

1. Record Nr.	UNINA9910299820803321
Titolo	Mechanisms, Transmissions and Applications [[electronic resource]] : Proceedings of the Third MeTrApp Conference 2015 // edited by Burkhard Corves, Erwin-Christian Lovasz, Mathias Hüsing
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-17067-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (335 p.)
Collana	Mechanisms and Machine Science, , 2211-0984 ; ; 31
Disciplina	621
Soggetti	Mechanical engineering Control engineering Robotics Mechatronics Computer mathematics Biomedical engineering Mechanical Engineering Control, Robotics, Mechatronics Computational Science and Engineering Biomedical Engineering and Bioengineering
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 index.
Nota di contenuto	Preface -- Organization -- Mechanism and Machine Design -- The Infinitesimal Burmester Lines in Spatial Movement, by Delun Wang, Wei Wang, Huimin Dong, Son Lin -- Educational and Research Kinematic Capabilities of GIM, by Erik Macho, Victor Petuya, Mónica Urizar, Mikel Diez, Alfonso Hernandez -- Geared Linkages with linear Actuation used as kinematic Chains of a Planar Parallel Manipulator, by Erwin-Christian Lovasz, Sanda Margareta Grigorescu, Dan Teodor Margineanu, Corina Mihaela Gruescu, Cristian Pop, Valentin Ciupe, Inocentiu Maniu -- Kinematic analysis of 3 RSS+CP parallel mechanisms, by Fernando Malvezzi, Tarcisio Coelho -- On the Accuracy Analyses of a Class of 2-DOF Planar Parallel Manipulators, by Mümin Özsipahi, Eres Soylemez --

Determination of linkage parameters from coupler curve equations, by Shaoping Bai -- Introduction of a 1-DOF rolling contact element for a planar reconfigurable manipulator, by Stefan Kurtenbach, Fritz Ehreiser, Mathias Hüsing, Burkhard Corves -- The Bennett Linkage as a Hinge Application, by Uwe Hanke, Jana Ehlig, Cornelia Fischer, Karl-Heinz Modler, Niels Modler -- Distance from Conic to Point, Plane or Line, by Paul Zsombor-Murray -- Motion Synthesis of a Planar Watt II type Six-Bar Mechanism With Two End-Effectors, by Gökhan Kiper -- VDI-Guideline -- Motion Conversion with the Crank-Slider Mechanism regarding Transfer Quality (Part 1), by Antonius Klein Breteler -- Motion Conversion with the Crank-Slider Mechanism regarding Transfer Quality (Part 2), by Antonius Klein Breteler -- Implementation of VDI Guidelines in Parametric 3D CAD Systems and their Functional Extension to Dynamically Associative Optimization Tools, by Christian Ahl, Rainer Lohe -- Dynamics of Mechanisms and Machines -- Optimal Motion Cueing Algorithm Selection and Parameter Tuning for Sickness-Free Robocoaster Ride Simulations, by Duc An Pham, Sebastian Röttgermann, Francisco Geu Flores, Andres Kecskemethy -- Structural Body Stiffness Influence on the Vehicle Dynamic Behavior, by Antonio Botosso, Tarcisio Coelho -- Case Study Regarding a New Knee Orthosis for Children with Locomotion Disabilities, by Cristian Copilusi, Alexandru Margine, Nicolae Dumitru -- Dynamic modelling of lower-mobility parallel manipulators using the Boltzmann-Hamel equations, by Oscar Altuzarra, Philipp Marcel Eggers, Francisco J. Campa, Constantino Roldán, Charles Pinto -- Mechanical Transmissions -- Gear Variator – Scientific Reality, by Konstantin Ivanov, Almas Dinassylov, Ekaterina Yaroslavceva -- A Novel Approach for Conceptual Structural Design of Gearbox, by Delun Wang, Huipeng Shen, Huimin Dong, Shudong Yu -- Dynamic Modeling of Planetary Gear Train for Vibration Characteristic Analysis, by Huimin Dong, Kai Zhang, Delun Wang, Yangyang Wu, Shaoping Bai -- Kinematics and dynamics of compound and complex gear system, by József Drewniak, Jerzy Kopec, Stanislaw Zawislak -- Robotics -- Step Design of a Cassino Tripod Leg Mechanism, by Mingfeng Wang, Marco Ceccarelli -- Self-crossing Motion Analysis of a Novel Inpipe Parallel Robot with Two Foldable Platforms, by Wan Ding, Yao Yanan -- A novel Skid-Steering Walking Vehicle with Dual Single-Driven Quadruped Mechanism, by Jianxu Wu, Qiang Ruan, Yao Yanan, Meili Zhai -- Automatic generation of serial manipulators to be used in a combined structural geometrical synthesis, by Daniel Ramirez, Jens Kotlarski, Tobias Ortmaier -- Biomechanics and Medical Engineering -- Bioinspired mechanism synthesis for flapping flight with unsteady flow effects, by Hrishikesh Raste, Anupam Saxena, Roger Sauer, Burkhard Corves -- Conceptual Design of a New Neurosurgical Brain Retractor, by Gary Kuan, Chin-Hsing Kuo -- Mechanism Design for Haptic Handwriting Assistance Device, by Mehmet Ismet Can Dede, Gökhan Kiper -- 3 DoF Haptic Exoskeleton for Space Telerobotic, by Dan Teodor Margineanu, Erwin-Christian Lovasz, Valentin Ciupe, Marius Mateas, Eugen Sever Zabava -- Industrial Applications -- The Handling and Spreading Algorithms of a Multi-arm Robot System for Automated Cloth Sheet Ironing Machine, by Hidetsugu Terada, Kazuyoshi Ishida, Koji Makino, Yasunori Atsumi -- AutoHD – Automated Handling and Draping of reinforcing Textiles, by Burkhard Corves, Jan Brinker, Isabel Prause, Mathias Hüsing, Bahoz Abbas, Helga Krieger, Philipp Kosse -- Singularity and workspace analyses of a 3-DOF parallel mechanism for vehicle suspensions, by Fernando Malvezzi, Tarcisio Coelho -- Mechatronics -- The Mathematical Model of a Weaving Machine, by Jirí Ondrášek -- Approximation of periodic displacement law with Fourier series in the

applications of mechanisms with electronic cam, by Petr Jirásko, Pavel Dostražil, Miroslav Vaclavik -- High-speed and High-resolution Linear Microstepper Based on Toggle Mechanism Actuated by Electromagnet, by Takaaki Oiwa, Yuichiro Toyoda, Junichi Aasama -- Author Index.

Sommario/riassunto

This volume deals with topics such as mechanism and machine design, biomechanics and medical engineering, gears, mechanical transmissions, mechatronics, computational and experimental methods, dynamics of mechanisms and machines, micromechanisms and microactuators, and history of mechanisms and transmissions. Following MeTrApp 2011 and 2013, held under the auspices of the IFToMM, these proceedings of the 3rd Conference on Mechanisms, Transmissions and Applications offer a platform for original research presentations for researchers, scientists, industry experts and students in the fields of mechanisms and transmissions with special emphasis on industrial applications in order to stimulate the exchange of new and innovative ideas.
