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Trung Vu* (vu2@stolaf.edu), St. Olaf College, 1500 St. Olaf Avenue, Northfield, MN 55057,
and **Kosmas Diveris** (diveris@stolaf.edu), St. Olaf College, Mathematics, Statistics and
Computer Science Department, Northfield, MN 55057. *Matrix square roots of polynomials.*

In this research, we consider matrix factorizations of a polynomial where the two matrices appearing in the factorization are the same, which we call “matrix square roots.” The main result is that any polynomial in $\mathbb{R}[x_1, \dots, x_n]$ admits a matrix square root. Our proof is constructive and provides an algorithm for constructing these matrices. (Received August 09, 2018)