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Sommario/riassunto	New finite elements are needed as well in research as in industry environments for the development of virtual prediction techniques. The design and implementation of novel finite elements for specific purposes is a tedious and time consuming task, especially for nonlinear formulations. The automation of this process can help to speed up this process considerably since the generation of the final computer code can be accelerated by order of several magnitudes. This book provides the reader with the required knowledge needed to employ modern

automatic tools like AceGen within solid mechanics in a successful way. It covers the range from the theoretical background, algorithmic treatments to many different applications. The book is written for advanced students in the engineering field and for researchers in educational and industrial environments.