Lewis & Clark College

Department of Mathematical Sciences

Problem of the Week #7 (Spring 2018)

For any real numbers a, b with $a < b$, let $[a, b]$ denote the closed interval with end points a and b. Given any finite collection of closed intervals

$$[a_1, b_1], [a_2, b_2], \ldots, [a_n, b_n]$$

such that any two of them have at least one point in common, show that there must be some point common to all the intervals.