Astronomical Optics and Elasticity Theory provides a very thorough and comprehensive account of what is known in this field. After an extensive introduction to optics and elasticity, the book discusses variable curvature and multimode deformable mirrors, as well as, in depth, active optics, its theory and applications. Further, optical design utilizing the Schmidt concept and various types of Schmidt correctors, as well as the elasticity theory of thin plates and shells are elaborated upon. Several active optics methods are developed for obtaining aberration corrected diffraction gratings. Further, a weakly conical shell theory of elasticity is elaborated for the aspherization of grazing incidence telescope mirrors.

The very didactic and fairly easy-to-read presentation of the topic will enable PhD students and young researchers to actively participate in challenging astronomical optics and instrumentation projects.