# Opinions on This and That

This Journal has been serving the AIAA membership as a connection to developments in interfacial fluid dynamics and ocean engineering since 1967. During these years the backlog of manuscripts has never been large. There are some who think that it would be wise to merge with the *Journal of Ship Research* of the Society of Naval Architects and Marine Engineers, also functioning with low backlog. In view of definite views in SNAME about preserving the identity of its highly reputedJSR, I feel that JH would lose its identity, and this would be a definite loss to AIAA. We would be better off to examine the distribution of papers published and make concerted efforts to derive manuscripts in those areas where little has been submitted.

Going back to 1973, there have been 32 papers and notes dealing with interfacial effects, 11 with ocean engineering, 20 with nonfree surface fluid mechanics, 3 with powerplants and propulsion, one with materials, and one with maritime communications. We need to find sources of papers on ocean structures, ship vibration underwater acoustics, physical oceanography, ocean energy extraction, and maritime-satellite communication systems.

To be sure, much of the work in these disciplines is published in discipline-oriented journals, and it will take personal persuasion to induce authors to publish in our area-oriented Journal. Ralph Ragan's excellent proposal to appoint "honorary" editors, each knowledgeable in specific areas, should be implemented. These editors would not be asked to perform editorial tasks but to encourage submission of manuscripts to JH from researchers and engineers in their own spheres.

Also, direct contact with principle investigators in all relevant Sea Grant, Navy, Maritime Administration, and ERDA projects will be made in the next months to insure that the attributes of JH are known by them.

Of course, the widespread dearth of archival-level manuscripts is basically due to the generally declining support of both basic and applied research in the United States in favor of short-term responses to crises and applications engineering. Let us hope this trend has hit bottom and that recent reported awareness that the U.S. has fallen behind technically, as a result of the "MacNamara Syndrome," will result in a substantial increase in support of our national assets in science and engineering departments and specific laboratories in universities across the nation.

To change the subject, two years ago I complained about latter-day educational processes in colleges as being largely devoid of drill in application of fundamentals as well as reduced emphasis on manipulative skill in mathematics. A pervading weakness in the present system arises in the secondary schools, many of which appear to gear their mathematics and sciences courses to the depth required by the College Board Entrance Examinations designated as Scholastic Aptitude Tests (SAT). To achieve a good score on SATs in mathematics, one must know only the elements and be quick about it. Since the tests are largely composed of multiple-choice questions which are graded by machines, it is not possible to ask the student to analyze a problem requiring the application of several theorems or to perform any more then the most elementary manipulation in algebra and trigonometry. It is not surprising that college instructors are subsequently confronted by students, the majority of whom are completely flummoxed by mathematics requiring more than one or two steps! It is my belief that many engineers consequently are turned off by mathematical details as a result of this undemanding process and are thereafter ever impatient with authors who provide mathematical details in Journals such as ours.

The other extreme for testing of highschool students would be the use of problems requiring insight and adroit manipulations. Consider the following questions posed years ago by Webb Institute of Naval Architecture on its entrance examinations:

Express the four roots of the following equation in terms of radicals

$$(3x-5)(3x+1)^2(3x+7)+68=0$$

Show that

$$\sin\theta+\sin2\theta+\sin3\theta+\ldots=\frac{\sin\tfrac{1}{2}(n+1)\theta\sin(n\theta/2)}{\sin\theta/2}$$

when summed to $n$ terms.

Try these out on your high school seniors, and you may find, as I have, that today's courses do not reach the level of competence required years ago. There should be country-wide standards which demand an ability to solve substantial problems without over-stress on cleverness. Then a grass-roots weakness in the education of future engineers and scientists would be eliminated.

We wish to thank our reviewers, listed below, for their most diligent help and our authors for their patience and persistence. Once again I wish to express appreciation and admiration for all the assistance rendered by Ruth F. Bryans, Director of Scientific Publications, and Anne Huth, Assistant Director of Scientific Publications, and her dutiful Staff. Special thanks are due Director of Production, David L. Staiger, and Staff, for introducing and perfecting in-house, computer-controlled photographic composition.

John P. Breslin
*Editor-in-Chief*

**Reviewers for *Journal of Hydronautics*, September 1, 1975 – August 31, 1976***

| | | | |
|---|---|---|---|
| Acosta, A.J. | Court, Kenneth E. | Granville, Paul | Sallet, D.W. |
| Bai, June | Durchin, John M. | Griffin, Owen M. | Skop, Richard A. |
| Beck, R. | Fairbanks, David R. | Hires, Richard | Soosar, Keto |
| Blount, D. | Fruman, Daniel H. | Hooft, J.P. | Stens, Paul |
| Cebeci, Tuncer | Gilbert, Arthur | Kim, C.H. | Tsakonas, S. |
| Clement, Eugene | Goodman, Theodore R. | Lee, David | Ursell, Fritz |
| | | Rakowsky, Edward L. | Wehansen, John |

*Because it is difficult to include the reviewers from September, October, November, and December 1976 in this issue of the Journal, they will be listed with the reviewers for 1977, in the January 1978 issue.