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Selvi Beyarslan* (sbeyars1@tulane.edu), Tulane University, Department of Mathematics, 6823 St. Charles Ave., New Orleans, LA 70118, and **Ali Alilooee**, **Arindam Banerjee** and **Huy Tai Ha**. *An Optimal Upper Bound on the Regularity of Powers of Edge Ideals*. Preliminary report.

Let G be a graph and let $I(G)$ be its edge ideal. In this talk, we give the following upper bound for the regularity of powers of edge ideals

$$\operatorname{reg} I^s \leq 2(s - 1) + \operatorname{reg} (I)$$

for any graph G and for $s \geq 1$. Then we partially answer the question that for which classes of graphs $\operatorname{reg} I(G)^s = 2s + \nu(G) - 1$. (Received January 19, 2016)