

## EVERY 8-TRACEABLE ORIENTED GRAPH IS TRACEABLE

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### Abstract

A digraph of order  $n$  is  $k$ -traceable if  $n \geq k$  and each of its induced subdigraphs of order  $k$  is traceable. It is known that if  $2 \leq k \leq 6$ , every  $k$ -traceable oriented graph is traceable but for  $k = 7$  and for each  $k \geq 9$ , there exist  $k$ -traceable oriented graphs that are nontraceable. We show that every 8-traceable oriented graph is traceable.

**Keywords:** oriented graph, traceable, hypotraceable,  $k$ -traceable, generalized tournament.

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