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**Jessica Fuller\*** ([jessica.fuller@emory.edu](mailto:jessica.fuller@emory.edu)) and **Ronald J. Gould**. *Saturation and Constructing  $(K_t - e)$ -saturated graphs.*

Given a graph  $H$ , we say a graph  $G$  is  $H$ -saturated if  $G$  does not contain  $H$  as a subgraph and the addition of any edge  $e' \notin E(G)$  results in  $H$  as a subgraph. The question of the minimum number of edges of an  $H$ -saturated graph on  $n$  vertices, known as the *saturation number*, and the question of the maximum number of edges possible of an  $H$ -saturated graph, known as the Turán number, has been addressed for many different types of graphs. We are interested in the existence of  $H$ -saturated graphs for each edge count between the saturation number and the Turán number. We prove that  $(K_4 - e)$ -saturated graphs do not exist for small values of  $|E(G)|$  and construct  $(K_4 - e)$ -saturated graphs with  $|E(G)|$  in the interval  $[2n - 4, \lfloor \frac{n}{2} \rfloor \lceil \frac{n}{2} \rceil - n + 6]$ . We then extend the  $(K_4 - e)$ -saturated graphs to  $(K_t - e)$ -saturated graphs. (Received September 13, 2016)