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Nursel Erey* (nurselerey@gtu.edu.tr), **Jürgen Herzog**, **Takayuki Hibi** and **Sara Saeedi Madani**. *Matchings and squarefree powers of edge ideals.*

Let G be a finite simple graph. The edge ideal of G , denoted by $I(G)$, is a monomial ideal generated by the monomials that correspond to the edges of the graph. In this talk, we will be interested in resolutions of *squarefree powers* of edge ideals. The k th squarefree power $I(G)^{[k]}$ of $I(G)$ is generated by the squarefree monomials in $I(G)^k$. Therefore, generators of $I(G)^{[k]}$ correspond to the matchings in G of size k , which implies that $I(G)^{[s]} = (0)$ for s greater than the matching number of G . We will explore the question of when squarefree powers of edge ideals are linearly related or have linear resolution. (Received January 08, 2021)