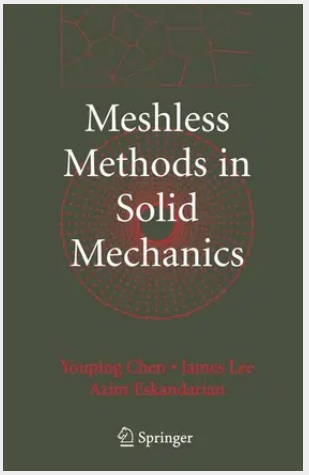
Chen / Lee / Eskandarian

Meshless Methods in Solid Mechanics

Finite element method has been the dominant technique in computational mechanics in the past decades, but this method is not well suited to problems having severe mesh distortion. This book covers the fundamentals of continuum mechanics, the integral formulation methods of continuum problems, the basic concepts of finite element methods, and the methodologies, formulations, procedures, and applications of various meshless methods. It also provides general and detailed procedures of meshless analysis on elastostatics, elastodynamics, non-local continuum mechanics and plasticity with a large number of numerical examples. Some basic and important mathematical methods are included in the Appendixes. For readers who want to gain knowledge through hands-on experience, the meshless programs for elastostatics and elastodynamics are also introduced in the book and included in the disc.

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