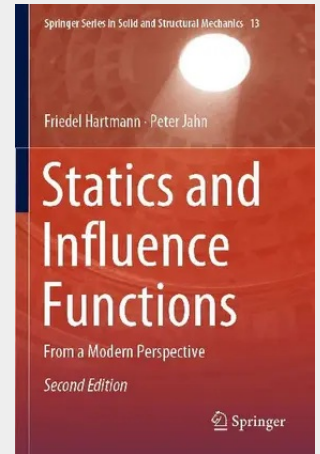


## Statics and Influence Functions

From a Modern Perspective

This extended and revised second edition is intended for engineering students and researchers working with finite element methods in structural and mechanical analysis. Discussing numerical structural analysis from first mechanical and mathematical principles, it establishes the central role of influence functions (Green's functions) in finite element analysis, reanalysis, sensitivity analysis, parameter identification and in optimization, with a particular focus on computational aspects and questions of accuracy. It also presents a one-click reanalysis, a new technique that allows instantaneous modifications to a structure to be made by clicking on single elements. Lastly, the book features four programs that can be downloaded for the solution of the Poisson equation, 2-D elasticity, plate-bending problems and planar frames.

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