

1096-05-786

Hal Kierstead and **Landon Rabern*** (landon@lbd-data.com). *Extending Alon-Tarsi Orientations.*

We prove that a graph either has many edges or an Alon-Tarsi orientable induced subgraph satisfying a certain degree condition. From this we get improved lower bounds on the number of edges in list critical and online list critical graphs. This is joint work with Hal Kierstead. (Received September 10, 2013)