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Nota di contenuto	Contents ; Preface ; Chapter 1: On the Use of Nonholonomic Variables in Robotics ; 1 Introduction ; 2 Choice of Procedure ; 2.1 Constraints and Minimal Velocities ; 2.2 On Virtual Displacements and Variations ; 2.3 The Transitivity Equation ; 2.4 Dynamical Procedures 2.5 Analytic Approach vs. Synthetical Approach 3 Choice of Reference Frame ; 3.1 Element Matrices ; 3.2 Recursive Kinematics ; 3.3 Recursive Kinetics ; 4 Structurally Variant Systems ; 4.1 Freeing from the Constraints ; 4.2 Remark on the Choice of Minimal Velocities 4.3 Gauss' Principle of Minimal Constraints 5 Conclusions ; Chapter 2: Compensators for the Attenuation of Fluid Flow Pulsations in Hydraulic Systems ; 1 Introduction ; 2 Sources of Hydraulic Noise ; 2.1 Positive Displacement Pumps/Motors ; 2.2 Switching Valves

3 Devices for the Suppression of Hydraulic Noise
3.1 Conventional Devices ; 3.2 Novel Devices
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Multi Degree-of-Freedom Mass-Spring Compensator
; 4.2 Compensator Based on Plate/Shell Element
; 4.3 Compact /\/4 Side-Branch Resonator
5 Conclusions Chapter 3: Some Aspects of Washing
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; 1 Introduction ; 2 Theoretical Modelling
; 2.1 Description of the Model ; 2.2 The Results
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Experiment ; 3.1 Experimental Set-Up
3.2 Experimental Results Analysis

Sommario/riassunto

In the past twenty years, the scientific community has witnessed a technological revolution in products and processes, from consumer goods to factory automation systems. This revolution is based on the integration, right from the design phase, of the best that current technology can offer in electronics, control systems, computers, structures and mechanics. The terms that have emerged, for the synergetic approach to design, and integration of sensors, actuators, computers, structures and mechanics, are "structronics" and "mechatronics". Structronics can be viewed as an integration of mechatro