1. Record Nr. UNINA9910438037803321 Autore Marghitu Dan B Titolo Statics with MATLAB / / Dan B. Marghitu, Mihai Dupac, Nels H. Madsen Pubbl/distr/stampa London:,: Springer,, 2013 **ISBN** 1-4471-5110-0 Edizione [1st ed. 2013.] 1 online resource (ix, 286 pages): illustrations (some color) Descrizione fisica Gale eBooks Collana Disciplina 620.103 Soggetti Statics - Data processing Engineering mathematics - Data processing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Nota di contenuto 1. Operation with Vectors -- 2. Moments, Couples, Equipollent Systems -- 3.Centers of Mass -- 4.Equilibrium -- 5.Friction -- 6.VirtualWork and Stability. Engineering mechanics involves the development of mathematical Sommario/riassunto models of the physical world. Statics addresses the forces acting on and in mechanical objects and systems. Statics with MATLAB® develops an understanding of the mechanical behavior of complex engineering structures and components using MATLAB® to execute numerical calculations and to facilitate analytical calculations. MATLAB® is presented and introduced as a highly convenient tool to solve problems for theory and applications in statics. Included are example problems to demonstrate the MATLAB® syntax and to also introduce specific functions dealing with statics. These explanations are reinforced through figures generated with MATLAB® and the extra material available online which includes the special functions described. This detailed introduction and application of MATLAB® to the field of statics

makes Statics with MATLAB® a useful tool for instruction as well as self study, highlighting the use of symbolic MATLAB® for both theory and

applications to find analytical and numerical solutions.