عنوان مقاله:

On the complexity of the colorful directed paths in vertex coloring of digraphs

نویسندگان:

S. Saqaeeyan - *Abadan Branch, Islamic Azad University*

. Esmaeil Mollaahmadi - *Sharif University of Technology*

Ali Dehghan - *Amirkabir University of Technology, Tehran, Iran*

خلاصه مقاله:

The colorful paths and rainbow paths have been considered by several authors. A colorful directed path in a digraph G is a directed path with $\chi(G)$ vertices whose colors are different. A v-colorful directed path is such a directed path, starting from v. We prove that for a given ۳-regular triangle-free digraph G determining whether there is a proper $\chi(G)$-coloring of G such that for every $v \in V(G)$, there exists a v-colorful directed path is $\mathbf{NP}$-complete.

کلمات کلیدی:

Colorful Directed Paths, Computational Complexity, Vertex Coloring