# Interval colouring of oriented graphs

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An oriented graph is *interval colourable* if it admits an arc colouring with integers such that, for every vertex, the integers assigned to the in-arcs incident to this vertex are pairwise distinct, the integers assigned to the out-arcs incident to this vertex are also pairwise distinct, and both of these sets form intervals of integers. Since there exist oriented graphs that are not interval colourable, we analise the *interval colouring reorientation number* of an oriented graph $D$, denoted by $icr(D)$, defined as the minimum number of arcs of $D$ that should be reversed so that a resulting oriented graph is interval colourable.

In this talk, we present properties and constraints of the interval colouring reorientation number, as well as its connections to other well-known parameters studied in the theory of graphs and digraphs.

## References

[1] M.Borowiecka-Olszewska, E.Drgas-Burchardt, R.Zuazua, On interval colouring reorientation number of oriented graphs, *Discrete Appl. Math.* 2025 pp.65-80.