

Advances in Transport Processes, edited by A. S. Mujumdar, Halstead Press/Wiley Eastern Limited, New Delhi. Vol. I, 1980, 263 pp., price \$27.95. Vol. II, 1982, 432 pp., price \$37.95.

How to Write and Publish Engineering Papers and Reports, by H. B. Michaelson, ISI Press, Philadelphia, 1982, 158 pp., price \$17.95.

REVIEWED BY FRANK M. WHITE

These two volumes mark the beginning of a new cloth-bound series of review articles on fluid dynamics and other aspects of transport processes. The articles are wide-ranging, with a diverse international authorship. The books are printed in India with excellent type composition and clear, sharp figures. However, the paper is of rather poor quality – thin, rough, and porous – the benefit to the reader being a considerably lower price than comparable review series.

Volume I presents five reviews of about 50 pages each: Blood Flow, by V. L. Shah; Two-Phase Gas Non-Newtonian Flow, by R. Mahalingam; Mass Transport in Electrochemical Systems, by T. Z. Fahidy and S. Mohanta; Numerical Methods for Viscous Flow Problems, by M. M. Gupta; and Mixing of Viscous Newtonian and Non-Newtonian Fluids, by V. V. Chavan and R. A. Mashelkar. In general, the articles are less general than they sound. For example, Shah's blood flow review is primarily concerned with entrance and diffusion effects in straight tube flow. Similarly, Gupta's numerical methods review concentrates on the traditional stream function/vorticity technique plus a brief discussion of the MAC method. One senses that these articles, though very interesting to the nonexpert such as this reviewer, are not presenting the state of the art as described, say, in the program of the last ASME Winter Annual Meeting. They do serve the goal expressed by the editors that engineer readers learn about scientific advances in transport processes while scientists learn about the practical problems to be faced.

Volume II contains six reviews: Modelling of Aquatic Systems, by L. T. Fan et al.; Non-Newtonian Circular Entry Flows, by D. V. Boger; Electrohydrodynamic Enhancement of Convective Transfer, by F. A. Kulacki; Dust Removal from Gas Streams by Filters, by S. C. Saxena and W. M. Swift; Multiphase Flow Models, by R. W. Lyczkowski et al.; and Movement of Particles in Flow Fields, by H. Brauer. Again the work may be somewhat dated and not too general. Brauer's review of particle motion, for example, leans heavily on simple drag correlations and flow field descriptions and is much less general than a gas-particle textbook we reviewed here in December 1981. The review of multiphase flow models does seek generality at the expense of being utterly uncritical: model after model is thrown at us without recommendations or judgments. Kulacki's review of electrohydrodynamic enhancement was especially interesting and educational.

This new review series serves a good purpose of educating engineers to new fields of fluids engineering. They are recommended especially for library acquisition.

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A how-to-do-it book on this topic is normally a turn-off for research engineers, who might typically grumble, "I don't need no double-dome English teachers to show me how to write good." And they are often right. Further, a positive review by myself might be interpreted merely as an act of self-defense in my role as a *Transactions* editor.

But this book is a jewel. There is no one I know who would fail to benefit from it. This author has put so much thought and insight into the manuscript and knows so much more about writing and publishing than the rest of us that it isn't funny. The reviewer is filled with editor-envy.

The title only hints at the broad scope of the book. There are 22 chapters covering every phase of engineering communications, beginning with the selection of the proper journal and audience. There is a chapter on writing abstracts – did you know there are three different kinds of abstract, each with a different purpose? There is a chapter on organizing and writing as you go, thus preserving the excitement of the research as it occurred. There is a chapter on how to select and draw proper illustrations.

A chapter on word processing and home computers conveys the subtle power of these new tools, in addition to describing the newest software packages which correct spelling, replace poor words with better synonyms, punctuate, proofread, and improve the style of manuscripts. And there is a very useful chapter showing how to compile a bibliography either by hand or by computer search. What not to do is explained also.

There are chapters on how to deal with journal editors and how to rebut critical reviewers. There is a complete list of proofreading symbols and how to use them. And there is a long section on how to prepare and deliver an oral presentation, including tips on visual aids.

A softcover version is also available at \$11.95. If every reader and contributor to the JFE would read this book, a measurable improvement in our meetings and journals would be predicted by this reviewer.

An Album of Fluid Motion, edited by Milton van Dyke, The Parabolic Press, PO Box 3032, Stanford CA 94305, 1982, 176 pp., price \$10.00 (paperback).

REVIEWED BY FRANK M. WHITE

One of the glories of fluid mechanics is its ready adaptability to flow visualization techniques. This book celebrates that fact with an album of 282 photographs of flow