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*Homogeneous sets for colorings of  $\mathbb{N}$*

I will discuss joint work with Carl Jockusch, in particular the result that there is a 3-coloring  $c$  of  $\mathbb{N}$  such that every 2-coloring of  $\mathbb{N}$  has an infinite homogeneous set that does not compute an infinite homogeneous set for  $c$ . This result is related to a variation on the notion of infinite information reducibility introduced by Dzhafarov and Igusa, as well as to the project of comparing  $\Pi_2^1$  principles via computability-theoretic notions of reduction.