

Correction to "2-products of Idempotent by Nilpotent Matrices"

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September 21, 2024

Page 6, line 1

It is stated that "the + (plus) equation has the solutions (0,0), (-1,0) and the - (minus) equation has the same solutions and two more: (2,2), (1,-2)".

It should be corrected as follows: the - equation has the solutions (0,0), (1,0) and the + equation has the same solutions and two more: (-2,2) and (-1,2).

However, the last line of the proof remains true and so is the statement of Example 2.9.

Page 9, line -1

The equalities are:

$$\begin{bmatrix} 0 & r \\ 0 & 1 \end{bmatrix} \begin{bmatrix} 0 & 0 \\ s & 0 \end{bmatrix} = \begin{bmatrix} rs & 0 \\ s & 0 \end{bmatrix} = \begin{bmatrix} rs & r^2s \\ s & rs \end{bmatrix} \begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}.$$

Some minus signs are missing. It should be

$$\begin{bmatrix} 0 & -r \\ 0 & 1 \end{bmatrix} \begin{bmatrix} 0 & 0 \\ -s & 0 \end{bmatrix} = \begin{bmatrix} rs & 0 \\ -s & 0 \end{bmatrix} = \begin{bmatrix} rs & r^2s \\ -s & -rs \end{bmatrix} \begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}.$$

Page 11, lines 10-11

The lines should be replaced by:

We start with the matrix $A = \begin{bmatrix} 26 & 4 \\ -78 & -12 \end{bmatrix}$. Using Theorem 2.2 with $c = -3$, $a = 1$, $b = 0$, we get an IN-decomposition: $A = ET = \begin{bmatrix} 1 & 0 \\ -3 & 0 \end{bmatrix} \begin{bmatrix} 26 & 4 \\ -169 & -26 \end{bmatrix}$. Everything bellow holds true.