

15. B. A. Dubrovin et al, *Non-linear equations of Korteweg-deVries type, finite-zone linear operators, and Abelian varieties*, Russian Math. Surveys **31** (1) (1976), 59–146.
16. W. Rossmann, *Kirillov's character formula for reductive Lie groups*, Invent. Math. **48** (1978), 207–220.
17. R. K. Sachs and H. Wu, *General relativity for mathematicians*, Graduate Texts in Math., vol. 48, Springer-Verlag, Berlin and New York, 1977.
18. I. E. Segal, *Algebraic integration theory*, Bull. Amer. Math. Soc. **71** (1965), 419–489.
19. D. J. Simms, *An application of polarizations on half-forms*, Non-commutative Harmonic Analysis, Lecture Notes in Math., vol. 466, Springer-Verlag, Berlin and New York, 1975.
20. J.-M. Souriau, *Structure des systemes dynamique*, Dunod, Paris 1970.
21. S. Sternberg, *On the role of field theories in our Physical conception of geometry*, Differential Geometrical Methods in Mathematical Physics, Lecture notes in Math., vol. 676, 1978, pp. 1–81.
22. M. E. Taylor, *Propagation, reflection, and diffraction of singularities of solutions to wave equations*, Bull. Amer. Math. Soc. **84** (1978), 589–612.
23. V. S. Varadarajan, *Geometry of quantum theory*. I, II, D. Van Nostrand, Princeton, N. J., 1968.
24. M. Vergne, *On Rossmann's character formula for discrete series*, Invent. Math. **54** (1979), 11–15.
25. J. F. Veverka, *The Morse theory and its applications to solid state physics*, Queen's Papers in Pure and Applied Math. no. 3 (1966).
26. A. Weinstein, *Lectures on symplectic manifolds*, CBMS Regional Conf. Ser. in Math., no. 29, Amer. Math. Soc., Providence, R. I., 1977.
27. R. O. Wells, Jr., *Complex manifolds and mathematical physics*, Bull. Amer. Math. Soc. (N. S.) **1** (1979), 296–337.

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Banach modules and functors on categories of Banach spaces, by Johann Cigler, Viktor Losert, and Peter Michor, Lecture Notes in Pure and Applied Mathematics, Volume 46, Marcel Dekker, New York, 1979, xviii + 282 pp., \$29.50.

As the authors state in their preface, this is a book about “general nonsense”, a term indicating the uneasy attitude many of us have towards the material. This term cannot be other than perjorative—why should a valid and necessary part of an argument get such scant respect? Many of us lose patience with a tower of increasingly complicated general propositions with a liberal scattering of words like natural and contravariant with perhaps a diagram which when chased enough merely states the obvious—why can't we stick to something interesting like operator theory where there are real theorems? And yet there must be another side of the coin or the subject would not attract the attention of enough competent mathematicians to survive—what can it be? One ingredient in our reaction is the reluctance to take a new point of view, learn some new words and a new way of looking at things. Former generations reacted similarly to modern analysis and abstract algebra. However some notions really do need this generalized framework, for example the concept of a tensor norm. Often this is defined as a norm on a product $X \otimes Y$ of Banach spaces but the way the term is used is more in keeping with thinking of it as a description of a norm on each possible $X \otimes Y$ with various relationships between the norms so described—if you accept this