COMPUTATIONAL BALLISTICS III

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Preface

The study of computational ballistics is one of the most challenging scientific endeavours, not only because of the diversity of time and space scales involved in practically all problems, but due to its interdisciplinary character.

Interest in ballistics has also grown considerably recently as a result of the complexity of the political and military situation in many parts of the world. The classical subdivision into internal, external and terminal ballistics now encompasses numerous applications on how to model and protect against accidental or man made explosions. Many other civilian applications of ballistics are also of growing importance as impact, crash and blast problems are a by-product of more sophisticated techniques involving dimensions and speeds impossible to achieve a few years ago.

The computational solution of problems in ballistics require specialised tools. Problems with very short time scales are particularly difficult to solve accurately as well as those involving changing of state or material and geometry conditions. Computational ballistics solutions frequently require substantial computer power and the use of specialised algorithms.

The lack of sufficient number of open meetings in the field also preclude the sharing of important information amongst researchers and hence a way to avoid choosing the wrong alternatives. Because of that, conferences such as this are particularly important.

This conference started in Rio in 2003 and was reconvened in Cordoba, Spain in 2005 before the meeting that took place in the New Forest.

This volume covers the following topics:

- Fluid flow aerodynamics
- Interior ballistics
- Terminal ballistics
- Experimental mechanics/ballistics and field testing
- New developments in computational techniques
- Systems and technology

The Editors are grateful to the members of the International Scientific Advisory Committee and other colleagues who helped to review the papers included in this book. They are also indebted to all authors for their presentations.

The Editors
New Forest, 2007

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