

Correction of the Numerical Example in

“R. Sipahi, I.I. Delice, Advanced Clustering With Frequency Sweeping Methodology for the Stability Analysis of Multiple Time-Delay Systems, IEEE Trans. Aut. Con. 56(2), 467-472”

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We wish to correct a part of Case 1 numerical case study presented in [1] on pg 471. Although the authors revealed accurately the potential stability switching curves (PSSC), the gray shaded region in Fig 1 of [1] was accidentally labeled as “stable region.” Using BIFTOOL [2], it is trivial to find out however that the gray shaded region in Fig 1 of [1] is actually an “unstable” region with the number of unstable roots (NU) of the system being equal to two. In Figure A, the NU distribution computed with BIFTOOL is presented along with the PSSC carried from Fig 1 of [1], to clarify this point. Rest of the numerical results in this case study remains unchanged.

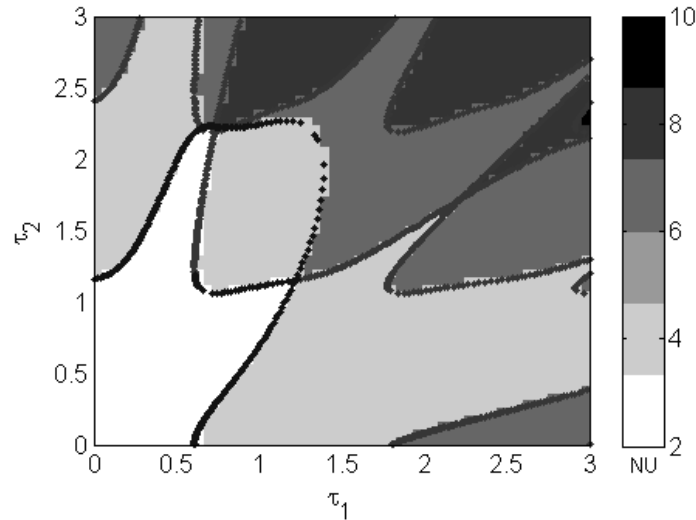


FIGURE A: The number of unstable (NU) roots of the system in Case 1 of [1] computed by BIFTOOL [2] superimposed with the potential stability switching curves (PSSC) found in Fig 1 of [1] using ACFS. Computation of this figure was carried out with coarse step size but without sacrificing the accuracy of the results.

REFERENCES:

- [1] R. Sipahi, I.I. Delice, Advanced Clustering With Frequency Sweeping Methodology for the Stability Analysis of Multiple Time-Delay Systems, IEEE Trans. Aut. Con. 56(2), 467-472.
- [2] K. Engelborghs, T.Luzyanina, G. Samaey, DDE-BIFTOOL v. 2.00: a Matlab package for bifurcation analysis of delay differential equations, Technical Report TW-330, Department of Computer Science, K.U.Leuven, Leuven, Belgium, 2001.