



## LETTERS TO THE EDITOR



### COMMENT ON "VIBRATION ANALYSIS OF CANTILEVERED SHALLOW SHELLS WITH TRIANGULAR AND TRAPEZOIDAL PLANFORMS"

S. M. DICKINSON

*Department of Mechanical and Materials Engineering, The University of Western Ontario,  
London, Ontario, N6A 5B9, Canada*

(Received 13 May 1996)

The writer wishes to compliment Professor Qatu on his interesting and useful paper [1]. In his summary it is suggested that the results presented are "the first known natural frequencies for cantilevered shallow shells having triangular and trapezoidal planforms". At the time of submission of the paper, that likely was true; it likely remains true for the trapezoidal shells. However, the present writer would like to bring to the attention of interested readers that some natural frequency parameters for cantilevered, right and isosceles triangular planform, shallow shells have also been given by Young and Dickinson [2] in a paper on shells of more general planform and which appeared subsequent to the submission date of reference [1]. As with the work of Qatu, the Ritz method was used with simple polynomials as trial functions and, it is expected, would have yielded identical results had the same shells been studied with the same number of terms in the displacement series. The results in reference [2] complement those of Qatu.

#### REFERENCES

1. M. S. QATU 1996 *Journal of Sound and Vibration* **191**, 219–231. Vibration analysis of cantilevered shallow shells with triangular and trapezoidal planforms.
2. P. G. YOUNG and S. M. DICKINSON 1995 *Journal of Sound and Vibration* **181**, 215–230. Vibration of a class of shallow shells bounded by edges described by polynomials, part 2: natural frequency parameters for shallow shells of various different planforms.

#### AUTHOR'S REPLY

M. S. QATU

*Department of Mechanical Engineering, Lake Superior State University,  
Sault St. Marie, MI 49783, U.S.A.*

(Received 24 July 1996)

The comment made by Professor Dickinson is correct. The paper by Young and Dickinson (reference [1]) appeared before the author's paper (reference [2]). The author did know that Professor Dickinson was working on a similar class problems (and actually checked some benchmark calculations with him prior to submitting the paper for publication). Unfortunately, the particular paper by Young and Dickinson mentioned above was not known to the author at the time he submitted his paper for publication.

#### REFERENCES

1. P. G. YOUNG and S. M. DICKINSON 1995 *Journal of Sound and Vibration* **181**, 215–230. Vibration of a class of shallow shells bounded by edges described by polynomials, part 2: natural frequency parameters for shallow shells of various different planforms.
2. M. S. QATU 1996 *Journal of Sound and Vibration* **191**, 219–231. Vibration analysis of cantilevered shallow shells with triangular and trapezoidal planforms.