

1. Record Nr.	UNINA9911049177903321
Autore	Arafa Hani Ali
Titolo	'Dynamibility' of Mechanical Systems // by Hani Ali Arafa
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2026
ISBN	3-032-12645-2
Edizione	[1st ed. 2026.]
Descrizione fisica	1 online resource (214 pages)
Collana	Mechanical Engineering (R0) Series
Disciplina	620.0042
Soggetti	Engineering design Mechanics, Applied Machinery Mechanics Engineering Design Engineering Mechanics Machinery and Machine Elements Classical Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Drive over Highly Variable Operating Angles -- Hydraulic Variable-Displacement Pumps/Motors -- Mechanical Variable-Ratio Transmissions -- Four Degrees of Freedom Cylindrical Gearing -- High-Speed Reciprocating Mechanisms -- Damping Mobile Interface Load Dynamicity -- Inertial Response to a Change in Effort -- Micromotion Amplification into a Command -- Stabilizing Cardanic Suspended Rigid Bodies -- Variable Multi-Bladed Rotor Systems -- Attributes of Multistage Mechanical Systems.
Sommario/riassunto	This book explores the design of mechanical subsystems, with particular emphasis on the dynamibility they impart to the overall systems they become part of. Dynamibility is defined here as an attribute of a physical system - its capacity for good dynamic performance. At several places throughout the book innovative designs are presented that address previously obscure or stubborn design challenges, each tailored to meet specific functional requirements. These designs are neither patented nor patent-pending, and readers

are free to adopt and use them. The book spans a range of disciplines within mechanical design engineering, aiming to fill notable information gaps and tackle problem areas that have long remained unspoken. Where appropriate, it highlights subtle design pitfalls, cautioning designers to avoid them.
