We mainly consider new kinds of hypergraph colorings where the conditions on the edges are given with parity constraints. This is joint work with Július Czap. We also plan to mention some problems where the cardinalities of the largest monochromatic and largest multicolored subsets inside the edges are bounded (from above and/or from below). Those studies are done jointly with Csilla Bujtás.

**Keywords:** hypergraph, parity coloring, mixed hypergraph, color-bounded hypergraph.

**AMS Subject Classification:** 05C15, 05C65.