

Universal Cycles of Graph Colorings

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A universal cycle enumerates the elements of a set in such a way that cycling through the set one k -window at a time exhibits each element exactly once. U-cycles have been shown to exist for k -ary strings, permutations, graphs, discrete functions, posets, and even juggling patterns. We consider whether u-cycles exist for k -colorings of a labeled graph G , and discover this actually encompasses and expands on many of the other combinatorial objects previously studied.