SCHWARTZ SPACES, NUCLEAR SPACES AND TENSOR PRODUCTS
(Lecture Notes in Mathematics 726)

By YAU-CHUEN WONG: pp. 418. DM.39.—, US$21.50. (Springer–Verlag, 1979.)

In his introduction the author states that "one of the purposes of this book is to embark upon a unifying treatment of Schwartz spaces, nuclear spaces and λ-nuclear spaces by using [semi-norms satisfying some expected properties]". He succeeds not only in doing this but also in integrating the theory of tensor products of ordered (locally) convex spaces into the mainstream of the theory of locally convex tensor products.

In view of the series in which the book is published, some lack of perfection is understandable; for instance the absence of comparison with other approaches, in some parts lack of references to original sources, the occasional lapses of English and some inconsistencies in the spelling of transliterated names. Not so understandable is the almost complete absence of examples (apart from a few counterexamples) in a field that abounds with beautiful and important ones. The reviewer would like to see a final version of the book published with these omissions rectified.

For those with some familiarity with the subject matter, the book is thoroughly recommended. The book contains complete proofs and is almost self contained. Those who feel that they should know more about the subject but have been put off by existing treatments may find Doctor Wong's approach more palatable. However, a graduate student meeting the subject for the first time might have some difficulty in reconciling the approach in this book with the standard texts in the field, and would certainly fail to understand why anyone should be interested in the topic.

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