Werk

Label: Errata

Jahr: 1972

PURL: https://resolver.sub.uni-goettingen.de/purl?316342866_0013|log40

Kontakt/Contact

CORRECTION

to my paper ON PAIRS OF MATRICES WITH PROPERTY L

Jiří KOPÁČEK, Praha

The proof of Theorem 2 in [1] is not correct. We have used, that the ortonormal basis $t_1^{\vec{j}}(\alpha)$, $t_2^{\vec{j}}(\alpha),\dots, t_{p_j}^{\vec{j}}(\alpha)$ in eigensubspace $N_j(\alpha)$ of matrix $A(\alpha)$ may be taken analytic in some neighbourhood of each point $\alpha_0 \neq \alpha_{\ell k}$. But in general the procedure of orthonormalisation violates (in general) analyticity.

Nevertheless the theorem is true. This may be seen as follows: In [1] we have proved that under the conditions of the theorem 2 the matrix $A(\alpha) = \alpha A + B$ is diagonable for all α complex. Since B is diagonable, it follows that $\alpha A + \beta B$ is diagonable for all α , β complex. By the theorem 4 in [2] we get that A and B are diagonable simultaneously and therefore they commute.

References

[1] J. KOPÁČEK: On pairs of matrices with property L,Comment. Math.Univ.Carolinae 8(1967),453-457.

[2] T.S. MOTZKIN, O. TAUSSKY: Pairs of matrices with property L, II.TAMS 80(1955),387-401.