Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: January 2015

There are 2015 points in the space, no three of them are lying on the same line and no four of them are lying on the same plane. Any pair of points is connected by a segment. The k-coloring of these $\binom{2015}{2}$ segments is a coloring of each segment into one of the k colors so that each color is used at least once. Find the minimal possible value of k for which any k-coloring contains a triangle with differently colored edges.