

sequential estimation of the mean of a normal distribution under rather general loss and cost function. Yet, it is a classical paper whose method for proving admissibility is often quoted. His work on the mean of a rectangular population is misstated on p. 342.

If I have given the impression that Govindarajulu's book only contains accounts of other people's work, with nothing added of his own, then that is not quite fair. A small amount of his own research is incorporated. The problems he supplies have been mentioned earlier. Furthermore, Govindarajulu did catch a few mistakes in the sources from which he borrowed. For instance, he points out a rather bad error in a footnote on p. 72. On p. 214 he points out an error in B. K. Ghosh's book which invalidates Ghosh's argument. Unfortunately, when trying to correct the computation and the argument he also commits an error (in the differentiation of the function  $h$ ) and so his expression for  $h'(\alpha)$  is incorrect. (It is claimed that  $h'' < 0$  in the interval  $(0, \frac{1}{2})$ , but in fact  $h''(\alpha) > 0$  for  $\alpha$  close to  $\frac{1}{2}$ . I have no doubt that  $h > 0$  in  $(0, \frac{1}{2})$ , but I have not seen a proof yet.)

Theorems 2.4.2, 2.4.3, and 2.4.4 seem to be new (except, of course, part (i) of Theorem 2.4.2). Unfortunately, the assumptions are not completely stated. Worse is that no proofs are supplied. There is a lot of manipulation, which is valid provided the interchange of summation and expectation can be justified, but Govindarajulu never provides this justification. Dominated convergence does not seem to work. I am much obliged to Professor Tze Leung Lai for showing me a martingale proof of Theorem 2.4.2(ii). So at least that result seems to be true, even though not proved in the book. Another question is what the formulas in Theorems 2.4.2–2.4.4 are good for. In a remark on p. 36 Govindarajulu says that in the case of Wald's SPRT Theorem 2.4.2 leads to approximate expressions for  $EN$  and  $\text{Var } N$ . But all formulas (also the ones in Theorems 2.4.3 and 2.4.4) contain only the first moment of  $N$ , so it is hard to see what  $\text{Var } N$  would follow from. Govindarajulu continues on p. 36 with some more puzzling remarks about the conditional expectation of  $N$  given that the hypothesis is accepted (or rejected). How (2.4.15)–(2.4.17) are going to be used for that purpose is a mystery to me.

In conclusion, I would like to transmit to Professor Govindarajulu my sincere regrets that this review turned out to be so negative. But in my mind a prerequisite for reaching an audience, be it by spoken or by written word, is a deep concern with the manner in which the thoughts are going to be conveyed. In my opinion the book fails to display that kind of concern.

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*Sobolev spaces*, by Robert Adams, Academic Press, New York, 1975, xviii + 268 pp., \$24.50.

This monograph is devoted to the study of real valued functions  $u$  defined on an open set  $\Omega$  in Euclidean  $n$ -space  $R^n$  having the property that  $u$  and all its distribution derivatives up to (and including) order  $m$  are functions that are  $p$ th power summable. Here  $1 \leq p < \infty$  and  $m$  is a positive integer. The set of all such functions  $u$  is denoted by  $W^{m,p}(\Omega)$  and when endowed with an appropriate norm, for example,