Record Nr. UNINA9910817976103321 Autore Kubby Joel A. **Titolo** A guide to hands-on MEMS design and prototyping / / Joel Kubby [[electronic resource]] Cambridge: ,: Cambridge University Press, , 2011 Pubbl/distr/stampa **ISBN** 1-139-12411-0 1-107-21936-1 1-283-29560-1 1-139-12216-9 9786613295606 1-139-11642-8 1-139-11206-6 0-511-98466-9 1-139-12708-X 1-139-11425-5 Descrizione fisica 1 online resource (xi, 166 pages) : digital, PDF file(s) TEC008080 Classificazione Disciplina 621.381 Soggetti Microelectromechanical systems Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Title from publisher's bibliographic system (viewed on 05 Oct 2015). Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Machine generated contents note: 1. Introduction; 2. Micro-mechanics; 3. Electrostatics; 4. Optical MEMS; 5. Thermal MEMS; 6. Fluidic MEMS; 7. Package and test; 8. From prototype to product: MEMS deformable mirrors for adaptive optics. Sommario/riassunto Whether you are a student taking an introductory MEMS course or a practising engineer who needs to get up to speed guickly on MEMS design, this practical guide provides the hands-on experience needed to design, fabricate and test MEMS devices. You will learn how to use foundry multi-project fabrication processes for low-cost MEMS projects, as well as computer-aided design tools (layout, modeling) that can be used for the design of MEMS devices. Numerous design examples are described and analysed, from fields including micromechanics, electrostatics, optical MEMS, thermal MEMS and fluidic

MEMS. There's also a final chapter on packaging and testing MEMS devices, as well as exercises and design challenges at the end of every chapter. Solutions to the design challenge problems are provided online.