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of continuous media and the

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properties of the finite element method, and then brings them together to produce discrete physical models of nonlinear continua. The mathematical properties of these models are analyzed, along with the

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heat conduction, and
thermoviscoelasticity.
Problems in rarefied gas
dynamics and nonlinear
partial differential
equations are also examined.
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MATLAB program includes all source codes so that students can develop their own material models, or different algorithms. Please visit the author's website for supplemental material, including PowerPoint

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components that make optimal
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associated with both manufacturing and working environments. The modeling of these characteristics can only be done through numerical formulation and simulation, and this

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demonstrations of the use of
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T. Oden is Director of the
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(ICES) at the University of Texas at Austin, and J. N. Reddy is a Professor of Engineering at Texas A&M University. They developed this essentially self-contained text from their seminars and courses for

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