

3) To suggest using equilibrated actuator force groups instead of individual nodal forces as a way of making the force control problem identical in form to the thermal control problem.

I agree with all of the comments, but the following clarifications are in order.

1) The alternate discrete derivation presented by Professor Baruch is very similar to that presented in Ref. 1 (Ref. 15 of my paper), and can be obtained from it by setting the mass matrix equal to the identity matrix.

2) The use of equilibrated force groups does remove the need for special treatment for force controls, but it may not be as convenient to the designer. Therefore the special treatment presented in the paper is useful.

References

¹Haftka, R. T. and Adelman, H. M., "An Analytical Investigation of Shape Control of Large Space Structures by Applied Temperatures," presented at the 4th VPI&SU/AIAA Symposium on Dynamics and Control of Large Structures, Blacksburg, Va., June 1983; also, *AIAA Journal*, Vol. 23, March 1985, pp. 450-457.

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- "Swirling Flow in a Research Combustor," Vol. 23, No. 2, 1985, pp. 241-248. The second author's name is H. T. Somer; he is Assistant Professor at Carnegie-Mellon University. In Ref. 11, the last name of the second author is Gouldin.

- "The Circular Cylinder in Subsonic and Transonic Flow," Vol. 22, No. 2, 1984, pp. 1713-1718. In the caption for Fig. 8, $\Delta t = 30 \mu s$, not $0.30 \mu s$.

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