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1944 1984
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From the Editor-in-Chief

Walking across the software landscape can be a very tricky proposition. All too often you find yourself surrounded by a quagmire of unfulfilled promises with little firm ground of accomplishment upon which to tread.

Many of the challenges facing the software industry today are a direct result of our insatiable appetite for new computer-based systems applications. Others confront us simply because we have not managed to successfully solve a large number of problems that we ourselves created many years ago.

Specifically, we still, by and large, lack the necessary methods to increase our ability to design and implement high-quality systems. We do not have, nor are we able to teach to those entering the field, methods to significantly increase programming productivity. We have not yet developed a specification and verification methodology and its supporting technology that can be used by the bulk of software practitioners.

We need to make short-term progress in a variety of areas because of ever-increasing demands made on our industry. These demands come largely from the important application areas of knowledge-based systems, decision support systems, office information and automation systems, mixed voice/data/picture-based communications systems, and local and wide-band networks. Specifically, we need

to see rapid progress in tools and environments for specifying, designing, implementing, and testing systems; automatic programming; document preparation environments; operating systems, security, reliability, and services; and programming languages and the associated compiler technology for distributed and highly parallel systems.

Through the breadth and diversity of its membership, the IEEE Computer Society, aided by this new quarterly publication, is in a unique position to bring attempts to negotiate the constantly shifting software terrain into focus.

The Editorial Board of *IEEE Software* has the ambitious goal of making this publication one of the pre-eminent magazines for software practitioners—a periodical that these professionals will read to help them understand software and software-related issues. To do this, *IEEE Software* must be informative, timely, technically stimulating, and useful. Consequently, it will emphasize current practice and experience, together with interesting ideas for the future. The complete "Guidelines for Authors" is published on pp. 7-8 to aid those who wish to submit articles to guide us. These guidelines detail the audience, content, and standards for *IEEE Software*.

In addition to technical articles, *IEEE Software* will have a number of regular departments that all

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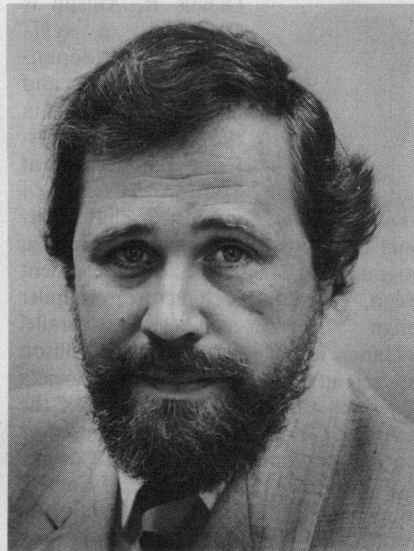
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Bruce D. Shriver is the Alfred Lamson Research Professor of Computer Science at the University of Southwestern Louisiana. Previously, he was on the faculty of the University of Aarhus in Denmark and, prior to that, California Polytechnic University, Pomona. He served on the Editorial Board of *Computer* from 1979 to 1983. Additionally, he is currently on the Editorial Boards of *Journal of Medical Systems*, *Medical Electronics*, and *Measurement and Control*. He is a past chairman of the IEEE Technical Committee on Microprogramming and past vice chairman of the Technical Committee on Computational Medicine. His current interests are in firmware engineering, distributed computer systems, and dataflow languages and architectures. Shriver is a senior member of the IEEE.

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IEEE Software's Editorial Board members are introduced in the following pages. Please do not hesitate to contact any of them to give suggestions, criticisms, topics for feature articles and special issue coverage, and the names of potential authors and referees. All of us will be responsive to your input. Obviously, much of *IEEE Software's* viability and vitality will rest upon the quality of the technical articles submitted by the readership for inclusion in the magazine. If you would like to referee articles for *IEEE Software*, please send me a list of numbered subject areas from the *Computing Reviews'* classification system, iden-

tifying your area(s) of expertise. Also, please provide me with some idea of the number of articles per year that you can referee.

It does, of course, take a significant amount of effort to launch a new publication. Hopefully, the amount of time, energy, and thought that has gone into *IEEE Software* is evident within these pages. We owe a debt of gratitude to both the Editorial Board members, who gave so unselfishly of their time, and to the publications staff of the West Coast Office of the Computer Society for the substantial efforts they put into the production of this issue. We hope that you enjoy it and look forward to receiving the next issue.

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