Jiu Ding*, Department of Mathematics, 118 College Dr, Box 5045, Hattiesburg, MS 39406, and Noah Rhee (rheen@umkc.edu), Department of Mathematics and Statistics, Kansas City, MO 64110. Solving a quadratic matrix equation.

Let A be square matrix. We try to solve the quadratic matrix equation $\mathrm{AXA}=\mathrm{XAX}$ for some classes of matrices A to find all commuting solutions or all solutions. Such classes include diagonalizable and nilpotent ones. (Received January 04, 2016)

