

MR3526661 [05C20](#) [05C70](#)**Beeler, Robert** [[Beeler, Robert A.](#)] (1-ETNS-SS);**Gardner, Robert** [[Gardner, Robert Bentley](#)] (1-ETNS-SS);**Gwellem, Chrysanthus** (1-AUTM);**Lewenczuk, Jan** [[Lewenczuk, Janice](#)] (1-NESCC-DMS)**Decompositions, packings, and coverings of the complete digraph with orientations of $K_3 \cup \{e\}$. (English summary)***Util. Math.* **100** (2016), 153–167.

Summary: “There are eight orientations of the complete graph on three vertices with a pendant edge, $K_3 \cup \{e\}$. Two of these are 3-circuits with a pendant arc and the other six are transitive triples with a pendant arc. Necessary and sufficient conditions are given for decompositions, packings, and coverings of the complete digraph with each of these eight orientations of $K_3 \cup \{e\}$.”