1035-05-1163 **Jeong-Hyun Kang*** (jkang@westga.edu), Department of Mathematics, University of West Georgia, Carrollton, GA 30118, and **Hiren Maharaj** (hmahara@clemson.edu), Department of Mathematical Sciences, Clemson University, Clemson, SC 29634. *Distance graph – p-adic approach.*

For a given subset D of the positive integers, the integer distance graph $G(\mathbb{Z}, D)$ is defined on the set of integers as vertex set and two vertices are adjacent if the (Euclidean) distance between them belongs to D. We want to characterize its chromatic number according to the distance set D.

The integer distance graphs were first systematically studied by Eggleton–Erdős–Skilton in 1985, and have been investigated in many ways.

In this talk, we approach the problem under p-adic norm. The chromatic numbers of some distance sets will be determined under p-adic distance. We discuss how the p-adic results can be connected to and complement some of the results in Euclidean norm.

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