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Atif Abueida* (Atif.Abueida@notes.udayton.edu), Department of Mathematics, 300 College Park, Dayton, OH 45469-2316. *Multidecomposition of the Complete Graph with Various Leaves.*

A *graph-pair of order t* is two non-isomorphic graphs G and H on t non-isolated vertices for which $G \cup H \cong K_t$ for some integer $t \geq 4$. Given a graph-pair (G, H) , we say (G, H) divides some graph K if the edges of K can be partitioned into copies of G and H with at least one copy of G and at least one copy of H . We will refer to this partition as a *(G, H) -multidecomposition* of K . In this talk, we consider the existence of multidecompositions of the complete graph into graph-pairs of order 4 and 5 with various leaves. (Received August 30, 2005)