

# Book Review

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## ***Structures Under Shock and Impact II***

P. S. Bulson (ed.), Computational Mechanics Publications, Billerica, Massachusetts, 1992, 450 pp., \$124.00.

*Structures Under Shock and Impact II* is a collection of most of the papers presented at the Second International Conference on Structures Under Shock and Impact Symposium held in Portsmouth, U. K., June 1992. The focus of the papers within the present volume is definitely on structures: 40 of the 52 papers in the volume are concerned with the response of a wide variety of structures to shock, blast, explosive, and impact loads. The most common structural material discussed was concrete. Thirteen papers are devoted to concrete targets, both above-ground (e.g. nuclear containment vessels) and underground (e.g. bunkers). A healthy mix of analysis techniques is also evident in the present collection of papers: 14 papers present the results of empirical investigations, 16 employ numerical algorithms to arrive at the solution to a problem, and 22 are analytical phenomenological investigations.

One of the highlights of the volume is the presence of several papers on real-life design experiences with shock and explosive loadings that are not treated frequently enough in the commonly available open literature. Most notable of these are papers on military vehicle rollover, the Israeli experience with structural design against explosive loadings, and on the response of a four-legged offshore platform to ocean storm waves. These and other papers that address real-life problems testify to the importance of the subject matter covered in the present volume and the timeliness of its publication.

One noticeable absence is a collection of papers on the analysis of space structures subjected to impact loadings. Only one paper is included that addresses the issue of satellite impact. With the seriousness of the orbital debris problem, one would expect that the effect of an on-orbit impact on the integrity of an orbiting spacecraft would be an area of major concern.

While the level of detail and thoroughness of the papers within the volume varies, it is understood that the papers are intended to present the latest results to a particular problem rather than to review an entire subject area. As such, the volume would probably be most useful to a specialist in the area of impact mechanics who wishes to be informed of the latest developments in certain areas of impact mechanics research. Although not quite on a technical par with papers that appear in peer-reviewed journals, the articles are informative and reasonably well-written.

Overall, the book gives a fairly balanced presentation of some important subjects currently under investigation in the area of impact mechanics and the methods used in their study. *Structures Under Shock and Impact II* would be a welcome addition to the library of an impact mechanics analyst with an interest in the application of the principles of impact mechanics to terrestrial and sub-terrestrial structures.

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