1. Record Nr. UNINA9910299939503321 Autore Wiggers Sine Leergaard Titolo Structural Stability and Vibration: An Integrated Introduction by Analytical and Numerical Methods / / by Sine Leergaard Wiggers, Pauli Pedersen Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-72721-4 **ISBN** Edizione [1st ed. 2018.] 1 online resource (169 pages): illustrations Descrizione fisica Collana Springer Tracts in Mechanical Engineering, , 2195-9862 Disciplina 515.392 Soggetti Vibration Dynamical systems **Dynamics Physics Statics** Vibration, Dynamical Systems, Control Numerical and Computational Physics, Simulation Mechanical Statics and Structures Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Sommario/riassunto This book offers an integrated introduction to the topic of stability and vibration. Strikingly, it describes stability as a function of boundary conditions and eigenfrequency as a function of both boundary conditions and column force. Based on a post graduate course held by the author at the University of Southern Denmark, it reports on fundamental formulas and makes uses of graphical representation to promote understanding. Thanks to the emphasis put on analytical methods and numerical results, the book is meant to make students and engineers familiar with all fundamental equations and their derivation, thus stimulating them to write interactive and dynamic

programs to analyze instability and vibrational modes. .