



## SEMINARIUM MATEMATYKA DYSKRETNA

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### Locally irregular colorings of powers of cycles

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A graph  $G$  is called locally irregular if every two adjacent vertices in  $G$  have different degrees. An edge coloring (not necessarily proper) of a graph  $H$  is locally irregular if all color classes induce locally irregular subgraphs of  $H$ . We give a proof that the  $k$ -th power of a cycle admits a locally irregular edge 2-coloring (i.e., it can be partitioned into two locally irregular subgraphs) whenever it is different from a complete graph. This is joint work with Igor Grzelec, Tomáš Madaras and Roman Soták.