1.	Record Nr.	UNINA9910299931703321
	Titolo	New Advances in Mechanism and Machine Science : Proceedings of The 12th IFToMM International Symposium on Science of Mechanisms and Machines (SYROM 2017) / / edited by Ioan Doroftei, Cezar Oprisan, Doina Pisla, Erwin Christian Lovasz
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
	ISBN	3-319-79111-7
	Edizione	[1st ed. 2018.]
	Descrizione fisica	1 online resource (515 pages)
	Collana	Mechanisms and Machine Science, , 2211-0984 ; ; 57
	Disciplina	621.05
	Soggetti	Machinery Robotics Automation Computer simulation System theory Machinery and Machine Elements Robotics and Automation Simulation and Modeling Systems Theory, Control
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Preface Committees Part I. Mechanism Design Solar Tracking Parallel Linkage Applicable for all Latitudes, by I. Visa, M. Neagoe, M. Moldovan, M. Comsit On the Design of the Gravity Balancer Using Scotch Yoke Derivative Mechanism, by HN. Nguyen, WB. Shieh Structural Synthesis of Planar 10-link 1-DOF Kinematic Chains with Up to Pentagonal Links with All Possible Multiple Joint Assortments for Mechanism deSign, by V. Pozhbelko, E. Kuts Kinematic-Dynamic Analysis of the Cam-Worm Mechanism for Humanoid Robots Shrug, by M. Peni, M. avi, M. Rackov, B. Borovac, Z. Lu Drive System of the Robot Eyeballs and Eyelids with 8 DOFs, by M. Peni, M. avi, M. Rackov, B. Borovac, Z. Lu Method for the Kinetostatic Analysis of the Road Vehicles Axle Suspensions, by C. Alexandru Forces

Transmission at Structural Group 0/4/2, by C. Duca, F. Buium --Topological Structure of the Actuating Mechanisms of the Urban Buses Doors, by D. Antonescu, C. Brezeanu, O. Antonescu -- Geometric Synthesis of the Actuating Mechanisms of Urban Bus Doors, by D. Antonescu, I. Popescu, O. Antonescu -- Synthesis of the Mechanisms Used to Actuate the Cabinet Doors, by D. Antonescu, F. Gaspar, P. Antonescu -- Design of a Class of Novel 3T1R Parallel Mechanisms with Low Coupling Degree, by H. Shen, H. Qiang, Y. Shen, T.-Li Yang -- Part II. Biomechanics and Rehabilitation -- Design and Finite Element Analysis of a New Spherical Prosthesis-Elbow Joint Assembly, by D. Tarnita, C. Boborelu, D.-L. Popa, D.-N. Tarnita -- Experimental Method for Dynamic Evaluation of Spinal Column Deformation Exercises, by A.-M. Vutan, V. Ciupe, C. Gruescu, E.-Chr. Lovasz -- Kinematic Design of a Parallel Robot for Elbow and Wrist Rehabilitation, by B. Gherman, G. Carbone, N. Plitea, A. Banica, M. Ceccarelli, D. Pisla -- Preliminary Design for a Spherical Parallel Robot for Shoulder Rehabilitation, by C. Vaida, G. Carbone, I. Ulinici, N. Plitea, D. Pisla -- Study of the Effects of Rotation Axis Misalignment in an Exoskeleton-Human Hip Joint, by C. Moldovan, I. Maniu, E.-Chr. Lovasz, A. M. Stoian -- Children Locomotion Rehabilitation Test Bed Designed from Kinematic Considerations, by C. Copilusi, N. Dumitru, A. Margine -- Design and Simulation of an Underactuated Mechanism for Leg Exoskeleton, by S. Yao, M. Ceccarelli -- Design, Numerical Simulation and Manufacturing of a Powered Wheelchair, by I. D. Geonea, N. Dumitru, A. Rosca, A. Didu -- Methodology for Determining the Positions of the Human Spine Vertebrae, by S. Butnariu, C. Antonya -- Neurorobotic Investigation into the Control of Artificial Eve Movements, by A. Mussina, M. Ceccarelli, G. Balbayev -- New Concepts of Ankle Rehabilitation Devices - Part I: Theoretical Aspects, by C. Racu (Cazacu), I. Doroftei -- New Concepts of Ankle Rehabilitation Devices - Part II: Design and Simulation, by C. Racu (Cazacu), I. Doroftei -- Part III. Mobile Robots -- Service Robots for Cultural Heritage Applications, by G. Carbone -- Dimensional Synthesis of a Robotic Arm for Mobile Manipulator -- Using an Interactive Geometric Software, by S. Maraje, J.-C. Fauroux, B.-C. Bouzgarrou, L. Adouane -- Design and Simulation of a Snake Like Robot, by L.-M. Ciurezu-Gherahe, N. Dumitru, C. Copilusi -- Sinale DoF Leg Mechanisms Analysis using GIM Software, by F. Pop, C. Pop, E. -Chr. Lovasz, S. M. Grigorescu, I. Carabas -- Design and Simulation of a Novel Hybrid Leg Mechanism for Walking Machines, by M. Demirel, G. Carbone, M. Ceccarelli, G. Kiper -- Modular reconfigurable robots, by M. O. Tatar, C. I. Cirebea -- Velocity Variation Analysis of an Autonomous Vehicle in Narrow Environment, by T. Girbacia, Gh. Mogan -- Part IV. Mechanism Theory -- Charts of Relative and Absolute Velocities of Chosen Parts of Plane Biplanetary Gear, by J. Drewniak, J. Kope, J. Marszaek, K. Staco, S. Zawilak -- Modelling of the Static Response of a Wind / Hydro Turbine with Two Rotors and a 1DOF Speed Increaser, by R. Saulescu, M. Neagoe, C. Jaliu -- Higher-Order Cayley Transforms for SE(3), by D. Condurache and I.-A. Ciureanu --Kinetostatic of Knife Edge Translating Follower under Dry Friction Conditions, by S. Alaci, F.-C. Ciornei, E,-V. Alexandru, C. Filote --Tetrapod Coupling, by S. Alaci, F. Buium, F.-C. Ciornei, D.-I. Dobinc -- Some Mechanisms Using Internal Gears with Small Teeth Numbers Difference, by O. Crivoi, I. Doroftei -- Mechanical System for Determining the Shot Force at Football, by E. Merticaru, L. Popescu, E. Budescu -- Part V. Manipulators -- Design and Simulation of a Parallel-Serial LARMbot Arm, by M. Russo, M. Ceccarelli -- Kinematically Redundant Octahedral Motion Platform for Virtual Reality Simulations, by G. Nawratil -- Kinematic Analysis of a 3-RRPS Manipulator, by S. M.

	Grigorescu, EChr. Lovasz, C. Pop Dynamic Modeling and Simulation of Sliding Mode Control for a Cable Driven Parallel Robot, by F. Inel, Z. Mansouri, M. Ceccarelli, G. Carbone Optimization of a Spatial 2 DOF Parallel Mechanism Used for Orientation, by CI. Boanta, S. Besoiu, C. Brisan Tensioned carbon fiber winding on a collaborative robots cell. Part 1 (system), by MP. Sbanca, Gh. Mogan Tensioned carbon fiber winding on a collaborative robots cell. Part 2 (tests), by MP. Sbanca, Gh. Mogan, F. Inel, Z. Mansouri, M. Ceccarelli, G. Carbone An IKP-DKP Approach Emphasizing Singularities of 9R (3-RRR) Mechanisms, by F. Buium, D. Leohchi, C. Duca Part VI. Experimental Mechanics Use of Hypocycloidal Motion in The Study of Rolling Friction, by S. T. Siretean, I. Musca, S. Alaci, FC. Ciornei Experimental Bench for Spur Gears Efficiency Measurement, by N. Dumitru, E. Dragut, N. Craciunoiu, I.D. Geonea Design, Development and Testing of a Dynamometer for Drill Force Measurement, by I.D. Geonea, A. Rosca, P. Rinderu Frictional Contact Study of the Chain Link/Polyamide Contact, by M.T. Lates, C.C. Gavrila, R. Papuc Influence of Number of Teeth and Centrifugal Force on Forces Distribution on Silent Chain Transmissions, by L. Jurj, R. Velicu Influence of Chain Pitch Increase on Bush-Sprocket Contact for Bush Chain Drives, by R. Velicu, R. Saulescu, L. Jurj Increasing the Resistance of Scuffing for HCR External Helical Gearing, by M. Rackov, M. avi, M. Peni, M. Vereš Author Index.
Sommario/riassunto	This volume presents the proceedings of the 12th IFToMM International Symposium on Science of Mechanisms and Machines (SYROM 2017), that was held in "Gheorghe Asachi" Technical University of Iasi, Romania, November 02-03, 2017. It contains applications of mechanisms in several modern technical fields such as mechatronics and robotics, biomechanics, machines and apparatus. The book presents original high-quality contributions on topics related to mechanisms within aspects of theory, design, practice and applications in engineering, including but not limited to: theoretical kinematics, computational kinematics, mechanism design, experimental mechanics, mechanics of robots, dynamics of machinery, dynamics of multi-body systems, control issues of mechanical systems, mechanisms for biomechanics, novel designs, mechanical transmissions, linkages and manipulators, micro-mechanisms, teaching methods, history of mechanism science, industrial and non-industrial applications. In connection with these fields, the book combines the theoretical results with experimental tests.