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Ryan R. Martin* (rymartin@iastate.edu), Department of Mathematics, 428 Carver Hall, 411 Morrill Road, Ames, IA 50011, and **Alex W.N. Riasanovsky**. *On the edit distance function of the random graph.*

Given a hereditary property of graphs \mathcal{H} and a $p \in [0, 1]$, the edit distance function $\text{ed}_{\mathcal{H}}(p)$ is asymptotically the maximum proportion of edge-additions plus edge-deletions applied to a graph of edge density p sufficient to ensure that the resulting graph satisfies \mathcal{H} . The edit distance function is directly related to other well-studied quantities such as the speed function for \mathcal{H} and the \mathcal{H} -chromatic number of a random graph. Let \mathcal{H} be the property of forbidding an Erdős-Rényi random graph $G(n_0, p_0)$, and let φ represent the golden ratio. In this talk, we show that if $p_0 \in [1 - 1/\varphi, 1/\varphi]$, then we know the asymptotic value of the expectation of $\text{ed}_{\mathcal{H}}(p)$ over the entire interval $p \in [0, 1]$.

Moreover, for any $p_0 \in [0, 1]$, then we know the asymptotic value of the expectation of $\text{ed}_{\mathcal{H}}(p)$ over the interval $p \in [1/3, 2/3]$. (Received August 09, 2021)