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Firefighting on K_4 minor free graphs

Let G be a connected graph with $n \geq 2$ vertices. Suppose that a fire breaks out at a vertex v of G and a firefighter then protects a vertex not yet on fire. Afterwards, the fire spreads to all its unprotected neighbours in each time interval. The fire and firefighter take turns until the fire can no longer spread.

The survival rate of G can be thought of as the expected proportion of vertices the firefighter can save when a fire breaks out at a random vertex. The discharging method is used to obtain results on the survival rate of K_4-minor free graphs.

This is joint work with P. Wang and W. Wang.