

Immersion of complete digraphs in Eulerian digraphs

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We say that a digraph G immerses a digraph H if there is an injection f from the vertices of H to the vertices of G and a collection of pairwise edge disjoint paths, one for each edge uv in H , such that the path corresponding to uv starts in $f(u)$ and ends in $f(v)$. We prove that every Eulerian digraph with minimum degree t immerses a complete digraph on at least ct vertices, for some positive constant c . This answers a question of DeVos, McDonald, Mohar and Scheide (2012), and is joint work with António Girão.