

# Editorials

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*IEEE TRANSACTIONS ON MEDICAL IMAGING* has been several years in the making. For some time, individual efforts in the medical imaging field had been taking place in the Nuclear and Plasma Sciences Society and the Engineering in Medicine and Biology Society. These efforts were in the form of short courses, sessions at conferences, tutorials, and publications. It was decided that a journal such as TMI was necessary to provide a single medium for all aspects of this rapidly expanding field of technical and scientific investigation.

The first joint organizing effort took place in New York City in August of 1980. Shortly thereafter, a Steering Committee was set up with representatives from four cosponsoring IEEE societies: Nuclear and Plasma Sciences, Engineering in Medicine and Biology, Sonics and Ultrasonics, and Acoustics, Speech, and Signal Processing.

After working with plans, programs, formats, budgets, Editor and Associate Editor selection, and many other organizational details, this first issue of TMI has resulted under the guidance of three Associate Editors as Guest Editors.

I am sure our Editor, Mike Ter-Pogossian, will do everything necessary to make TMI a success and future issues will be publishing significant papers on all aspects of medical imaging.

It is the intention of the Steering Committee to have TMI represent a major publication in the medical imaging field and any comments from the readers will be welcomed.

Martin Plotkin, Chairman

*IEEE Transactions on Medical Imaging* Steering Committee

The purpose of this editorial is to seek the IEEE community's support for its *IEEE Transactions on Medical Imaging*. Indeed, the success of this new journal will be mostly determined by how actively it is supported by the readers it serves.

In seeking backing for a new scientific publication, it behooves one to justify its need. Indeed, the justification for yet another scientific publication is far from being axiomatic, for it is an opinion probably widely held in the scientific community (and shared by this writer), that there may already be too many publications competing for the attention of the readers and for manuscripts and leading to the situation where respected journals are forced into accepting less desirable material for survival. A number of excellent journals, many addressed to the radiological community, do publish manuscripts dealing with the engineering aspects of medical imaging and a large fraction of the material on this subject has been disseminated among the scientific community through these channels. Still the justification for the existence of TMI, which was recognized by the TMI Steering Committee, is compelling. A majority of the publications with interest in medical imaging exhibit a strong clinical trend with only secondary interest in the technological aspect of imaging. Often highly technical manuscripts compete for publication space in these journals with clinically oriented

reports, this when the field, which can be broadly classified as the technological aspects of medical imaging, is rapidly expanding. A perusal of issues of the *IEEE Transactions on Nuclear Science* for the past few years shows a large and rapidly growing number of excellent articles dealing with various engineering aspects of medical imaging.

It is inevitable that some overlap will occur between the scope of interest of TMI and other either established or developing journals. Such overlap, which occurs often in scientific publications, provides both the readers and the writers with a flexibility which is often desirable, provided excessive redundancy is avoided. The latter pitfall can be avoided for TMI by establishing effective communications with other publications dealing with medical imaging. TMI will strive to open and maintain such channels of communication through its editorial board.

The success of TMI, as for any scientific journal, will be measured only secondarily by the number of pages published, or by the number of subscribers, or even by the balance of its budget. Primarily this success will be assessed by its contribution to the pursuit of science.

Without financial solvency, which can be regarded as a *sine qua non* of success, TMI will not survive to be tested for its contribution to science. A journal's solvency can be regarded as recognition by the scientific community that it does fulfill a need and is deemed worthy of survival. TMI will undoubtedly be subjected to this test.

In the forthcoming issues of TMI, it is likely that criticism from the readers will be spurred by many weaknesses. Much of this blame will justifiably belong in the editor's office. For these failings, the reader's indulgence is requested. However, the fundamental potential weaknesses and strengths of this journal will be those of the contributed manuscripts. It is in this area that the eventual success of TMI will be credited to its contributors. The undersigned wishes to thank the Steering Committee for their confidence in asking him to serve as Editor of this journal and the Associate Editors for their generous willingness to contribute their time and effort to the success of this project.

The TMI Steering Committee, under the very effective chairmanship of Dr. Martin Plotkin, should be congratulated for their indefatigable (and successful) efforts in creating the *IEEE Transactions on Medical Imaging*.

Michael M. Ter-Pogossian, Ph.D.  
Editor

The first issue of a new journal should set standards for the style and content that readers and authors come to expect. In fact, this issue is only a first step in that direction. Submissions were solicited on short notice to a number of key scientists working in the relevant medical imaging technologies. Twice as many papers as included in the first issue were received. Little guidance to authors was given on style, as an editor was being sought, editorial policy was be-

ing formed, and relations with the publisher were being established. Despite this chaotic beginning, we are very pleased your response has allowed the first issue to contain a sample of the kinds of papers that the journal intends to publish. The relative paucity of ultrasound papers in the first issue will no doubt be corrected in subsequent issues. It is our hope that medical imaging papers will be brought together from the various IEEE and other publications and that this will reduce the difficulty scientists and engineers have in keeping up with important developments in this rapidly growing field. The type of medical imaging paper which previously could only go into a clinical journal will now find another outlet which will reach a technical audience, as well. Our ability to publish key papers with

minimum time delays will be tested in the years to come. The number of issues per year, and their size, will be determined by the number and quality of papers submitted.

The quality and nature of the journal depends in largest part on the papers submitted. If the technical community feels that this is a needed forum, the journal will grow and prosper. Your support is solicited, as we believe there is a need for such a journal and we will do our best to help support the Editor, the IEEE, and the medical imaging community in making this an important scientific publication.

A. B. Brill, A. Macovski, and J. Reid  
Associate Editors

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