



# Editorial

The Editorial Board of this Journal has been considering for the past few years the broader issues of scope, aims, and goals of archival publishing and in particular publishing in the area of fluids engineering. This has been stimulated by recent changes in the methods of communication between different sectors of the engineering community. We are also experiencing great advances in tools for research which, combined with a rise in the number of researchers, led to an increased number of papers appearing in technical journals. As a result, we are required to emphasize publication selectivity. This process will be strongly influenced by the needs of the readers. Authors are, therefore, encouraged to address themselves to the broader audience of the Journal and not just to the very few researchers who work on topics of their specialties. We understand that not all readers could be expected to follow the details of advanced methodologies. However, most fluids engineers should be able to comprehend the basic findings of a contribution and assess its significance.

The Board believes that the primary purposes of archival publishing are to communicate with readers new, significant, and useful technical information and to document such information for posterity. To serve these purposes, this Journal is seeking to publish articles in fluids engineering, namely articles that do not only make a contribution to the discipline of fluid mechanics but also have a clear relationship to a motivating engineering problem. The specific areas and topics of interest defining the scope of the Journal are listed on the inside of the back cover. This list is continuously updated in response to scientific and engineering developments. The basic criteria of the reviewing process have been outlined in an earlier editorial (March, 1991, Vol. 113, p. 1).

The following type of articles are invited.

## Contributed Articles

The mainstream articles published in an archival journal are contributed papers reporting on progress of research. Theoretical contributions should offer the framing and/or solution of a new engineering problem, or provide a significant improvement to the solution of a problem. Contributions based on experimental results should contain significant new information on the flow features of a problem or report on new experimental techniques. Adequate information should be provided for readers to be able to reconstruct and use the proposed experimental devices. Similarly, contributions based on numerical analysis should present numerical results for problems that have not previously been investigated and/or provide information on new or improved numerical techniques. Reporting on the use of a new numerical method, without documenting its superiority and supplying enough information on how to use it, is not a sufficient reason to publish a paper in this Journal.

All experimental papers should provide adequate information on the experimental uncertainty following the guidelines outlined in an earlier editorial (September, 1991, Vol. 113, p.

313). Numerical papers should also provide a thorough report on numerical accuracy. For more information on this issue the authors should refer to another earlier editorial (March, 1986, Vol. 108, p. 2). The CFD Coordinating Group of the Division is in the process of preparing a new set of guidelines for CFD papers which will appear in one of the following issues of the Journal.

All papers, theoretical, experimental, or numerical should offer a thorough discussion of the physical aspects of the results and their possible significance in fluids engineering.

A very important part of a paper is the section on conclusions. Authors will be required to prepare their conclusions in such a manner that a broad audience comprehends them. Moreover, the conclusions should make clear the significance of the authors' contributions to the permanent literature. Broad and general statements must be avoided. In case authors feel that preparing in detail and in simplified terms the basic elements of their contributions would dilute the scientific impact of their contribution, they may wish to prepare a separate section entitled "Technical Contributions." In such a section they could also include ideas on how their results could be implemented in engineering applications.

## Technical Briefs

Technical Briefs are shorter contributions which could be (i) an addendum to previously published results, (ii) material relating to new ideas, (iii) or just results of limited extent. Technical Briefs generally require shorter review times.

## Reviews

These papers are reviews of recent contributions in an area of current interest. Reviews appear every three to four years on a particular topic, include all major related references and are usually addressed to the specialists. The scope and topics in such articles are the choice of the author but care should be taken to consult the Journal Editor concerning suitability and timeliness for publication.

## Perspectives

A Perspective is a new type of article introduced by this Journal. A perspective article should provide a critical evaluation of work contributed in an area over the past ten or more years. The author of such an article should limit discussion to contributions of major significance and should provide his/her own interpretation of advances in understanding of physical phenomena based on the evidence collected over the years. For perspectives that are focused on methodology, be it experimental or numerical, the author should again provide a clear description of successful methods, supplementing it with his/her own evaluation. A good criterion to determine whether certain material is appropriate for a perspective article is its maturity. A perspective should cover material that has reached the level of completeness and acceptance that would

qualify it to be a chapter in a book. Authors are strongly encouraged to prepare such articles in a way that they could reach a broad audience.

### **Historical Articles**

In such articles we encourage authors to follow the history of thinking, not the history of events. The latter belongs to magazines like *Mechanical Engineer*. Historical articles will be valuable to the readers if they can follow the inception and maturation of significant ideas through decades of development. Discussion and clarification of pioneering earlier contributions and evaluation of how such information has impacted to our present understanding of fluid flow phenomena are strongly encouraged.

### **Editorials**

Editorials are invited on topics of interest to the readership

of the Journal. Authors wishing to contribute an editorial should submit their manuscript to the Technical Editor. Directions and guidelines for the authors also appear in the form of editorials.

### **Special Articles**

Occasionally, articles of special character appear in this Journal as, for example, reports on recent panel discussions or workshops, reports on educational issues, reports on the progress of major research efforts, etc.

### **Discussions**

Short discussions of published papers and authors' responses are also published. The readers of this Journal are encouraged to submit their Discussions directly to the Technical Editor.

**The Editorial Board**