# Olivier BrÃ¼ls

List of Publications by Year
in descending order



| 85 | 1,930 | 279701 | 289141 |
|---|---|---|---|
| papers | citations | 23 h-index | 40 g-index |

| 86 | 86 | 86 | 1086 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A mortar formulation for frictionless line-to-line beam contact. Multibody System Dynamics, 2022, 54, 31-52. | 1.7 | 8 |
| 2 | An inertial human upper limb motion tracking method for robot programming by demonstration. Robotics and Autonomous Systems, 2022, 156, 104201. | 3.0 | 3 |
| 3 | Tight shoulders: A clinical, kinematic and strength comparison of symptomatic and asymptomatic male overhead athletes before and after stretching. European Journal of Sport Science, 2021, 21, 781-791. | 1.4 | 2 |
| 4 | Evolution of the trophy position along the tennis serve playerâ€™s development. Sports Biomechanics, 2021, 20, 431-443. | 0.8 | 5 |
| 5 | A General Purpose Formulation for Nonsmooth Dynamics With Finite Rotations: Application to the Woodpecker Toy. Journal of Computational and Nonlinear Dynamics, 2021, 16, . | 0.7 | 5 |
| 6 | A foot/ground contact model for biomechanical inverse dynamics analysis. Journal of Biomechanics, 2020, 100, 109412. | 0.9 | 7 |
| 7 | A robust nonsmooth generalized-$alpha $ scheme for flexible systems with impacts. Multibody System Dynamics, 2020, 48, 127-149. | 1.7 | 11 |
| 8 | Modelling and simulation of coupled multibody systems and granular media using the non-smooth contact dynamics approach. Multibody System Dynamics, 2020, 49, 181-202. | 1.7 | 7 |
| 9 | On the adaptation of local impact laws for multiple impact problems. Nonlinear Dynamics, 2020, 102, 1997-2016. | 2.7 | 7 |
| 10 | Normalizing gastrocnemius muscle EMG signal: An optimal set of maximum voluntary isometric contraction tests for young adults considering reproducibility. Gait and Posture, 2020, 82, 196-202. | 0.6 | 4 |
| 11 | Analysis of open-loop control design and parallel computation for underactuated manipulators. Acta Mechanica, 2020, 231, 2439-2456. | 1.1 | 6 |
| 12 | Geometrically exact thin-walled beam including warping formulated on the special Euclidean group <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1556" altimg="si6.svg"><mml:mrow><mml:mi>S</mml:mi><mml:mi>E</mml:mi><mml:mrow><mml:mo>(</mml:mo><mml:mn>3</mml:mn><mml:mn><br>Computer Methods in Applied Mechanics and Engineering, 2020, 369, 113062. | 3.4 | 21 |
| 13 | Kinesiotaping for scapular dyskinesis: The influence on scapular kinematics and on the activity of scapular stabilizing muscles. Journal of Electromyography and Kinesiology, 2020, 51, 102400. | 0.7 | 10 |
| 14 | A nonsmooth frictional contact formulation for multibody system dynamics. International Journal for Numerical Methods in Engineering, 2020, 121, 3584-3609. | 1.5 | 17 |
| 15 | Algorithm for Extracting Initial and Terminal Contact Timings during Treadmill Running using Inertial Sensors. , 2020, , . | | 0 |
| 16 | A geometric optimization method for the trajectory planning of flexible manipulators. Multibody System Dynamics, 2019, 47, 347-362. | 1.7 | 16 |
| 17 | Using supervised learning machine algorithm to identify future fallers based on gait patterns: A two-year longitudinal study. Experimental Gerontology, 2019, 127, 110730. | 1.2 | 11 |
| 18 | Gait symmetry in the dual task condition as a predictor of future falls among independent older adults: a 2-year longitudinal study. Aging Clinical and Experimental Research, 2019, 31, 1057-1067. | 1.4 | 15 |

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|---|---|---|---|
| 19 | Comparison and Analysis of Multibody Dynamics Formalisms for Solving Optimal Control Problem. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2019, , 55-77. | 0.1 | 2 |
| 20 | Inter-Session Reliability of the Tennis Serve and Influence of the Laboratory Context. Journal of Human Kinetics, 2019, 66, 57-67. | 0.7 | 6 |
| 21 | Adaptive Method for Detecting Zero-Velocity Regions to Quantify Stride-to-Stride Spatial Gait Parameters using Inertial Sensors. , 2019, , . | | 1 |
| 22 | System-Based Approaches for Structural Optimization of Flexible Mechanisms. Archives of Computational Methods in Engineering, 2018, 25, 817-844. | 6.0 | 19 |
| 23 | System-wise equivalent static loads for the design of flexible mechanisms. Computer Methods in Applied Mechanics and Engineering, 2018, 329, 312-331. | 3.4 | 11 |
| 24 | Experimental and numerical investigation of the nonlinear dynamics of compliant mechanisms for deployable structures. Mechanical Systems and Signal Processing, 2018, 101, 1-25. | 4.4 | 27 |
| 25 | Conceptual Design of a Variable Stiffness Mechanism in a Humanoid Ankle Using Parallel Redundant Actuation. , 2018, , . | | 8 |
| 26 | P 054 - Evaluation of ground reaction forces by inverse dynamics analysis. Gait and Posture, 2018, 65, 72-73. | 0.6 | 0 |
| 27 | On the Constraints Formulation in the Nonsmooth Generalized-$$alpha $$Î± Method. , 2018, , 335-374. | | 7 |
| 28 | Data set of healthy old people assessed for three walking conditions using accelerometric and opto-electronic methods. Aging Clinical and Experimental Research, 2017, 29, 1201-1209. | 1.4 | 14 |
| 29 | Analysis of stable model inversion methods for constrained underactuated mechanical systems. Mechanism and Machine Theory, 2017, 111, 99-117. | 2.7 | 27 |
| 30 | Aeroservoelastic simulations for horizontal axis wind turbines. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2017, 231, 103-117. | 0.8 | 7 |
| 31 | Interpolation schemes for geometrically exact beams: A motion approach. International Journal for Numerical Methods in Engineering, 2017, 112, 1129-1153. | 1.5 | 30 |
| 32 | Trajectory planning of soft link robots with improved intrinsic safety * *The publication is funded by the European Regional Development Fund (ERDF) within European Unionâ€™s INTERREG V A-program Greater Region, project Robotix Academy.In addition, the first author would like to acknowledge the Belgian Fund for Research training in Industry and Agriculture for its financial support (FRIA grant).. IFAC-PapersOnLine, 2017, 50, 6016-6021. | 0.5 | 7 |
| 33 | Normalizing shoulder EMG: An optimal set of maximum isometric voluntary contraction tests considering reproducibility. Journal of Electromyography and Kinesiology, 2017, 37, 1-8. | 0.7 | 34 |
| 34 | Which tool for a tennis serve evaluation? A review. International Journal of Performance Analysis in Sport, 2017, 17, 1007-1033. | 0.5 | 14 |
| 35 | Coupling multibody system and granular dynamics application to a 2D benchmark. EPJ Web of Conferences, 2017, 140, 16007. | 0.1 | 0 |
| 36 | A Lie Algebra Approach to Lie Group Time Integration of Constrained Systems. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, , 91-158. | 0.3 | 13 |

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|---|---|---|---|
| 37 | Mechanical behaviour of tape springs used in the deployment of reflectors around a solar panel. Acta Astronautica, 2016, 123, 271-282. | 1.7 | 30 |
| 38 | Weakly and fully coupled methods for structural optimization of flexible mechanisms. Multibody System Dynamics, 2016, 38, 391-417. | 1.7 | 14 |
| 39 | Solving the inverse dynamics of a flexible 3D robot for a trajectory tracking task. , 2016, , . | | 1 |
| 40 | Gender effect on the scapular 3D posture and kinematic in healthy subjects. Clinical Physiology and Functional Imaging, 2016, 36, 188-196. | 0.5 | 8 |
| 41 | Unilateral contact condition enhanced with squeeze film modelling in automotive differentials. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2016, 230, 1243-1257. | 1.1 | 0 |
| 42 | On the equivalent static load method for flexible multibody systems described with a nonlinear finite element formalism. International Journal for Numerical Methods in Engineering, 2016, 108, 646-664. | 1.5 | 10 |
| 43 | Nonlinear Interpolation on Manifold of Reduced-Order Models in Magnetodynamic Problems. IEEE Transactions on Magnetics, 2016, 52, 1-4. | 1.2 | 16 |
| 44 | An integrated control-structure design for manipulators with flexible links. IFAC-PapersOnLine, 2015, 48, 156-161. | 0.5 | 2 |
| 45 | Segmentation of gait cycles using foot-mounted 3D accelerometers. , 2015, , . | | 5 |
| 46 | Development and validation of an accelerometer-based method for quantifying gait events. Medical Engineering and Physics, 2015, 37, 226-232. | 0.8 | 71 |
| 47 | Merging multi-camera data to reduce motion analysis instrumental errors using Kalman filters. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 952-960. | 0.9 | 13 |
| 48 | Importance of structural damping in the dynamic analysis of compliant deployable structures. Acta Astronautica, 2015, 111, 323-333. | 1.7 | 20 |
| 49 | Structural optimization of multibody system components described using level set techniques. Structural and Multidisciplinary Optimization, 2015, 52, 959-971. | 1.7 | 21 |
| 50 | Order reduction in time integration caused by velocity projection. Journal of Mechanical Science and Technology, 2015, 29, 2579-2585. | 0.7 | 4 |
| 51 | Error analysis of generalized- $$alpha $$ Î± Lie group time integration methods for constrained mechanical systems. Numerische Mathematik, 2015, 129, 149-179. | 0.9 | 30 |
| 52 | Biomechanical analysis of abdominal injury in tennis serves. A case report. Journal of Sports Science and Medicine, 2015, 14, 402-12. | 0.7 | 5 |
| 53 | Simultaneous enforcement of constraints at position and velocity levels in the nonsmooth generalized-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si17.gif" display="inline" overflow="scroll"><mml:mi>Î±</mml:mi></mml:math> scheme. Computer Methods in Applied Mechanics and Engineering, 2014, 281, 131-161. | 3.4 | 61 |
| 54 | Development and validation of a 3D kinematic-based method for determining gait events during overground walking. , 2014, , . | | 1 |

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| 55 | A Formulation on the Special Euclidean Group for Dynamic Analysis of Multibody Systems. Journal of Computational and Nonlinear Dynamics, 2014, 9, . | 0.7 | 23 |
| 56 | A Stable Inversion Method for Feedforward Control of Constrained Flexible Multibody Systems. Journal of Computational and Nonlinear Dynamics, 2014, 9, . | 0.7 | 23 |
| 57 | Dominance effect on scapula 3-dimensional posture and kinematics in healthy male and female populations. Journal of Shoulder and Elbow Surgery, 2014, 23, 873-881. | 1.2 | 25 |
| 58 | Sensitivity analysis for multibody systems formulated on a Lie group. Multibody System Dynamics, 2014, 31, 47-67. | 1.7 | 18 |
| 59 | Geometrically exact beam finite element formulated on the special Euclidean group. Computer Methods in Applied Mechanics and Engineering, 2014, 268, 451-474. | 3.4 | 129 |
| 60 | Geometric Interpretation of a Non-Linear Beam Finite Element on The Lie Group SE(3). Archive of Mechanical Engineering, 2014, 61, 305-329. | 0.7 | 12 |
| 61 | Discussion on the optimization problem formulation of flexible components in multibody systems. Structural and Multidisciplinary Optimization, 2013, 48, 1189-1206. | 1.7 | 25 |
| 62 | Modelling of Contact Between Stiff Bodies in Automotive Transmission Systems. Computational Methods in Applied Sciences (Springer), 2013, , 193-214. | 0.1 | 1 |
| 63 | Inverse dynamics of serial and parallel underactuated multibody systems using a DAE optimal control approach. Multibody System Dynamics, 2013, 30, 359-376. | 1.7 | 24 |
| 64 | A nonsmooth generalizedâ€•Î± scheme for flexible multibody systems with unilateral constraints. International Journal for Numerical Methods in Engineering, 2013, 96, 487-511. | 1.5 | 45 |
| 65 | Modeling joints with clearance and friction in multibody dynamic simulation of automotive differentials. Theoretical and Applied Mechanics Letters, 2013, 3, 013003. | 1.3 | 9 |
| 66 | Contact Model Between Superelements in Dynamic Multibody Systems. , 2013, , . | | 4 |
| 67 | Validated extraction of gait events from 3D accelerometer recordings. , 2012, , . | | 8 |
| 68 | Lie group generalized-Î± time integration of constrained flexible multibody systems. Mechanism and Machine Theory, 2012, 48, 121-137. | 2.7 | 124 |
| 69 | Computation of bounded feed-forward control for underactuated multibody systems using nonlinear optimization. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 69-70. | 0.2 | 1 |
| 70 | Optimization of Multibody Systems and Their Structural Components. Computational Methods in Applied Sciences (Springer), 2011, , 49-68. | 0.1 | 23 |
| 71 | Integrating structural and input design of a 2-DOF high-speed parallel manipulator: A flexible model-based approach. Mechanism and Machine Theory, 2010, 45, 1509-1519. | 2.7 | 15 |
| 72 | Dynamic analysis of the self-locking phenomenon in tape-spring hinges. Acta Astronautica, 2010, 66, 1125-1132. | 1.7 | 33 |

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| 73 | On the Use of Lie Group Time Integrators in Multibody Dynamics. Journal of Computational and Nonlinear Dynamics, 2010, 5, . | 0.7 | 76 |
| 74 | Computer-aided integrated design for machines with varying dynamics. Mechanism and Machine Theory, 2009, 44, 1733-1745. | 2.7 | 33 |
| 75 | Integrated structure and control design for mechatronic systems with configuration-dependent dynamics. Mechatronics, 2009, 19, 1016-1025. | 2.0 | 37 |
| 76 | Computer-Aided Integrated Design for Mechatronic Systems with Varying Dynamics. , 2009, , 53-62. | | 2 |
| 77 | Sensitivity analysis for dynamic mechanical systems with finite rotations. International Journal for Numerical Methods in Engineering, 2008, 74, 1897-1927. | 1.5 | 32 |
| 78 | On the numerical damping of time integrators for coupled mechatronic systems. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 577-588. | 3.4 | 7 |
| 79 | The Generalized-Î± Scheme as a Linear Multistep Integrator: Toward a General Mechatronic Simulator. Journal of Computational and Nonlinear Dynamics, 2008, 3, . | 0.7 | 26 |
| 80 | Modelling, simulation and control of flexible multibody systems. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2008, , 21-74. | 0.3 | 4 |
| 81 | The global modal parameterization for non-linear model-order reduction in flexible multibody dynamics. International Journal for Numerical Methods in Engineering, 2007, 69, 948-977. | 1.5 | 81 |
| 82 | Multiphysics modeling and optimization of mechatronic multibody systems. Multibody System Dynamics, 2007, 18, 345-373. | 1.7 | 69 |
| 83 | Convergence of the generalized-Î± scheme for constrained mechanical systems. Multibody System Dynamics, 2007, 18, 185-202. | 1.7 | 301 |
| 84 | The generalized-Î± method in mechatronic applications. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2006, 86, 748-758. | 0.9 | 17 |
| 85 | A Model Reduction Method for the Control of Rigid Mechanisms. Multibody System Dynamics, 2006, 15, 213-227. | 1.7 | 9 |