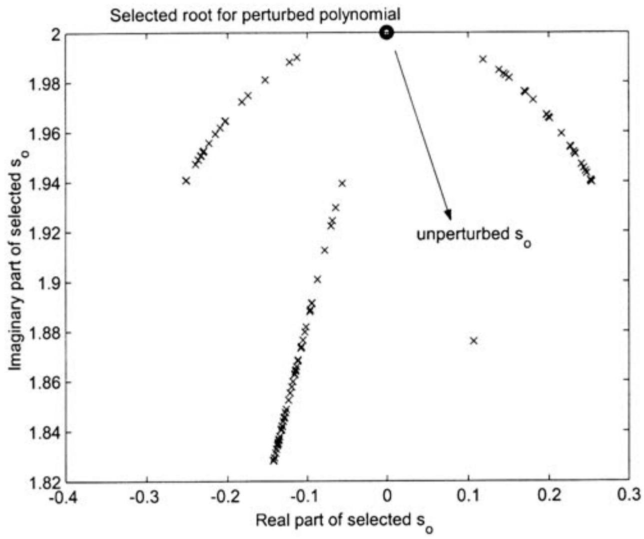

Fig. 10. Selected root persistently located around the unperturbed root $2j$

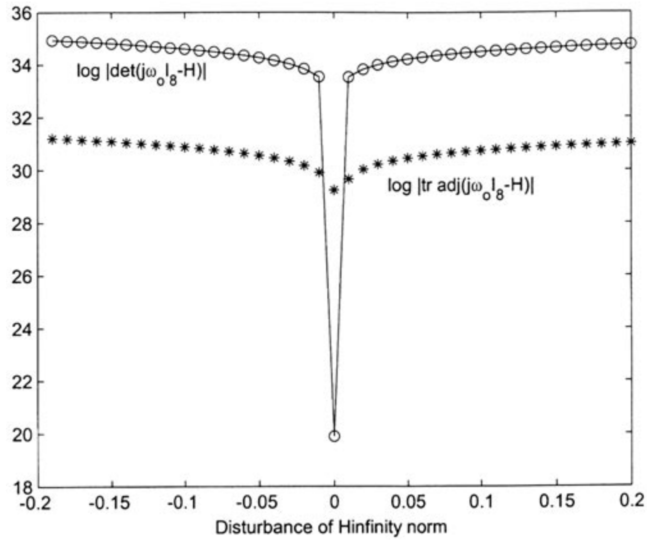

Fig. 11. Absolute value of search conditions in a small vicinity around the target infinity norm

4.2 Example 4

Predetermined H_∞ norm schedule: For the same settings as in Example 2, the algorithm of Eqs. (35) to (38) is carried out. In order to present the consistency of this search procedure, in Fig. 11 the expressions det $(j\omega_o \mathbf{I}_8 - \mathbf{H})$ and tr adj $(j\omega_o \mathbf{I}_8 - \mathbf{H})$ are pointed out versus the resulting infinity norm in a small-scale disturbance. The gaps are deep with very steep ascents. During the search process, occasionally unstable $\mathbf{A}_{cl}$ must be excluded since the H_∞ norm defined via Hamiltonian requires a stable coefficient matrix.

References

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Weinmann, A. (2004): Optimal assignment of multiple control system eigenvalues with minimum controller norm. e & i 121 (2): 37–42.

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BERICHTIGUNG

In Heft 12 (2003) wurde die Gleichung (1) auf S. 463 nicht korrekt dargestellt.

Richtig lautet es:

$$R(t_1, t_2) = \exp(-\lambda_1 t_1) \cdot (1 - (1 - \exp(-\lambda_{2,TM} t_2))^T) \cdot \exp(-\lambda_{2,AWM} t_2)^A.$$