

## ***Non-bipartite $k$ -common graphs***

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**Zoom meeting ID: 613 055 95836 Password: 121323**

**Link: <https://zoom.com.cn/j/61305595836>**

**Abstract:** For a given integer  $k \geq 2$ , a graph  $H$  is said to be “ $k$ -common” if the number of monochromatic copies of  $H$  in a  $k$ -coloring of the edges of an  $n$ -vertex complete graph is asymptotically minimized by a random coloring. Note that the case  $k = 2$  coincides with the notion of common graphs introduced in 1960s.

We construct the first examples of non-bipartite  $k$ -common graphs for  $k \geq 3$ , which resolves a problem of Jagger, Stovíček and Thomason from 1996.

This is a joint work with Dan Kral, Jon Noel, Sergey Norin and Fan Wei.