



BOOK REVIEWS

ACOUSTICAL IMAGING, Vol. 24, 2000, H. Lee (editor). New York: Kluwer Academic.

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There was something slightly disconcerting about the arrival of this volume for review. Let me say immediately that this has nothing to do with the contents, of which more later. It was simply that it arrived on my desk out of phase. As an attendee at the 25th International Symposium on Acoustical Imaging held in Bristol in March 2000, I had already received those proceedings earlier this year. So I was a little bemused to receive for review the preceding proceedings, which contained papers from the Acoustical Imaging Symposium held in Santa Barbara, California, in September 1998, but not published until 2000.

The 25 volumes which contain the papers from these Acoustical Imaging Symposia comprise a remarkable archive covering the development of acoustic imaging over the 34 years since the first meeting was held, under the title Acoustical Holography, in California during December 1967. A number of interesting comparisons can be made between the proceedings of the first symposium, edited by Metherell, El-Sum and Larmore, and those of this one. Hua Lee in his editorial perface to Volume 24 makes the point that this recent meeting was organized in “the old-fashioned manner”, and it may be assumed that there was plenty of time at Santa Barbara for much discussion between delegates on problems of common interest. But this review is of the proceedings, and the most obvious comparison is of the publication styles. Volume 1 was published as a book with a coherent style, but accompanied by a slight apology that different symbols for the same quantity may appear throughout the book. By 1998 such minor apologies seem a distant memory, with camera-ready texts giving a feast of different type-faces and sizes, text layouts and referencing conventions. I suppose this represents some kind of progress. There was at least one common participant between the two meetings. Glen Wade appears in the upper right of the black-and-white picture of speakers at the first symposium, having presented his paper on “Acoustical transparencies for optical imaging and ultrasonic diffraction.” In 1998, he again co-authored two of the presentations describing developments in SLAM techniques in a useful section on Microscopy and Non-destructive Evaluation. This strikingly demonstrates the strength of this particular symposium series, its sense of continuity. Many authors make reference to their earlier work presented at a previous symposium, and published in earlier proceedings. By exploring the continuing contributions of particular scientists and laboratories it is possible to track the gestation and birth, and sometimes the conception, of a wide range of developments in acoustic imaging. In his summary, in the first proceedings, Dennis Gabor said “I was very much interested in Thurstone’s brilliant review of medical applications,” adding that “The conclusion is that this is a very important field.” How true. Nineteen of the 54 papers in the 24th volume are in the section on Biomedical Applications, and more than half of all the papers have a biomedical context. These range from Tortoli’s exploration of Doppler effects when using contrast agents and Bamber’s further studies in speckle, to Saijo’s investigation of the effect of shear stress on live cells using acoustic microscopy and several reports on novel developments in breast, prostate, vascular and skin imaging. A further group of papers appears under the general heading of “Advanced Systems and Techniques.”

These are primarily concerned with the design and analysis of array structure and operation, tomographic reconstruction techniques and pulse-echo signal analysis.

So who will buy and use this volume? There are quicker ways to bring work to publication than this, and much of this work has already appeared in a very similar form elsewhere in the referred literature. Those who retain a library archive on acoustic imaging will see it as a necessary addition to the volume series, whilst recognizing that such paper archives are rapidly becoming a thing of the past. Yet there is still something very comforting about browsing through a book of this sort, and it undoubtedly contains many gems and ideas worthy of further study. I will add the book to the five other volumes in this series on my shelves, using it and encouraging others to do so as well. It will be a sad day when scientists no longer learn from others in this way. However, I fear that it will not be long before this series follows the electronic publication route, perhaps a more appropriate route for rapid conference publication.

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