

trical Digital Computers in Structural Engineering, Univ. of Newcastle upon Tyne, 1966.

⁶ Bazeley, G. P. et al., "Triangular Elements in Plate Bending—Conforming and Nonconforming Solutions," Conference on Matrix Methods, Air Force Institute of Technology, Dayton, Ohio, 1965; also see Addendum.

⁷ Zienkiewicz, O. C. and Cheung, Y. K., *The Finite Element Method in Structural and Continuum Mechanics*, McGraw-Hill, New York, 1967.

⁸ Irons, B., "Testing and Assessing Finite Elements by an Eigenvalue Technique," Royal Aeronautical Society Conference on Recent Advances in Stress Analysis, March 1968.

⁹ Anderson, R. G. et al., "Vibration and stability of plates using finite elements," *International Journal of Solids and Structures*, Vol. 4, No. 10, Oct. 1968, pp. 1031–55.

¹⁰ Ahmad, S., "Pseudo-Isoparametric Finite Elements for Shell and Plate Analysis," Joint British Committee on Stress Analysis Conference on Recent Advances in Stress Analysis, R.Ae.S., London, March 1968.

Reply by Authors to B. M. Irons

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THE authors are pleased that their Note should have led B. Irons to discuss an important aspect of convergence in the finite element methods. They are, in fact, concerned that the comments made may not be lost, being only part of a discussion, instead of being put out as a Note in its own right.

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However, the authors are not clear exactly where they have been "misguided," for they cannot trace any real contradiction between their statements and Dr. Irons' comments. The authors' viewpoint was that, whereas general polygonal elements with generalized functional descriptions are very useful for arbitrary shapes, for special shapes, like circular holes that are often used in design, it is relatively economical and convenient to apply simple tailored elements. They have the feeling that Dr. Irons is not really questioning this viewpoint, but is discussing a more general question of criteria for convergence with arbitrary elements and numerical integrations for elements.

On the other hand, the authors would like to take this opportunity to make good an oversight in their original Note. The trigonometric distributions of displacements, unlike the linear distributions (Table 1), do not adequately provide the necessary kinematic freedoms, so that one may run into convergence troubles when applying them.

Erratum: "Experimental Study of High-Enthalpy Shock-Tunnel Flow. Part I: Shock-Tube Flow and Nozzle Starting Time"

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THE correct title of Fig. 2 is "Incident-shock test time in air for laminar boundary layer."