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REVIEW

Solitons in Action. Edited by K. LONNGREN and A. SCOTT. Academic, 1978. 300 pp. £9.75.

This publication is another one of a series of volumes on 'solitons' that have recently emerged as the proceedings of meetings held on this rapidly growing subject. The other three, published in 1978, are: *The Theory and Application of Solitons* (Rocky Mountain Journal of Mathematics, volume 8), which in this reviewer's opinion is the best; *Nonlinear Evolution Equations Solvable by the Spectral Transform* (Research Notes in Mathematics 26, Pitman) and *Nonlinear (Soliton) Dynamics and Structure in Condensed Matter Physics* (Solid State Sciences, volume 8, Springer).

All four volumes are definitely worth reading and contain material and ideas which are as current as the literature; indeed many of the articles have very recently been published in part or in their entirety in journals. However, in the context of the Proceedings, some of the writers appear to lose the inhibition normally caused by the presence of zealous and cynical referees and, as a result, the style of writing is more free flowing and speculative. The main thrust of *Solitons in Action* is, as the title suggests, applied. The stated purpose is to introduce the broader community of scientists to the rapidly developing area of nonlinear science connected in one way or another with the ubiquitous soliton. There are some introductory articles outlining some minimal theoretical ideas, but the major portion of the book is devoted to soliton-related activities in solid state physics, statistical mechanics, plasma physics, hydrodynamics, lattices and electrical networks. Except for the article by Deem & Zabusky on interacting vortices of the two-dimensional Euler equations, all the situations and models discussed in this volume are one-dimensional. The articles are well written, should be accessible to most interested scientists and contain a wealth of references. *Solitons in Action* is by no means a must book for a scientist interested in nonlinear phenomena. On the other hand, true to the inter-disciplinary nature of the soliton itself, it is convenient to have a series of papers, whose common denominator is the soliton, which cover such a broad area of physics. I have it on my own shelf.

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