ALL NON–COMMUTING SOLUTIONS OF THE YANG–BAXTER MATRIX EQUATION FOR A CLASS OF DIAGONALIZABLE MATRICES

QIANGLIAN HUANG, MANSOUR SAEED IBRAHIM ADAM, JIU DING AND LANPING ZHU

Abstract. Let $A$ be a complex matrix such that its square equals the identity matrix. We solve the matrix equation $AXA = XAX$ to construct all the solutions. This finishes our task for finding all the non-commuting solutions, continued from the authors’ previous work.


Keywords and phrases: Yang-Baxter matrix equation, non-commuting solution, diagonalizable matrix, eigenvalue, spectral perturbation.

REFERENCES