1117-15-90Jiu Ding*, Department of Mathematics, 118 College Dr, Box 5045, Hattiesburg, MS 39406, and
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64110. Solving a quadratic matrix equation.

Let A be square matrix. We try to solve the quadratic matrix equation AXA = 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)