1.	Record Nr.	UNINA9910254352603321
	Titolo	New Advances in Mechanisms, Mechanical Transmissions and Robotics : Proceedings of The Joint International Conference of the XII International Conference on Mechanisms and Mechanical Transmissions (MTM) and the XXIII International Conference on Robotics (Robotics '16) / / edited by Burkhard Corves, Erwin-Christian Lovasz, Mathias Hüsing, Inocentiu Maniu, Corina Gruescu
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
	ISBN	3-319-45450-1
	Edizione	[1st ed. 2017.]
	Descrizione fisica	1 online resource (XVII, 497 p. 275 illus.)
	Collana	Mechanisms and Machine Science, , 2211-0984 ; ; 46
	Disciplina	620
	Soggetti	Engineering design Machinery Robotics Automation Manufactures Engineering Design Machinery and Machine Elements Robotics and Automation Manufacturing, Machines, Tools, Processes
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
	Nota di contenuto	Keynote Speeches – Abstracts -- Abstracts of Keynote Speeches, by Clement Gosselin, Marwene Nefzi, Robert Schmitt, Frank Harmeling -- MTM - Mechanisms - analysis and synthesis -- Optimal Design of a Grasping Device through Simplified Pose Synthesis of a Four-Bar Linkage, by Voicu Mesaros-Anghel, Erwin-Christian Lovasz, Corina Gruescu, Cristian Moldovan -- Modified method of the kinematic analysis of planar link mechanism for nonstationary motion modes, by Józef Drewniak, Garlicka Paulina, Zawislak Stan, Kopec Jerzy -- A Type Synthesis Method for Parallel Mechanisms Based on SAKCs, by Huiping

Shen, Chi-Yu Sun, Dan Zhang, Tingli Yang -- Matlab GUI for SVAJ cam analysis diagrams, by Cristian Pop, Erwin-Christian Lovasz, Florina Pop, Davidescu Arjana, Sanda Margareta Grigorescu -- On the kinematic analysis of sixth class mechanism, by Cristian Moldovan, Perju Dan, Erwin-Christian Lovasz, Karl-Heinz Modler, Inocentiu Maniu -- Zero-free-length Elastic Systems for Static Balancing, by Liviu Ciupitu, Ion Simionescu -- Analytic and FEM study of load distribution on the length of spline joints under pure torque, by Dan Teodor Margineanu, Sticlaru Carmen, Davidescu Arjana, Margineanu Eugenia -- Synthesis of the planar parallel Manipulator using Geared Linkages with linear Actuation as kinematic Chains, by Sanda Margareta Grigorescu, Erwin-Christian Lovasz, Dan Teodor, Margineanu, Cristian Pop, Florina Pop -- MTM - Dynamics of mechanisms and machines -- The Concept of Natural Motion for Pick and Place Operations, by Juan Pablo Barreto, Frederic Schöler, Burkhard Corves -- Structural Synthesis of Planar Geared Linkage Mechanisms as Multibody Systems, by Ion Visa, Mircea Neagoe, Macedon Moldovan -- Dynamics of a Vertical Unbalanced Gyroscopic Rotor with Nonlinear characteristics, by Zharilkassin Iskakov -- MTM - Mechanical Transmissions -- Edge Tooth Addendum Thickness of Hindley Worm, by Yaping Zhao -- A Single Speed (CVT) Transmission, by Konstantin Ivanov, Gani Balbayev -- An approach for modelling harvester head mechanisms dedicated to hardwood stands, by Benjamin Hatton, B. Chedli Bouzgarrou, Jean-Christophe Fauroux, Vincent Gagnol, Grigore Gogu -- Novel Speed Increaser used in Counter-Rotating Wind Turbines, by Mircea Neagoe, Radu Saulescu, Codruta Jaliu, Nadia Cretescu -- MTM - Micromechanisms and Microactuators -- On Application Melnikov Method to Detecting the Edge of Chaos for a Micro-Cantilever, by Jin Xie, S. -H. He, Z.-H. Liu, Y. Chen -- MTM - Computational and Experimental Methods -- Use of the structomatic method to perform the forward kinematic and kinetostatic analyses of a hydraulic excavator, by Maxime Mailloux, Marin Éné, Ion Simionescu, Iulian Alexandru Tabara -- Application of a Cam Workbench for Education in Mechanical Engineering, by Hu Chen, The Thanh Nga Nguyen, Mario Müller, Stefan Kurtenbach, C. Pan, Mathias Hüsing, Burkhard Corves -- Kinematic Characterization of the Origami Spring Based on a Spherical 6R Linkage, by Hiroshi Matsuo, Daisuke Matsuura, Yusuke Sugahara, Yukio Takeda -- Scaled Test Stand Simulation for Studying the Behavior of Anti-Lock Brake Systems on Bumpy Roads, by Valentin Ciupe, Dan Teodor Margineanu, Erwin-Christian Lovasz -- MTM – Terminology -- Activities of Russian - Speaking Scientists in Development of MMS Terminology, by Victor Starzhinsky, Evgenii Shalobaev, Mark Kane, Veniamin Goldfarb -- State of Art in Separate Sections of MMS Terminology and Some Proposals, by Evgenii Shalobaev, Serge Shil'ko, Rymantas Tadas Tolocka, Victor Starzhinsky, Galina Iurkova, Dmitry Surikov -- Robotics - Mechanical design of robot architecture -- DesignSolutions to Simplify the Calibration of a Robotic Flexible Manufacturing System, by Ana Maria Stoian, Inocentiu Maniu, Erwin-Christian Lovasz, Corina Gruescu -- Robotics - Mobile robots -- Reconbot: A Reconfigurable Rescue Robot Composed of Serial-Parallel Hybrid Upper Humanoid Body and Track Mobile Platform, by Wan Ding, Tim Detert, Burkhard Corves, Yao Yan-An -- Kinematics Modelling of Mobile Robot with Articulated Limbs without Wheel Slip, by Przemyslaw Sperzynski -- Experimental Platform for Hexapod Locomotion, by Mircea Nitulescu, Mircea Ivanescu, Sorin Manoiu-Olaru, Dong Hai Nguyen Van -- Quadcopter Propeller Design and Performance Analysis, by Endrowednes Kuantama, Dan Craciun, Ioan Constantin Tarca, Radu Tarca -- A Method for Structural Synthesis of Cooperative Mobile Manipulators, by Zine Elabidine Chebab, Jean-

Christophe Fauroux, Grigore Gogu, Nicolas Bouton, Laurent Sabourin, Youcef Mezouar -- Mobile Robot used to collect data from a difficult access area, by Ryad Zemouri, Paul Patic -- Robotics - Parallel robots -- Extended procedure for Stiffness modeling based on the Matrix Structure Analysis, by Tim Detert, Burkhard Corves -- Translational parallel manipulator with Pa2 kinematic joints, by Alfonso Hernández Frías, zhang zhen, Victor Petuya, Erik Macho, Enrique Amezua -- Synthesis and Modeling of Redundantly Actuated Parallel Kinematic Manipulators- An Approach to Efficient Motion Design, by Tobias Haschke, Michael Lorenz, Jan Brinker, Mathias Hüsing, Burkhard Corves -- 6-PSS based Parallel Manipulators, by Dwarakanath T A, Ketan Lagoo, D N Badodkar -- Robotics - Sensors and actuators in robotics -- Compliant rotary actuator driven by shape memory alloy, by Han Yuan, Xavier Balandraud, Jean-Christophe Fauroux, Frédéric Chapelle -- Modelling and Simulation of Linear Actuators in Mechatronic Systems, by Valer Dolga, Lia Dolga, Cristian Moldovan -- Robotics - Robotic control systems -- Dynamic Control for a Class of Continuum Robotic Arms, by Mircea Ivanescu, Mircea Nitulescu, Dong Hai Nguyen, Mihaela Florescu -- Actuator design for stabilising single tendon platforms, by Daniel Haarhoff, Melanie Kolditz, Dirk Abel, Sigrid Brell-Cokcan -- Model-based stability prediction of a machining robot, by Said Mousavi, Vincent Gagnol, Belhassen-Chedli Bouzgarrou, Pascal Ray -- Robotics - Biomedical engineering -- Augmented PID Control of a 2PPR-2PRP Planar Parallel Manipulator for Lower Limb Rehabilitation Applications, by Jayant Kumar Mohanta, Santhakumar Mohan, Stefan Kurtenbach, Burkhard Corves, Mathias Hüsing -- Human motion characterization using wireless inertial sensors, by Micha Olinski, Antoni Gronowicz, Marco Ceccarelli, Daniele Cafolla Trajectory analysis for modified Jansen leg mechanism configuration, by Florina Pop, Erwin-Christian Lovasz, Cristian Pop, Valer Dolga, Sanda Margareta Grigorescu -- Development of an Assisting Instrument of Standing-up Motion Using Driving Springs for Elderly Persons, by Hidetsugu Terada, Koji Makino, Kazuyoshi Ishida, Masahiro Ichikawa -- An Evolutionary Computational Algorithm for Trajectory Planning of an Innovative Parallel Robot for Brachytherapy, by Florin Girbacia, Doina Pisla, Silviu Butnariu, Bogdan Gherman, Teodora Girbacia, Nicolae Plitea -- Inverse Kinematics and Dynamics of an Overconstrained Manipulator for the Rehabilitation of Upper Extremity, by Özgün Selvi, Kuntay Ylmaz -- Robotics - Teleoperation, haptics, virtual reality -- Image Processing Based Stiffness Mapping of a Haptic Device, by Bars Taner, Mehmet Ismet Can Dede -- Robotics - Compliant structures Kinematic Analysis of a Flexible Tensegrity Robot, by Oscar Altuzarra, Mikel Diez, Javier Corral, Francisco J. Campa -- Adaptive Compliant Gripper Finger with Embedded Contracting and Extending Actuators, by Andrija Milojevic, Nenad Pavlovic, Heikki Handroos -- Kinematic and Dynamic Analysis of a 4DOF Parallel Robot with Flexible Links, by Nadia Cretescu, Mircea Neagoe, Radu Saulescu -- Robotics - Robotic applications -- Automated Handling and Draping of Reinforcing Textiles - Challenges and Developments, by Jan Brinker, Isabel Prause, Philipp Kosse, Hans-Christian Früh, Printz Stephan, Christoph Henke, Mathias Hüsing, Burkhard Corves, Robert Schmitt, Thomas Gries, Sabine Jeschke -- Author Index. .

| Sommario/riassunto | This volume presents the proceedings of the Joint International Conference of the XII International Conference on Mechanisms and Mechanical Transmissions (MTM) and the XXIII International Conference on Robotics (Robotics '16), that was held in Aachen, Germany, October 26th-27th, 2016. It contains applications of mechanisms and transmissions in several modern technical fields such as mechatronics, |

biomechanics, machines, micromachines, robotics and apparatus. In connection with these fields, the work combines the theoretical results with experimental testing. The book presents reviewed papers developed by researchers specialized in mechanisms analysis and synthesis, dynamics of mechanisms and machines, mechanical transmissions, biomechanics, precision mechanics, mechatronics, micromechanisms and microactuators, computational and experimental methods, CAD in mechanism and machine design, mechanical design of robot architecture, parallel robots, mobile robots, micro and nano robots, sensors and actuators in robotics, intelligent control systems, biomedical engineering, teleoperation, haptics, and virtual reality. .