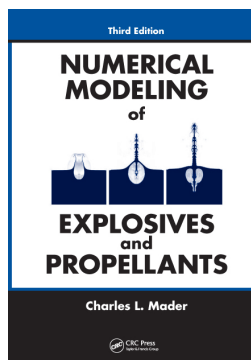


Third Edition  
**NUMERICAL MODELING of EXPLOSIVES  
and PROPELLANTS**

Charles L. Mader



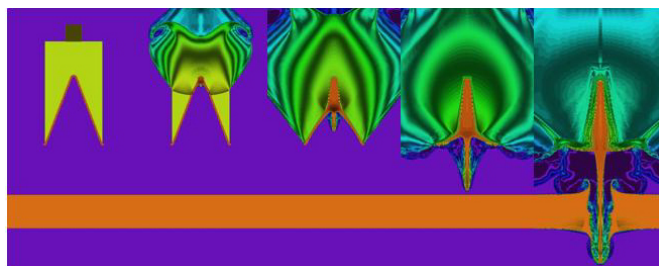
Major advances in modeling methods and computing power required to make them viable have led to major breakthroughs in our ability to model the performance and vulnerability of explosives and propellants. The development of proton radiography during the last decade has presented a major new experimental tool for studying explosive and shock wave physics. Problems that were once intractable – such as the generation of water cavities, jets and stems by explosives and projectiles – have now been solved.

*Numerical Modeling of Explosives and Propellants, Third Edition* covers all aspects of the subject, from the basic reactive fluid dynamics to the latest and most complex. The recently available Russian contributions to the experimental explosive physics data base are described and evaluated.

This book comes packaged with a CD-ROM that contains the FORTRAN and executable computer codes, movies, PowerPoint presentations generated by the author over the last 50 years. The explosive and shock wave data bases generated at the Los Alamos National Laboratory and the Russian Federal Nuclear Centers are included on the CD-ROM. Computer codes, movies and PowerPoint presentations were developed that will operate under VISTA for the third edition CD-ROM. Also developed were codes that will operate in the OS X operating system for the Apple IMAC computer.

Mader's three-pronged approach – through text, computer programs, and animations – imparts a thorough understanding of the new computational methods and experimental measuring techniques – and provides the tools to put these methods to effective use.

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