

indicated in the cases considered herein, is that a single term in the Galerkin procedure yields almost the complete solution, whereas the solutions obtained by the classical methods, when the latter can be applied, converge much more slowly, thus requiring a number of terms before a significant part of the solution is obtained.

With regard to the domain containing holes, any number or shape of holes may be included provided each shape is expressible in terms of a single analytical curve, $f(x, y) = 0$, which does not generate zero values elsewhere in the domain. For example, for a rectangular hole bounded by the lines $x = a$, $x = b$, $y = c$, $y = d$, the function $(x - a)(x - b)(y - c)(y - d) = 0$ certainly defines the hole, but unfortunately it generates zero values away from the hole, so that this function may not be used as part of the solution.** Obviously the external boundary of the domain, whether or not the domain is multiply connected, must not be re-entrant for the same reason.

** An approximation not having this deficiency is

$$\left[x - \frac{[(b+a)/2]}{(b-a)/2} \right]^{2n} + \left[y - \frac{[(d+c)/2]}{(d-c)/2} \right]^{2n} - 1 = 0$$

which, if n is sufficiently large, resembles a rectangle with rounded corners.

In the case of the cylindrical shell, the solution presented in (67) gives good results as to both behavior in time and variation in thickness. To improve the accuracy merely requires additional terms in the assumed form of solution (61). Finally, the inclusion of terms to account for angular or axial temperature variation, or both, as given by (35) and (52) presents no difficulty. It is clear that in this case $\bar{C}_0^{(n)}$ would include m or n terms. The solution corresponding to (67) would be, therefore, an infinite series over m or n , the general coefficient of which is easily determined.

References

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- ³ Hatch, J. E., Schacht, R. L., Albers, L. U., and Saper, P., "Graphical presentation of difference solutions for transient radial heat conduction in hollow cylinders with heat transfer at the inner radius and finite slabs with heat transfer at one boundary," NASA TR R-56 (1960).

FIRST CALL FOR PAPERS

AIAA AEROSPACE SCIENCES MEETING

HOTEL ASTOR

JANUARY 20-22, 1964

NEW YORK CITY

An Aerospace Sciences Meeting has been instituted by the AIAA and will be held in New York City on January 20 to 22, 1964. The major purpose of the meeting is to provide an interdisciplinary focal point for the research and scientifically oriented specialties of the AIAA. The papers of the meeting will be devoted to problems of research and not of design. In addition to specific research reports there will be survey papers on research topics which are considered to be both timely and of broad enough scope to be of interest to development engineers who wish to be informed of some of the more recent advances in the aeronautics and astronautics field. The meeting is in part intended to supplement the various specialist conferences by covering areas which might not be encompassed by such conferences, while at the same time providing an opportunity for the participants to present their research results at a level appropriate to the subject.

This meeting is to be held in New York City at the time of the American Physical Society Annual Meeting in order that the attendees may, if they wish, take advantage of the APS Meeting.

In view of the importance of this new activity, plans are now being made by the AIAA to provide adequate journal capacity for the many fine papers which are expected to be offered.

To insure the timeliness of the papers, the abstract deadline has been set for **October 14, 1963** and the deadline for receipt of manuscripts for preprinting December 16, 1963. A second call for papers will appear in the July issue of the AIAA Journal at which time session topics where defined will be given, as well as the names of the session chairman to whom abstracts should be sent for consideration.

The AIAA Technical Committees participating in the organization of this meeting are:

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Fluid Dynamics
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Space and Atmospheric Physics
Structural Dynamics

The Steering Committee carrying out the arrangements for the meeting consists of: D. Bershader, A. Ferri, S. S. Penner, W. R. Sears, R. F. Probstein (*Chairman*).

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