ARNOTT KIDNER, Memorial University of Newfoundland

Γ-switchable 2-colourings

Informally, a (m, n)-mixed graph is a mixed graph whose edges are assigned m colours and arcs are assigned n colours. For a permutation π that acts on the edge colours, arc colours, and arc orientations, we say switching at a vertex v with respect to π changes the edges/arcs incident with v with the action of π. We show that it is polynomial time decidable to determine whether; for a fixed permutation group, there admits a sequence of switches on a (m, n)-mixed graph such that the resulting graph admits a homomorphism to a simple target on 2 vertices.