The target audience for the book is the advanced undergraduate or beginning graduate student. The material is presented rather tersely; there are few extended discussions. The structure is that of an expanded outline. For instance, in chapter 4 on relativistic mechanics, the part on special relativity is allotted nine pages. The range of topics is determined by d'Inverno's intent that the student "gain insight into, and confidence in handling, the basic equations of the theory" and acquire the basis for discussions of "black holes, gravitational waves and cosmology." The aim is worthwhile and largely achieved; the foundation is suitable to the intended superstructure.

Chapter 1 is an overview that provides a rationale for the structure of the book and advice to the prospective student; it is a valuable orientation. The first part, Special Relativity, presents the usual discussion of the kinematic foundations and the consequent mechanics. In the next part, the purely mathematical armament required for the general theory is presented. In deference to the probable lack of sophisticated background of most of the students, the treatment is the conventional tensor approach. There is only a brief mention of the more modern coordinate-free technique. The third part deals with the basic theory of general relativity. The choice of material is traditional and an incomplete list runs from "the principles of general relativity" through, among other topics, "general relativity from a variational principle" and "the structure of the field equations" to "the Schwarzschild solution" and "experimental tests of general relativity." The next three parts on black holes, gravitational waves and cosmology, respectively, are the ultimate structures for which the first 3 parts are the foundation.

The book has important strengths. There is a large collection of problems (with answers) and an extensive bibliography. The treatment is lucid, well-focused and more complete than one might expect of an introductory text. Many topics that are not usually found in an introductory text are included, if briefly. Among these are Penrose diagrams and conformal treatment of infinity, the Hawking effect, colliding gravitational waves, news and mass loss, Petrov classification, the missing mass problem, and the anthropic principle.

The brevity of the discussion places a heavy burden on both teacher and student. The teacher will have to be an aggressive, inspiring "resource person." Students will find it necessary to consult other texts with fuller treatment. This is d'Inverno's intent and undoubtedly motivated the bibliography of texts and monographs as well as the collection of problems and answers. Many of the problems are intended to induce the student to complete some of the discussion in the text.

There are several objectionable features. In the table accompanying the section on acceleration in special relativity, the entry for general relativity requires clarification. In the absence of any "absolute" element (in the sense of J. L. Anderson, *Principles of Relativity Physics* (Academic P., New York, 1967)) in the theory of general relativity it is not clear what the term "relative" means. In the section on cosmology, the diagrams for those Friedmann models in which the scale factor R approaches zero do not show properly that R becomes infinite in that limit.

In the hands of a dedicated teacher able to inspire his or her students, the text could be very successful.

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