 29, 2018)