

But, as much as we can, we should keep his research spirit alive.

For a book of this scope there are relatively few errors, including an unfortunate one concerning general relativity. Some names are misspelled, for example that of Robert J. Van de Graaff—of all places in a book published by the MIT Press! All in all, the book should prove an inspirational gift for budding scientists and enjoyable reading for older ones.

Recent Developments in Computing, Processor and Software Research for High-Energy Physics

Edited by Rene Donaldson and Michael N. Kreisler

459 pp. Fermilab (Publications Division), 1984. Free on request

The importance of computing in physics has increased tremendously in recent years. But even with the new, more powerful processors, many important problems cannot be addressed with commercially available computers. In many cases physicists have developed special techniques to solve their specific problems in an economical way. This approach is widely and successfully used in experimental and theoretical high-energy physics.

There are many aspects to the computing problem in high-energy physics. These include trigger processors and specialized track reconstruction processors for experiments, and multiprocessor computer systems for lattice-gauge calculations. This broad range of computing problems, and the variety of solutions to these problems, is the subject of the proceedings of the symposium held at Guanajuato, Mexico, on 8–11 May 1984.

Specialized hardware for trigger systems and for on-line and off-line event reconstruction was a major topic at the meeting. These devices have become an important part of the detector systems for experiments at fixed-target and colliding-beam facilities. The systems discussed include analog processors and pipelined digital devices. Parallel multiprocessor systems have been used for analysis of event-structured data from experiments.

Other topics at the meeting included more conventional approaches and general-purpose processors. The discussion included hardware descriptions, algorithms for parallel computers and software for event processing. (The May 1983 and May 1984 issues of PHYSICS TODAY provide a useful introduction to these topics.) The proceedings reviewed here discuss other aspects of computing hardware and software.

The articles in these proceedings

cover a wide range of topics. They will be useful to researchers who must address similar problems in a variety of disciplines. The question-and-answer section following each paper helps convey the vitality of this rapidly developing field.

The area most neglected in these proceedings is software. This is an important part of the computing problem, and has important implications for the cost, time scale and reliability of computing. The topic is, perhaps, the subject of a future meeting.

STEWART C. LOKEN

Lawrence Berkeley Laboratory

new books

Solid-State Physics and Electronics

Defect Properties and Processing of High-Technology Nonmetallic Materials. *MRS Symposia Proceedings Vol. 24.* Proc. Symp. Boston, Mass., November 1983. J. H. Crawford Jr., Y. Chen, W. A. Sibley, eds. 482 pp. North-Holland, New York, 1984. \$85.25

Adsorption Processes on Semiconductor and Dielectric Surfaces I. *Springer Series in Chemical Physics 32.* V. F. Kiselev, O. V. Krylov, eds. 287 pp. Springer-Verlag, New York, 1985. \$43.50. *Monograph*

Dynamical Phenomena at Surfaces, Interfaces and Superlattices. *Springer Series in Surface Sciences 3.* Proc. Conf. Erice, Italy, July 1984. F. Nizzoli, K.-H. Rieder, R. F. Willis, eds. 329 pp. Springer-Verlag, New York, 1985. \$29.50

Dynamical Processes and Ordering on Solid Surfaces. *Springer Series in Solid-State Sciences 59.* Proc. Seventh Taniguchi Symp., Kashikojima, Japan, Sept., 1984. A. Yoshimori, M. Tsukada, eds. 195 pp. Springer-Verlag, New York, 1985. \$29.00

Energy Transfer Processes in Condensed Matter. *NATO ASI Series.* Proc. NATO Adv. Study Institute, Erice, Italy, June 1983. B. Di Bartolo, ed. 696 pp. Plenum, New York, 1984. \$105.00

Localization, Interaction, and Transport Phenomena. *Springer Series in Solid-State Sciences 61.* Proc. Intl. Conf., August 1984. B. Kramer, G. Bergmann, Y. Bruynseraede, eds. 264 pp. Springer-Verlag, New York, 1985. \$29.00

Molecular Semiconductors: Photoelectrical Properties and Solar Cells. J. Simon, J.-J. André. 288 pp. Springer-Verlag, New York, 1985. \$59.00. *Monograph*

Moment Formation in Solids. *NATO ASI Series.* Proc. Conf. Vancouver Island, September 1983. W. J. L. Buyers, ed. 336 pp. Plenum, New York, 1984. \$49.50

Nuclear Magnetic Resonance of Liquid Crystals. *NATO ASI Series.* Proc. NATO Adv. Study Institute, San Miniato, Italy, July 1983. J. W. Emsley, ed. 572 pp. Reidel, Boston, 1985.

Optimum Signal Processing: An Introduction. S. J. Orfanidis. 349 pp. Macmillan, New York, 1985. \$31.95. *Graduate text*

GAMMA SPECTROSCOPY NOBODY DOES IT FOR LESS

Nal(Tl) detector based gamma analysis systems are given short shrift by most suppliers. Not so Canberra. Our 727 shield, for example, handles a wide variety of detector sizes, accommodates test tube or bulk samples and is built with quality you can see. Our chrome-plated Nal(Tl) detectors and matching tube-based preamplifiers offer unexcelled quality, performance, and reliability. The New Series 20 MCA with built-in H.V. power supply and amplifier completes the system without cumbersome NIM Bins or bench-top accessories — true elegance at very affordable prices.



Circle number 29 on Reader Service Card

CANBERRA

Canberra Industries, Inc.
One State Street
Meriden, Connecticut 06450
(203) 238-2351