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Louiza Fouli and **Susan Morey*** (morey@txstate.edu), Department of Mathematics, Texas State University, 601 University Drive, San Marcos, TX 78666. *Depths of Powers of Edge Ideals of Graphs.*

There is a one-to-one correspondence between square-free monomial ideals generated in degree two and graphs given by associating to any graph G the ideal $I(G)$ whose generators correspond to the edges of G . We will use the relationship between a graph and its edge ideal to give lower bounds on the depths of such ideals. We will also show how similar bounds can sometimes be obtained for the depths (or equivalently the projective dimensions) of powers of these ideals. (Received August 15, 2013)