

This Editorial Board has strived not to lose sight of the fact that its purpose is to serve its readers, not its authors. The truth is that many members of our community view archival publications as a means to establish the quality and -alas- the quantity of their work. Moreover, the service actually offered to many readers is to communicate to them information needed to carry out more research that will result in more publications. This procedure does serve an important goal of archival publishing, namely the dissemination of original information in the areas covered by a journal. But an engineering journal should also reach the practitioners. This is not easy to do. Authors tend to address themselves to their peer researchers. In this way inner cells of author/readers develop which tend to leave out the rest of the community.

The Editorial Board of this Journal has been trying to reach a broader readership by various means. For this purpose, we established a new genre, the perspective article. Such articles present a body of work recently developed in a somewhat simplified way, starting from the fundamental concepts and emphasizing the practical aspects of the findings. Not all perspectives have this character but many such articles have aimed at reaching the practicing engineer. We have also attempted to reach a broader audience by launching the Technical Forum in which short articles, opinions and outlines of technical forums are presented. In these pages, we presented, for example, a sequence of columns dealing with the U.S. technical competitiveness, the transfer of technology and others.

This year, the JFE Editorial Board has decided to try another method to attract the attention of practicing engineers. Industrial experts are invited to write a few paragraphs assessing the relevance of accepted papers to the applied engineering world. Such discussions may also include ways in which the reported results can be utilized in applications and directions which continuing work can take. These discussions are published in the same issue with the relevant papers and thus serve as a highlight of the contributed papers. A few members of the Editorial Board (Ghoneim, Humphrey, Nelik and Sindir) have formulated the details of this procedure which are described in the editorial that appeared in the March issue of JFE. In the present issue we publish the first discussions prepared by industrial experts.

The efforts described above should not be perceived as changes in the aim and scope of the Journal. This Journal seeks to publish original material in fluid mechanics and its applications. The purpose of our most recent efforts is to make the material presented in the JFE pages more interesting and more accessible to the practicing engineers. Moreover, by promoting interaction between researchers and practitioners, we hope that we will motivate the research community to define and attack fundamental problems of interest to industry. Examples of such problems are described in the review articles that appear in this issue.

To emphasize our plans of reaching out to industry, we chose as a theme of this issue industrial fluid dynamics. Papers dealing with research directly related to industrial problems in fluid mechanics were collected and grouped together at the beginning of the issue. This Journal publishes routinely such papers but in this issue we have collected a few more than usually included in an issue and highlighted them by placing them ahead of the other contributions. We begin with a review of applications of computational fluid dynamics to a variety of fluids engineering problems encountered in automotive engineering. These are problems like the flow through exhaust manifolds, ventilation in the interior of an automobile, or underhood fluid flow for which so far we relied on simplified and crude models. This is followed by a perspective describing pump design experiences in the past few decades and defining the present needs and expectations for research and development in this area. The third article is a little more narrow in scope but goes deeper into the character of the flow and the operations of automotive torque converters.

Following the review articles we have three contributed papers on impeller characteristics and another discussing the flow through a pump guide vane. A paper dealing with hydraulic transients and vibrations and another on calculations of flow within the engine follow. Another problem of significance to industry is pipe flows. In this issue we include four papers dealing with crude oil transport, wavy-to-slug flow transition, buoyancy-driven air-water mixture and orifice flow characteristics in oil lines respectively. These papers are followed by three contributions on multi-phase flow. Two deal with cavitation and the third with airblast atomizers. Finally, we include here a paper on fish-tail curved diffusers and a paper on enclosure flows in torsionally-shaped geometries. The technical briefs at the end of the pages of this issue are led by three contributions of interest to industry. The first deals with a multiple-disk fan, the second describes a method to measure pressure gradients in capsule-liquid flows and the third is concerned with wind loads on low-rise structures. The technical forum also is devoted to the theme of this issue. It contains a report on a serious effort to bring together researchers and practitioners of automotive engineering.

Discussions of the engineering significance to industry for some of the above papers are presented following the Technical Forum. We would like to thank here the following individuals who prepared discussions: Mark W. Johnson, Weir Pumps; Arthur Lefebvre, Pebworth; Glenn Cunningham, Williams Technologies, Inc.; Dr. W. J. Meiring, Shell International Oil Products, B. V.

**D. P. Telionis
J. A. C. Humphrey
M. M. Sindir**