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Technical Program

Monday, June 20 10:40-11:40

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Impact of Strategies for Cooperative Project of R&D
Prof. Arturo Lara-López, Universidad de Guanajuato, México.

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- A23-511, On 4 - DOF Particularly Decoupled Parallel Mechanisms, V. Glazunov, Mechanical Engineering Research Institute, S. Palochkin, S. Kheilo, M. Shirinkin, Moscow State Textile University, Moscow, Russia, and N. M. Thanh, University of Transport, Ho Chi Minh City, Vietnam. 1072

- A23-498, Topological Structure Designs of Front Crank Type Elliptical Motion Exerciser, M. H. Hsu, H. P. Kuo, C. C. Hsueh, P. Y. Lin, Kun Shan University, Tainan, Taiwan, and H. H. Huang, National Panting University of Science and Technology, Pingtung, Taiwan. 1080

- A23-294, Structural Link Optimization of an Echography Robot, S. Miossec and L. Nouaille, PRISME Laboratory, University of Orléans, France. 1085

Rotor Dynamics II, Ch. Prof. S. Braut, Room B-104

- A17-469, Structural Optimization with Frequency Constraint of the Reinforced Concrete Columns of the Spring Mounted Turbine Generator Foundation, S. Braut, R. Žigulic, G. Štimac, and A. Skoblar, Faculty of Engineering, University of Rijeka, Rijeka, Croatia, M. Butković, Polytechnic of Karlovac, Karlovac, Croatia. 1094


- A17-603, Vibration-based Diagnostics of Rolling Element Bearings: State of the Art and Challenges, C. Nataraj, Department of Mechanical Engineering, Villanova University, Villanova, PA, USA, and K. Kappaganthu, Advanced Engineering Cummins Engine, Inc. Columbus, IN, USA. 1109

Dynamics of Machinery II, Ch. Prof. T. Thuemmel, Room B-105

- A24-438 Introduction to Modelling and Parameter Identification Methodology of Linkages by Measurements and Simulation, T. Thuemmel and M. Rossner, Technische Universität München Institute of Applied Mechanics, Munich, Germany. 1119


Tuesday, June 21 15:00-16:00

Robotics and Mechatronics XIII, Ch. Prof. S. B. Nokleby, Room B-1


- A12-486, Consequences of the Use of Decentralized Controllers for Redundantly Actuated Parallel Manipulators, T. Hufnagel, Heilbronn University, Heilbronn, Germany and D. Schramm, University Duisburg-Essen, Chair of Mechatronics, Duisburg, Germany.


Robotics and Mechatronics XIV, Ch. Prof. L. Baron, Room A-103


- A12-509, Trajectory-tracking Control of a Planar 3-RRR Parallel Manipulator with Singularity Avoidance, C. Nasa and S. Bandyopadhyay, Department of Engineering Design Indian Institute of Technology Madras, Chennai, India.

- A12-500, Modified Wren Platforms, G. Kiper and E. Söylemez, Middle East Technical University, Ankara, Turkey.

Computational Kinematics VII, Ch. Prof. D. Pisla, Room A-3

A7-535, Multi-Objective Scale Independent Optimization of 3-RPR Parallel Mechanisms, M. H. Saadatzi, H. D. Taghirad, M. Teshnehlab, K.N. Toosi University, Tehran, Iran, M. Tale Masouleh and C. Gosselin, Laval University, Quebec, Canada. 1197

A7-528, Efficient Solution of Kinematics for Multi-loop Mechanisms using Gröbner Bases, T. Uchida and J. McPhee, University of Waterloo, Waterloo, Ontario, Canada. 1207

Gearings VII, Ch. Prof. M. Pleguezuelos, Room A-106

A9-558, Analytical Expression of the Efficiency of Involute Spur Gears, M. Pleguezuelos, J. Pedrero and M. Sánchez, UNED, Madrid, España. 1216

A9-608, Offset Face Gear Tooth Surface Equations and Simulation, Y. Guo, T. Wang and Q. Li, Mechanical Engineering Institute, Tianjin University, Tianjin, China. 1225

A9-387, Mechanical Efficiency of Straight Bevel Gears Used in Photovoltaic Trackers Depending on Geometrical Parameters, G. Moldovean, B. Butuc, R. Velicu, and C.C. Gavrila, Transilvania University, Brasov, Romania. 1230

Linkages and Cams VII, Ch. Prof. B. Corves, Room B-106

A11-456, Descriptive and Intuitive Mechanism Design and Synthesis Using Geometry-Based Computer-Aided Methods, B. Corves, M. Riedel and M. Husing, RWTH Aachen University, Aachen, Germany. 1240

A11-464, Two Poses Synthesis of Spatial Linkages Using Similarity Transformation, G. F. Bär, K.-H. Modler, J. Ehlig, Technische Universität Dresden, Dresden, Germany, and S. Lin, Tongji University, Shanghai, China. 1247

A11-512, On Polynomial Flexure Hinges for Increased Deflection and an Approach for Simplified Manufacturing, S. Linß, L. Zentner, Department of Mechanism Technology Ilmenau University of Technology, and T. Erbe, Department of Engineering Design, Ilmenau University of Technology, Ilmenau, Germany. 1255

Design Methodology VII, Ch. Prof. S. Żółkiewski, Room A-105

A23-555, Selection and Impact of Parameters in Composite Materials Designing, S. Żółkiewski, Silesian University of Technology, Gliwice, Poland. 1264

- A23-545, Buckling as a New Perspective on Static Balancing of Mechanisms, J. A. Gallego and J. L. Herder, Dept. of BioMechanical Engineering, Delft University of Technology, Delft, The Netherlands. 1284

Rotor Dynamics III, Ch. Prof. J. C. Gómez-Mancilla, Room B-104


- A17-600, Evolution of Rotor Dynamics in 20th Century, J. S. Rao, Altair Engineering India, Bangalore, India N/A

- A17-602, Stability Analysis of Hydrodynamic Bearings with a Central Circumferential Feeding Groove, M. Chouchane, S. Naïmi, University of Monastir, Monastir, Tunisia, and J. L. Ligier, RENAULT S.A, Rueil Malmaison, France. N/A

Dynamics of Machinery III, Ch. Prof. T. Majewski, Room B-105

- A24-453, Resultant Dynamic Force of Automatic Balancing of a Disk with Elastic Shaft, T. Majewski, Departament of Mechanical Engineering, Universidad de las Américas, and M. A. Meraz Melo, Departament of Mechanical Engineering, Instituto Tecnológico de Puebla, Puebla, México. 1291

- A24-476, Dynamics of the Vibration Driven Tool at Its Interaction with the Processing Material, S.F. Jatsun, I.V. Lupehina, L. Yu. Volkova, South-West State University, Kursk, Russia, G. J. Panovko and A. A. Blagonravov, Mechanical Engineering Institute RAS, Moscow, Russia. 1299

- A24-593, Dynamic Answer Optimization and Experimental Research Concerning the Mechanisms of Farming Machine, I. D. Geonea, A. Margine, N. Dumitru, Craiova University, and C. Micu, G.S.I. Transporturi, Craiova, Romania. 1304
Robotics and Mechatronics XV, Ch. Prof. A. Raatz, Room B-1

- A12-499, Advantages of Task-adapted Parallel Robot Systems Featuring Modularity and Reconfigurability, G. Borchert, A. Burisch and A. Raatz, Technische Universität Carolo-Wilhelmina, Braunschweig, Germany. 1314

- A12-462, Kinetostatic Analysis of the New Parallel Manipulator with Cylindrical Joints, Zh. Baigunchev, B. Nurakhmetov, K. Sartaev, M. Izmambetov and Zh. Myrzageldieva, Kazakh-British Technical University, Almaty, Kazakhstan. 1322

- A12-513, Semi-Autonomous Collaborative Mobile Robot System for Material Handling, V. J. Gonzalez-Villela, A. Angeles-Garcia and D. Lima-Robleda, Department of Mechatronics Engineering UNAM, CU, Mexico, D.F., Mexico. 1329

Robotics and Mechatronics XVI, Ch. Prof. L. Notash, Room A-103

- A12-491, Investigation of Force Capability in Wire-Actuated Parallel Manipulators for Wire Failure, M. Agahi and L. Notash, Queen’s University, Kingston, Canada. 1335

- A12-503, Implementation of the Slide-O-Cam mechanism in the Design of a Robot Gripper, A. Silva-Caballero, M. González-Palacios, L. A. Aguilera-Cortés, Universidad de Guanajuato, Salamanca, M/éxico. 1345

- A12-523, Shaking Force Balancing of a Redundant Planar 4-RRR Parallel Manipulator by Linear Momentum with the Loop Equations Included, V. van der Wijk, J. L. Herder, University of Twente, Enschede, The Netherlands, S. Krut and F. Pierrot, LIRMM, Montpellier, France. 1353

Computational Kinematics VIII, Ch. Prof. J. Yu, Room A-3

- A7-367, The Reciprocity of a Pair of Line Spaces, J. Yu, Beihang University, Beijing, China, X. Kong, Heriot-Watt University, Edinburgh, United Kingdom, J. B. Hopkins, M. L. Culpepper, Massachusetts Institute of Technology, Cambridge, USA and J. S. Dai, King’s College, Univ. of London, London, UK. 1362

- A7-261, Analysis of Mechanism Structure Using Zero Transformation Parameters, K. Sholano, Kazakh National Technical University, Republic of Kazakhstan. 1372

- A7-570, Serial Kinematic Chains with Unilateral External Force Constraints, D. Zlatanov, University of Genoa, Genoa, Italy. 1380
Gearings VIII, Ch. Prof. D. Su, Room A-106

- A9-586, Online Gearbox Condition Monitoring Supported by Wireless Communication Techniques, D. Su, and W. Peng, Advanced Design and Manufacturing Engineering Centre, School of Architecture, Design and the Built Environment, Nottingham Trent University, Burton Street Nottingham, NG1 4BU, UK. 1389

- A9-598, Novel Variable-Tooth-Thickness Hob for Longitudinal Crowning in the Gear-Hobbing Process, R. H. Hsu and Z. H. Fong, National Chung Cheng University, Chia-Yi, Taiwan. 1398


Linkages and Cams VIII, Ch. Prof. J. L. Herder, Room B-106


- A11-553, Feasibility of Application of Finite Element Analysis Technique to Rigid Body Kinematics of a Mechanism, J. P. Modak, Priyadarshini College of Engineering, Near C.R.P.F. Campus, MIDC, Hingna Road, Nagpur, India 440 019. 1431

Design Methodology VIII, Ch. Prof. C. López-Cajún, Room A-105

- A23-537, Durability tests, J. M. Moisés, Volkswagen de México, Puebla, México, and M. T. Jose, SEPI Zacatenco IPN, DF, México. 1435

- A23-405, 3D Modeling And Motion Analysis of the Clock Mechanism, B. Popkonstantinovic, Z. Jeli, Faculty of Mechanical Engineering, M. Dimitrijevic, S. Misić, Faculty of Civil Engineering, Belgrade, Serbia. 1441

- A23-309, Some Considerations About the Modern Role of the Mechanical Historical Heritage, F. Rosa and E. Rovida, Politecnico di Milano - Dip.to di Meccanica, Milano, Italy. 1447
Rotor Dynamics IV, Ch. Prof. A. Grządziela, Room B-104

- A17-255. Diagnosing Of Rotor Systems Of Marine Gas Turbine Engines In Nonstationary States, A. Grządziela, Polish Naval Academy, Gdynia, Poland. 1454

- A17-572, Modal Analysis in Identification and Diagnostics of Rotating Machinery, J. Bednarz, T. Barszcz, T. Uhl, and P. Kurowski, AGH University Of Science and Technology, Kraków, Poland. 1460

Dynamics of Machinery IV, Ch. Prof. J. M. Dorador, Room B-105

- A24-455, Physical Explanation on Rotational Vibration Via Distorted Force Field of Multicyclic Symmetric Systems, D. L. Chen, S. Y. Wang, J. P. Liu School of Mechanical Engineering, Tianjin University, Tianjin, China, and J. Xiu, School of Electrical Engineering and Automation, Tianjin University, Tianjin, China. 1470


Tuesday, June 21 17:20-18:20

Robotics and Mechatronics XVII, Ch. Prof. Y. Nakamura, Room B-1

- A12-534, Mechanism and Control of Knee Power Augmenting Device with Backdrivable Electro-Hydrostatic Actuator, H. Kaminaga, H. Tanaka and Y. Nakamura, The University of Tokyo, Tokyo, Japan. 1488

- A12-516, Optimal Continuous Trajectory in Parallel Manipulators with Minimum Energy, A. Rojas Salgado and R. Terrazas Mallea, UNAM, DF, Mexico. 1498

- A12-542, Quasi-Static Simulation of a Wheeled Mobile Robot Having a Passive Variable Camber, V. Eathakota, G. Aditya and M. Krishna, RRC, IIIT-H, Hyderabad, India. 1508
A12-531, Determination of the Positioning Errors of the Robot Due to the Influence of Misalignments of the Revolute Joints Axes, I. A. Tabără, V. Moise, I. Dugăeșescu and L. Ionită, University Politehnica, Bucharest, Romania. 1516

A12-539, Kinematic Analysis and Computation of ZMP for a 12-internal-DoF Biped Robot, O. Narvez-Aroche, E. Rocha-Cózatl and F. Cuenca-Jiménez, National Autonomous University of Mexico, Mexico City, Mexico. 1522

A12-568, A Novel Type of 5 DOF Parallel Micromanipulator with Piezoelectric Actuators, D. Prusak, G. Karpiel and T. Uhl, AGH-UST, Krakow, Poland. 1532

Computational Kinematics IX, Ch. Prof. A. Veg, Room A-3

A7-613, Computer Aided Balancing (CAB) Applied on an Orbiting Mechanism, A. Veg, G. Sinikovic, R. Andrejevic and E. Veg, University of Belgrade, Faculty of M. E., Belgrade, Serbia. 1538

A17-484, Analysis of a Spatial Tensegrity-based Compliant Mechanism, Y. Moon, C.D. Crane III University of Florida, Gainesville, FL USA, and R. Roberts, Florida State University, Tallahassee, FL USA. 1546

A7-340, Mechanical Design and Kinematics Simulation for a Power Wheelchair with Self-actuated Seating Functions, J. G. Zhang, F. Wang, Q. Xue, Y. P. Guo and Y. Ren, College of Mechanical Engineering, Tianjin University of Science and Technology, Tianjin, China. 1556

Linkages and Cams IX, Ch. Prof. C. Nelson, Room B-106

A11-518, A Case Study of Designing a Cam-Follower Mechanism with Cycloidal Motion, A. Pourghodrat and C. A. Nelson, University of Nebraska-Lincoln, Nebraska, USA. 1560

A11-520, Bendable 9-Faced Polyhedra: Generation, Classification and Application, M. Hamann, G. Weiss, Faculty of Mathematics and Natural Sciences, Dresden University of Technology, Dresden, N. Posselt, K. H. Modler, Faculty of Mechanical Engineering, Dresden University of Technology, Dresden, Germany, and S. Lin, Department of Mechanical Engineering and Automobile, Tongji University, Shanghai, China. 1567

A11-554, Determination of the Minimum Size of the Disk Cam with Translating Flat-Face Follower, V. Moise, I. A. Tabara, I. Dugaesescu, University Politehnica, Bucharest, Romania, and M. Ene, University Quebec, Quebec, Canada. 1571
Multibody Dynamics I, Ch. Prof. A. Kecskemethy, Room A-105


- A8-564, Optimization in Dynamic Regime of a Francis Hydraulic Turbine Wicket Gate Mechanism, N. Dumitru, R. Malciu, S. Dumitru and A. Margine, University of Craiova, Craiova, Romania.

History of Mechanism and Machine Science I, Ch. Prof. H. Kerle, Room B-105

- A21-279, Historical Remarks on Past Model Collections of Machines and Mechanisms in Europe, H. Kerle, Technical University, Braunschweig, Germany, K. Mauersberger, Technical University, Dresden, Germany, and M. Ceccarelli, University of Cassino, Cassino, Italy.


- A21-393, Mechanism Designs of Cultural Heritage, M. Ceccarelli, LARM at University of Cassino, Cassino, Italy.
Wednesday, June 22 9:00-10:00

Conference Hall  Keynote Lecture 3, Ch. Prof. José M. Rico

The Task Selection Problem in the Kinematic Synthesis of Linkages
Prof. Michael McCarthy, University of California-Irvine, USA.

Wednesday, June 22 10:00-11:40

Robotics and Mechatronics XIX, Ch. Prof. M. Hiller, Room B-1

- A12-538, Optimization of the Wire Length for a Skid Actuated Wire Based Parallel Robot, C. Sturm, T. Bruckmann, D. Schramm and M. Hiller, University Duisburg-Essen, Duisburg, Germany. 1632

- A12-552, Thermoelectric Energy Harvester for a Smart Bearing Concept, T. J. Uhl and M. L. Lubieniecki, University of Science and Technology, Cracow, Poland. 1636

- A12-562, Simulation and Experimentation of Walking of the Bioloid Humanoid Robot, V. Nuñez, L. I. Olvera and J. A. Pamanes, División de Estudios de Posgrado e Investigación, Instituto Tecnológico de la Laguna, Torreón, Coah. México. 1644

- A12-573, 3D Objects Grasps Synthesis: A Survey, S. El-Khoury, Scuola Superiore Sant'Anna, Percro - Pisa, Italy, A. Sahbani and P. Bidaud, Pierre & Marie Curie University, Paris, ISIR-CNRS, France. 1651

- A12-259, Stabilizing Role of Feet in Walking Machines, T. Zielinska, Warsaw University of Technology, Institute of Aeronautics and Applied Mechanics (WUTIAAM), ul. Nowowiejska, 24, 00-665 Warsaw, Poland. 1661

Robotics and Mechatronics XX, Ch. Prof. I. Ion, Room A-103

- A12-563, Elastic Systems for Static Balancing of Robot Arms, I. Simionescu, L. Ciupitu, Luciana Ionita, I. Ion, Politehnica University, Bucharest, Romania, and M. Ene, University of Quebec, Quebec, Canada. 1666

- A12-347, An Approach for Stiffness Modelling of Lower Mobility Parallel Manipulators using the Generalized Jacobian, H. T. Liu, T. Huang, Tianjin University, Tianjin, China, Y. G. Li, Tianjin University of Technology and Education, Tianjin, China, and D. G. Chetwynd, The University of Warwick, Coventry, UK. 1671
Multibody Dynamics II, Ch. Prof. J. Ambrósio, Room B-106


- A8-263, Contact Prediction Between Moving Objects Bounded by Curved Surfaces, A. Albedah, King Saud University, Riyadh, Saudi Arabia, and J. J. Uicker, University of Wisconsin, Madison, Wisconsin, USA. 1705

- A8-301, On the Motion of the Rigid with Points Forced to Move on Given Fixed Surfaces, S. Ogaru and N. D. Stănescu, University of Pitești, Pitești, Romania. 1715

- A8-496, A General Contact Algorithm for Multibody System Dynamics with Complex Non-conforming 3D Geometry, D. Dopico, A. Luaces, J. Lugris and J. Cuadrado, Universidad de la Coruña, Ferrol, Spain. 1722

- A8-448, Elasto-Dynamic Modeling of a Novel High-Speed Parallel Manipulator with String-Parallelogram Mechanism, T. Sun, Y. Song, K. Yan and G. Dong, Tianjin University, Tianjin, P. R. China. 1729

History of Mechanism and Machine Science II, Ch. Prof. H. S. Yan, Room B-105

- A21-271, Ancient Mechanical Horse Carriages: from Basic Research to Science Education in Museums, H. S. Yan, National Cheng Kung University, Tainan, Taiwan. 1738

- A21-475, Creating Present-Day Solutions from Historical Knowledge, T. Brix, U. Döring and M. Reelfing, Ilmenau University of Technology, Ilmenau, Germany. 1744

- A21-397, Ivan Ivanovich Artobolevski as one of the Founders of IFToMM, O. Egorova, Moscow State Open University, Moscow, Russia, and M. Ceccarelli, DiMSAT, University of Cassino, Cassino, Italy. 1752
- A21-356, Development of a Foldable Maritime Container, A.J. Klein Breteler, Technical University Delft, Delft, the Netherlands. 1762


**Tribology I, Ch. Prof. E. Ciulli, Room A-3**

- A19-504, Dynamic Aspects of a New Experimental Apparatus for Tribological Investigations on Cam-Follower Pairs, D. Vela, F. Fazzolari and E. Ciulli, University of Pisa, Pisa, Italy. 1774

- A19-526, Interface Mass Transfer During the Tribofinishing Process, I. Hilerio and M. Barrón, Universidad Autónoma Metropolitana, Distrito Federal, México. 1783

- A19-527, Wet and Dry Abrasion Behavior of AISI 8620 Steel Boriding, I. Hilerio, Universidad Autónoma Metropolitana, Distrito Federal, México. 1788

- A19-262, Evaluation of Surface Fatigue Life and Durability Using D-value and Hardness, A. Yoshida, Hiroshima International University, Hiroshima, Japan, M. Seki, M. Fujii, Okayama University, Okayama, Japan, and K. Fukuhara, IAV GmbH, Berlin, Germany. 1792


**Education I, Ch. Prof. P. Fanghella, Room A-106**

- A20-443, Education in Mechatronic Engineering - Italian perspective, Pietro Fanghella, DIMEC - University of Genoa, Genoa, Italy. 1806


- A20-551, Robotics Engineering at the Universidad Politécnica de Guanajuato, Applied Educational Innovation, A. Cruz-Bernal and E. Chávez Conde, Departamento de Ingeniería Robótica, Universidad Politécnica de Guanajuato, Cúcuta, Gto. México. 1822

- A20-345, Development of the Waseda Wheeled Robot No. 2 Refined II and Pilot Experiments with Undergraduate Students, J. Solis and A. Takanishi, Waseda University, Tokyo, Japan. 1830
Sustainable Energy Systems I, Ch. Prof. R. Balan, Room A-105


- A29-599, Modeling and Control of Variable Speed Wind Turbine Equipped with PMSG, D. I. Stroe, A. I. Stan, Aalborg University, Aalborg, Denmark, I. Visa and I. Stroe, Transilvania University, Brasov, Romania. 1845


- A29-604, IFToMM Technical Committee - Sustainable Energy Systems, I. Visa, Transilvania University of Brasov, Brasov, Romania. 1856

- A29-594, Comparative Analysis of the Energy Response for Three Tracking System Types used for CPV Convertors, I. S. Hermenean, I. Visa, D. V. Diaconescu and A. Duta, Renewable Energy and Recycling, Transilvania University, Brasov, Romania. 1866

Reliability of Machines and Mechanisms I, Ch. Prof. S. H. Chang, Room B-104

- A15-350, A Monolithic Six Degrees-of-freedom Piezo-Micro-Positioner with Nanometer Resolution, C. C. Su, C. L. Tsai and S. H. Chang, National Taiwan University, Taipei, Taiwan, R.O.C. 1876

- A15-441, The Theory of Reliability of Machines and Mechanisms - History, State-of-art and Prospects, I. Demiyanushko, University MADI, Moscow, Russia. 1882


- A15-445, Sleeved Roll Reliability and Serviceability Improvement, V. Plakhtin, Moscow State Open University, Moscow, Russia. 1902
Robotics and Mechatronics XXI, Ch. Prof. K. J. Waldron, Room B-1

- A12-454, Resolving the Paradox of Asymmetry in the Gallop Gait, K. J. Waldron, University of Technology, Sydney, Australia, and S. P. N. Singh, Australian Centre for Field Robotics, Sydney, Australia. 1906


- A12-403, A New 3-DoF Planar Parallel Manipulator with Unlimited Rotation Capability, V. Arakelian, INSA, Rennes, France, S. Briot, IRCCyN-CNRS, Nantes, France, S. Yatsun and A. Yatsun, South-West State University, Kursk, Russia. 1920

Robotics and Mechatronics XXII, Ch. Prof O. Altuzarra, Room A-103

- A12-480, Discontinuity Analysis of Position Error due to Clearances in Parallel Manipulators, O. Altuzarra, Ch. Pinto, Univ. of the Basque Country, Bilbao, Spain, J. Aginaga and X. Iriarte, Public University of Navarra, Pamplona, Spain. 1928

- A12-450, Locally Dynamic Isotropy of Modified Symmetric Gough-Stewart Parallel Micromanipulators, Z. Tong, J. He, H. Jiang and Gu Duan, Harbin Institute of Technology, Harbin, China. 1937

- A12-466, Structural Synthesis, Dynamic Modeling and Analysis of a 3-DOF Asymmetric Parallel Mechanism, R. Z. H. Almeida and T. A. Hess-Coelho, University of São Paulo, São Paulo, Brazil. 1945

Multibody Dynamics III, Ch. Prof. E. C. Lovasz, Room B-106


- A8-310, Multibody Method for Dynamic Calculation of Kinematic Chains Movement with Clearances in Pin Joints, J. C. Grigore and N. D. Stănescu, University of Pitești, Pitești, Romania. 1961
History of Mechanism and Machine Science III, Ch. Prof. T. Koetsier, Room B-105

- A21-272, A Note on Stephenson’s Valve Gear and its Analysis in the 1850s, G. Klijn, and T. Koetsier, VU University, Amsterdam, Netherlands. 1972
- A21-451, Straight-line Mechanisms in the Collection of Bauman Moscow State Technical University, D. Klyukin, M. Shchedrin and V. Tarabarin, BMSTU, Moscow, Russia. 1987

Sustainable Energy Systems II, Ch. Prof. R. Chicurel, Room A-105

- A29-605, Micro Hydropower Plant with Rotor’s Pintle and Hydrodynamic Profile of Blades, I. Bostan, V. Dulgheru, and V. Bostan, Technical University of Moldova, Chisinau, Republic of Moldova. 2008

Human-Machine Systems I, Ch. Prof. K. Kedzior, Room A-106

- A10-304, Human Machine Interface Based on ZigBee Technique for Monitoring Vibration of Dynamic Object, B. Borowik, University of Bielsko-Biała, Bielsko-Biała, Poland, and J. Wojnarowski, Silesian Polytechnic, Gliwice, Poland. 2020
Vibrations I, Ch. Prof. N. Vrankovic, Room B-104

- A28-383, A Novel Algorithm for Bearing Stiffness Optimization, M. Jokic, M. Stegic and N. Vrankovic, University of Zagreb, Zagreb, Croatia. 2024

- A28-384, Receding Horizon Control of a Compliant Manipulator: Experimental Analysis, P. Boscariol, A. Gasparetto, M. Giovagnoni, A. Lanzutti, R. Vidoni and V. Zanotto, DIEGM University of Udine, Udine, Italy. 2029

- A28-446, Modelling and Vibration of Gear Drive Systems Considering Real Face Width, M. Byrtus and V. Zeman, University of West Bohemia, Plzeň, Czech Republic. 2039

Standardization of Terminology, Mechanical Transmissions and Nonlinear Vibrations I, Ch. Prof. T. Brix, Room A-3

1. A27-404, Multilingual Illustrated μ-thesaurus of “Mechanism” Indexing Terms, E.-C. Lovasz, D. Perju, A. Lovasz, Politehnica University of Timisoara, Timisoara, Romania, T. Brix, Technische Universität Ilmenau, Ilmenau, Germany, K.-H. Modler, Technische Universität Dresden, Dresden, Germany, and B. Corves, RWTH University Aachen, Aachen, Germany. 2047

2. A26-582, Topological Structure of a Six-speed Automatic Transmission Mechanism, O. Antonescu and P. Antonescu, Politehnica University, Bucharest, Romania. 2053

3. A14-319, Nonlinear Vibration Analysis of Wind Turbine Blades, J. C. Jauregui, CIATEQ, A.C., Querétaro, Qro., Mexico, and D. Jimenez, Universidad Politécnica de Chiapas, Tuxtla Gtz, Chis, Mexico. 2059
Robotics and Mechatronics XXIII, Ch. Prof. C. Crane, Room B-1


- A12-567, Kinematic Analysis of the 3-RPC-T Fully Translational Mechanism, **E. A. Rodriguez-Velazco and E. Rodriguez-Leal**, Dept. of Mechatronics and Automation, Tecnológico de Monterrey, Monterrey, Mexico. 2087

Robotics and Mechatronics XXIV, Ch. Prof. J. A. Carretero, Room A-103

- A12-577, Taking Measurements In and Around a Cluttered Static Environment with a Kinematically Redundant Serial Manipulator, **J. A. Carretero, B. C. Woody**, University of New Brunswick, Fredericton, NB, Canada, and **J. Slipp**, PAWS, Cape Breton University, Sydney, NS, Canada. 2093

- A12-576, Dynamic Balancing of a 2-DOF 2RR Planar Parallel Manipulator by Optimization, **A. Buganza and M. Acevedo**, Escuela de Ingeniería, Universidad Panamericana, Mexico City, Mexico. 2101

- A12-514, **MERO** Modular Robots, Solution for Displacing Technological Equipments on Irregular Terrains, **I. Ion, I. Simionescu, A. Curaj and A. Vasile**, Politehnica University, Bucharest, Romania. 2107

History of Mechanism and Machine Science IV, Ch. Prof. U. Meneghetti, Room B-105

- A21-574, Antique Applications of Cam Mechanisms, **U. Meneghetti and A. Maggiore**, University of Bologna, Bologna, Italy. 2115

- A21-560, Coriolis’ Theory of Machines and Mechanisms, **A. R. E. Oliveira**, Polytechnic School, Department of Mechanics and Structures, Federal University of Rio de Janeiro, Brazil. 2123
• A21-435, Models of the Gears with Variable Transmission Ratio in the Collection of Bauman Moscow State Technical University, E. Mikhailov and V. Tarabarin, BMSTU, Moscow, Russia. 2128

Linkages and Cams X, Ch. Prof. I. Torres, Room B-106

• A11-352, Methods of Structural Synthesis of Mechanisms, K. Romaniak, Cracow University of Technology, Cracow, Poland 2134

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