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	Titolo	Sociologia dell'organizzazione : Sviluppi ed applicazioni / Scritti di R. Bendix [et al.] ; cur. Claudio Belli ; Riccardo Guala Duca
	Pubbl/distr/stampa	Milano, : Franco Angeli, 1969
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	Lingua di pubblicazione	Italiano
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	Livello bibliografico	Monografia
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	Titolo	Advances in multi-photon processes and spectroscopy [[electronic resource]] . Volume 18 / / edited by S.H. Lin, A.A. Villaeys, Y. Fujimura
	Pubbl/distr/stampa	Hackensack, NJ, : World Scientific, c2008
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	Collana	Advances in Multi-Photon Processes and Spectroscopy ; ; v.18
	Altri autori (Persone)	FujimuraY (Yuichi) LinS. H <1937-> (Sheng Hsien) VillaeysA. A
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	Soggetti	Molecular spectra Multiphoton processes Spectrum analysis
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
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Contents; Preface; 1. Nonlinear Optics for Characterizing XUV/Soft X-ray High-order Harmonic Fields in Attosecond Regime Yasuo Nabekawa and Katsumi Midorikawa; 1. Introduction; 1.1. Nonlinear phenomena in XUV/soft X-ray region for ultrafast optics; 1.2. Autocorrelation measurement; 2. Generation of Intense Harmonic Fields; 2.1. Single atom response; 2.2. Propagation of the harmonic fields with pumping laser field: Phase matching; 2.3. Development of intense high-order harmonic generator; 3. Two-Photon Double Ionization; 4. Measurement of Attosecond Pulse Train with Two-Photon ATI

5. Interferometric Autocorrelation of APT with Two-Photon Coulomb Explosion 5.1. Similarity of APT with mode-locked laser pulses; 5.2. Why do we need interferometric autocorrelation?; 5.3. Two-photon Coulomb explosion; 5.4. Interferometric autocorrelation; 6. Summary and Prospects; Acknowledgements; References; 2. Signatures of Molecular Structure and Dynamics in High-Order Harmonic Generation Manfred Lein and Ciprian C. Chirilă; 1. Introduction; 2. Theory of High-Order Harmonic Generation; 2.1. Basic theory; 2.2. Three-step model; 2.3. The strong-field approximation

2.4. Odd and even harmonics 3. Influence of Molecular Structure on HHG; 3.1. Ionization step; 3.2. Recombination step; 4. Dynamical Effects; 5. Conclusions; Acknowledgments; References; 3. Molecular Manipulation Techniques and Their Applications Hirofumi Sakai; 1. Introduction; 2. Theoretical Background; 3. Molecular Orientation with Combined Electrostatic and Intense, Nonresonant Laser Fields; 3.1. One-dimensional molecular orientation; 3.2. Three-dimensional molecular orientation; 4. Applications with a Sample of Aligned Molecules

4.1. Optimal control of multiphoton ionization processes in aligned I₂ molecules with time-dependent polarization pulses 4.2. High-order harmonic generation from aligned molecules; 5. Summary and Outlook; Acknowledgments; References; 4. Sum Frequency Generation: An Introduction with Recent Developments and Current Issues Mary Jane Shultz; 1. Introduction; 2. Electric Fields and Orientation Factors; 2.1. Fresnel factors and propagation direction; 2.2. Orientation factors; 2.2.1. Simplification of the orientation tensor; 2.3. Observed intensity; 2.3.1. Molecular examples; 3. Recent Developments

3.1. Absolute orientation determination with a reference 3.2. Orthogonal resonances; 3.3. Null angle; 3.3.1. Visible angle null, VAN; 3.3.2. Polarization angle null, PAN; 3.3.3. Connection with previous work; 3.3.4. Example; 4. Current Issues in Sum Frequency Generation; 4.1. Interfacial optical constants and bulk contributions; 4.2. Collective modes - a theoretical challenge; 4.3. Probe depth; 4.4. Nanoparticle SFG; 4.5. Time resolution; 4.6. Surface 2D imaging; 5. Selected Results; 5.1. Ions at aqueous surfaces: The case for surface H₃O⁺; 5.2. Interactions at nanostructured interfaces

6. Summary

This book presents the latest developments and issues in both experimental and theoretical studies of multi-photon processes and the spectroscopy of atoms, ions and molecules in physics, chemistry, biology and material science. It contains review papers suitable for both active researchers and non-experts who wish to enter the field. Special attention is paid to the recent progress of non-linear photon-matter interactions in atoms, molecules and interfaces: XUV/soft X-ray, high-order harmonic generation in attosecond regime, high-order harmonic generation, sum frequency generation, four-wave

3. Record Nr.	UNINA9910392731203321
Titolo	Advances in Robot Kinematics // edited by Jadran Lenari, Oussama Khatib
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-06698-6
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (536 p.)
Disciplina	004 620 629.892
Soggetti	Robotics Automation Computer science - Mathematics Vibration Dynamics Robotics and Automation Computational Science and Engineering Vibration, Dynamical Systems, Control
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Computing Cusps of 3R Robots Using Distance Geometry -- Kinematic Mapping of SE(4) and the Hypersphere Condition -- Direct Kinematics of an Orthogonal 6PRRS Parallel Manipulator -- The Hidden Robot Concept: a Tool for Control Analysis and Robot Control-based Design -- Impact of Perturbation on Wire Tension Vector -- A Deployable Parallel Wrist with Simple Kinematics -- Geometric Derivation of 6R Linkages with Circular Translation -- Function Synthesis of the Planar 5R Mechanism Using Least Squares Approximation -- Some Remarks on the RRR Linkage -- Force Capability Polytope of a 4RRR Redundant Planar Parallel Manipulator -- Motion Planning of Non-holonomic Parallel Orienting Platform: A Jacobian Approach -- Non singular Change of Assembly Mode Without any Cusp -- The Influence of

Discrete-Time Control on the Kinematic-Static -- Behavior of Cable-Driven Parallel Robot with Elastic Cables -- Derivatives of Screw Systems in Body-fixed Representation -- Sharp Linkages -- Solvable Multi-Fingered Hands for Exact Kinematic Synthesis -- Non-Singular Assembly Mode Changing Trajectories in the Workspace for the 3-RPS Parallel Robot -- Influence of spring characteristics on the behavior of Tensegrity Mechanisms -- Human Motion Kinematics Assessment Using Wearable Sensors -- Stiffness Matrix of 6-DOF Cable-Driven Parallel Robots and its Homogenization -- Human Motion Mapping to a Robot Arm with Redundancy Resolution -- Analysis of Geometrical Force Calculation Algorithms for Cable-Driven Parallel Robots with a Threefold Redundancy -- Kinetostatic Analysis of Cable-Driven Parallel Robots with Consideration of Sagging and Pulleys -- Direct and Inverse Second Order Kinematics for Hyper-Redundant Parallel Robots -- Kinematic Design of Miura-Ori-Based Folding Structures Using the Screw Axis of a Relative Displacement -- On the Limitations on the Lower and Upper Tensions for Cable-driven Parallel Robots -- Characterization of the Subsystems in the General Three-System of Screws -- Geometrical Patterns for Measurement Pose Selection in Calibration of Serial Manipulators -- Stiffness Analysis of a Fully Compliant Spherical Chain with Two Degrees of Freedom -- Points, Lines, Screws and Planes in Dual Quaternions Kinematic -- Recovering Dual Euler Parameters from Feature-based Representation of Motion -- Kinematics and Dynamics of a 3-RPSR Parallel Robot Used as a Pipe-Bending Machine -- Kinematic Synthesis of a Watt I Six-bar Linkage for Body Guidance -- Collision-Free Workspace of 3-RPR Planar Parallel Mechanism via Interval Analysis -- Development of a One Degree of Freedom Mechanical Thumb Based on Anthropomorphic Tasks for Grasping Applications -- Trifurcation of the Evolved Sarrus-Motion Linkage Based on Parametric Constraints -- The Kinematics of Containment -- The Dimensional Synthesis of 3-RPR Parallel Mechanisms for a Approximating Constrained Hand Paths via Kinematic Synthesis with Contact Specifications -- Investigation of Error Propagation in Multi-Backbone Continuum Robots -- Kinematics of Expansive Planar Periodic Mechanisms -- From Inverse Kinematics to Optimal Control -- New Gravity Balancing Technique and Hybrid Actuation for Spatial Serial Manipulators -- Analysis of Constraint Equations and Their Singularities -- Shape Optimized Heliostats for Kinematic Sun Tracking -- Efficient Resolution of Hyper-Redundancy Using Splines -- Kinematic Modeling of an EAP Actuated Continuum Robot for Active Micro-Endoscopy -- Kinematics Analysis and Singularity Loci of a 4-UPU Parallel Manipulator -- On the Kinematics of an Innovative Parallel Robot for Brachytherapy -- Reconfigurable and Deployable Platonic Mechanisms with a Variable Revolute Joint -- Conditions for Sub-6th Order Screw Systems Composed of Three Planar Pencils of Lines -- Automatic Optimal Biped Walking as a Mixed-Integer Quadratic Program -- Mechanisms with Decoupled Freedoms Assembled from Spatial Deployable Units -- Motion Capability of the 3-RPS Cube Parallel Manipulator -- Coupling of Trajectories for Human-Robot Cooperative Tasks -- Dynamic Analysis of 4 Degrees of Freedom Redundant Parallel Manipulator.

Sommario/riassunto

The topics addressed in this book cover the whole range of kinematic analysis, synthesis and design and consider robotic systems possessing serial, parallel and cable driven mechanisms. The robotic systems range from being less than fully mobile to kinematically redundant to overconstrained. The fifty-six contributions report the latest results in robot kinematics with emphasis on emerging areas such as design and control of humanoids or humanoid subsystems. The book is of interest

to researchers wanting to bring their knowledge up to date regarding modern topics in one of the basic disciplines in robotics, which relates to the essential property of robots, the motion of mechanisms.
