The first remark is that there exists a third alternative to the two choices cited in Ref. 1; namely, a need to 1) reduce or condense the analytical model to the size (coordinate set) of the experimental model or 2) expand the experimental mode shapes to the full analytical model size.

The third alternative, discussed in the Comment, is simply to use those data that are available without seeking to make both analytical and experimental models be of the same order.

The authors agree that this is an alternative strategy that can be implemented not only in the sensitivity method outlined in the Comment but also in the error matrix method[3] and in the more recent response function method.[4] However, there exist a number of model improvement methods that *do* require expansion to the full size, and these are generally ones that incorporate a version of the orthogonality properties in their formulation, including the direct matrix update and eigendynamic constraint methods. For these, the third option is not really applicable.

The second remark refers to Eq. (10) of the original paper.[1] The authors acknowledge the possibility discussed in the Comment of implementing a singular value decomposition based solution for the unknown $[\Delta K]$ and $[H]$ matrices. Indeed, a very similar procedure has been explored in Ref. 4. However, the context of Eq. (10) in the paper is its potential for *locating* regions of error without the need for any matrix inversion at all. The point made in the paper is that the matrix expression on the right-hand side of Eq. (10), which can be readily computed, displays explicitly the error-affected coordinates (rows and columns) of the model. In this respect, the expression is offered as a convenient way to focus attention on the important areas of the model (error localization), a process that can greatly improve the subsequent updating task.

## References

[1]He, J., and Ewins, D. J., "Compatibility of Measured and Predicted Vibration Modes in Model Improvement Studies," *AIAA Journal*, Vol. 29, No. 5, 1991, pp. 798–803.

[2]Sidhu, J., and Ewins, D. J., "Correlation of Finite Element and Modal Test Studies of a Practical Structure," *Proceedings of the 2nd International Modal Analysis Conference*, Union College, Schenectady, NY, and Society for Experimental Mechanics, Bethel, CT, 1984, pp. 756–762.

[3]Lin, R.-M., and Ewins, D. J., "Model Updating Using FRF Data," *Proc. Int. Conf. Modal Analysis*, Leuven, Belgium, Sept. 1990.

[4]Leiven, N., and Ewins, D. J., "Error Location and Updating of Finite Elements Models Using Singular Value Decomposition," *Proceedings of the 8th International Modal Analysis Conference*, Union College, Schenectady, NY, and Society for Experimental Mechanics, Bethel, CT, 1990, pp. 768–773.

# Errata

## Exploratory Design Studies of Actively Controlled Wings Using Integrated Multidisciplinary Synthesis

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DURING final corrections to this article, E. Livne's name was inadvertently misspelled. We regret this error.