

1122-05-172

**Michael Tait\*** (mtait@cmu.edu), Pittsburgh, PA 15224, and **Craig Timmons**. *Polarity graphs coming from planar polynomials.*

Given a planar polynomial one may construct a projective plane. If this plane admits a polarity, one may construct the corresponding polarity graph. We study the independence and chromatic numbers of such polarity graphs. This work recovers theorems about the independence and chromatic numbers of the Erdős-Renyi orthogonal polarity graph, but also applies to many other polarity graphs, including graphs coming from non-desarguesian planes and graphs where the polarity is neither orthogonal nor unitary. (Received August 12, 2016)