

1. Record Nr.	UNINA9910957626603321
Titolo	Frontiers of engineering : reports on leading edge engineering from the 1996 NAE Symposium on Frontiers of Engineering / / National Academy of Engineering
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, 1997
ISBN	9780309174855 0309174856 9780309524353 0309524350 9780585165929 0585165920
Edizione	[1st ed.]
Descrizione fisica	1 online resource (133 p.)
Disciplina	620
Soggetti	Engineering - Research - United States Chemical engineering - Research - United States Engineering - Technological innovations - United States Chemical engineering - Technological innovations - United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Intro -- Preface -- Contents -- Designing Vehicles in Changing Times -- Development of Performance-Based Seismic Design Procedures -- Information in the Design Process -- Product Modularity: A Key Concept in Life-Cycle Design -- Visualizing Aircraft Aerodynamic Design -- Virtual Reality and Augmented Reality In Aircraft Design and Manufacturing -- The Frontiers of Virtual Reality Applied to High Performance Computing and Communications -- Digitizing the Shape and Appearance of Three-Dimensional Objects -- Microelectromechanical Systems (MEMS) -- Fabrication Technology and the Challenges of Large-Scale Production -- Frontiers in MEMS Design -- Large-Market Applications of MEMS -- Cellular Materials: Structure, Properties, and Applications -- Silicon Satellites -- Novel Ceramic Ferroelectric Composites -- Co-Continuous Composite Materials from Net-Shape Displacement Reactions -- Institutional Cultures and

Sommario/riassunto

Space may have been called the "final frontier," but there are new frontiers to discover every day and engineers are the ones exploring them. Through groundbreaking research and cutting-edge technologies, engineers are now able to go beyond traditional boundaries, doing things that would have been all but impossible just a few short years ago. A sample of these exciting frontiers is revealed in this new publication from the National Academy of Engineering, which looks at new and emerging technologies to explain how they were developed and what new benefits they will bring. The book also highlights the kinds of pioneering research and technological work being done by some of the country's emerging leaders in engineering. Topics covered include microelectromechanical systems, design research, computer-generated visualization for design and display, and innovations in materials and processes.

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