# Oliver M O'reilly

List of Publications by Year
in descending order



| 102 | 2,437 | 361296 20 | 223716 46 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 109 | 109 | 109 | 1584 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Electrostatically actuated MEMS in the post-touchdown regime: The thin-dielectric limit and a novel reduced-order model for release dynamics. International Journal of Solids and Structures, 2022, 252, 111812. | 1.3 | 3 |
| 2 | Continuous models for peristaltic locomotion with application to worms and soft robots. Biomechanics and Modeling in Mechanobiology, 2021, 20, 5-30. | 1.4 | 12 |
| 3 | Pervasive nonlinear vibrations due to rod-obstacle contact. Nonlinear Dynamics, 2021, 103, 2169-2181. | 2.7 | 3 |
| 4 | The geometry of equations of motion: particles in equivalent universes. Nonlinear Dynamics, 2021, 104, 2979. | 2.7 | 1 |
| 5 | Mechanics-based model for the cooking-induced deformation of spaghetti. Physical Review E, 2020, 101, 013001. | 0.8 | 5 |
| 6 | On a planar theory of a discrete nonlinearly elastic rod. Acta Mechanica, 2020, 231, 1217-1240. | 1.1 | 0 |
| 7 | On the delicate state of instability of a vertical riser transporting fluid. Journal of Fluids and Structures, 2020, 92, 102811. | 1.5 | 1 |
| 8 | On contact point motion in the vibration analysis of elastic rods. Journal of Sound and Vibration, 2020, 487, 115579. | 2.1 | 6 |
| 9 | On Planar Discrete Elastic Rod Models for the Locomotion of Soft Robots. Soft Robotics, 2019, 6, 595-610. | 4.6 | 48 |
| 10 | Gliding motions of a rigid body: the curious dynamics of Littlewood's rolling hoop. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190440. | 1.0 | 8 |
| 11 | Controlling the Locomotion of Spherical Robots or Why BB-8 Works. Journal of Mechanisms and Robotics, 2019, 11, . | 1.5 | 6 |
| 12 | Instability of catenary-type flexible risers conveying fluid in subsea environments. Ocean Engineering, 2019, 173, 98-115. | 1.9 | 17 |
| 13 | Perspectives on Euler angle singularities, gimbal lock, and the orthogonality of applied forces and applied moments. Multibody System Dynamics, 2018, 44, 31-56. | 1.7 | 58 |
| 14 | Bishop Frames and Reference Frames Along the Discretized Curve. SpringerBriefs in Applied Sciences and Technology, 2018, , 33-46. | 0.2 | 0 |
| 15 | A Primer on the Kinematics of Discrete Elastic Rods. SpringerBriefs in Applied Sciences and Technology, 2018, , . | 0.2 | 42 |
| 16 | Equations of Motion and Energetic Considerations. SpringerBriefs in Applied Sciences and Technology, 2018, , 93-112. | 0.2 | 0 |
| 17 | Modeling Nonlinear Problems in the Mechanics of Strings and Rods. Interaction of Mechanics and Mathematics, 2017, , . | 0.9 | 72 |
| 18 | The roles of impact and inertia in the failure of a shoelace knot. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160770. | 1.0 | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | On the development of rod-based models for pneumatically actuated soft robot arms: A five-parameter constitutive relation. International Journal of Solids and Structures, 2017, 120, 226-235. | 1.3 | 35 |
| 20 | Kirchhoffâ€™s Rod Theory. Interaction of Mechanics and Mathematics, 2017, , 187-268. | 0.9 | 6 |
| 21 | Green and Naghdiâ€™s Rod Theory. Interaction of Mechanics and Mathematics, 2017, , 295-341. | 0.9 | 0 |
| 22 | Theory of the Elastica and a Selection of Its Applications. Interaction of Mechanics and Mathematics, 2017, , 121-185. | 0.9 | 0 |
| 23 | Verifying the equivalence of representations of the knee joint moment vector from a drop vertical jump task. Knee, 2017, 24, 484-490. | 0.8 | 3 |
| 24 | Dynamical analysis and development of a biologically inspired SMA caterpillar robot. Bioinspiration and Biomimetics, 2017, 12, 056005. | 1.5 | 8 |
| 25 | A Kinect-based movement assessment system: marker position comparison to Vicon. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 1289-1298. | 0.9 | 14 |
| 26 | Numerical investigation of a walking soft robot. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 339-340. | 0.2 | 0 |
| 27 | Theory of an Elastic Rod with Extension and Shear. Interaction of Mechanics and Mathematics, 2017, , 269-293. | 0.9 | 0 |
| 28 | Mechanics of a String. Interaction of Mechanics and Mathematics, 2017, , 3-47. | 0.9 | 0 |
| 29 | An experimentally validated rod model for soft continuum robots. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 317-318. | 0.2 | 8 |
| 30 | On constitutive relations for a rod-based model of a pneu-net bending actuator. Extreme Mechanics Letters, 2016, 8, 38-46. | 2.0 | 87 |
| 31 | On geodesics of the rotation group SO(3). Regular and Chaotic Dynamics, 2015, 20, 729-738. | 0.3 | 16 |
| 32 | On Adhesive and Buckling Instabilities in the Mechanics of Carbon Nanotubes Bundles. Journal of Applied Mechanics, Transactions ASME, 2015, 82, . | 1.1 | 1 |
| 33 | A Simple Treatment of Constraint Forces and Constraint Moments in the Dynamics of Rigid Bodies. Applied Mechanics Reviews, 2015, 67, . | 4.5 | 8 |
| 34 | Some perspectives on Eshelby-like forces in the elastica arm scale. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140785. | 1.0 | 10 |
| 35 | On the dynamics of the eye: geodesics on a configuration manifold, motions of the gaze direction and Helmholtzâ€™s theorem. Nonlinear Dynamics, 2015, 80, 1303-1327. | 2.7 | 11 |
| 36 | Soft hands: An analysis of some gripping mechanisms in soft robot design. International Journal of Solids and Structures, 2015, 64-65, 155-165. | 1.3 | 72 |

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|---|---|---|---|
| 37 | On the formulation of cost functions for torque-optimized control of rigid bodies. Automatica, 2014, 50, 2723-2725. | 3.0 | 1 |
| 38 | Energy efficiency in friction-based locomotion mechanisms for soft and hard robots: slower can be faster. Nonlinear Dynamics, 2014, 78, 2811-2821. | 2.7 | 16 |
| 39 | The impulsive effects of momentum transfer on the dynamics of a novel ocean wave energy converter. Journal of Sound and Vibration, 2013, 332, 5559-5565. | 2.1 | 3 |
| 40 | On the modeling of the intervertebral joint in multibody models for the spine. Multibody System Dynamics, 2013, 30, 413-432. | 1.7 | 22 |
| 41 | Almost sure asymptotic stability of an oscillator with delay feedback when excited by finite-state Markov noise. Probabilistic Engineering Mechanics, 2013, 32, 21-30. | 1.3 | 5 |
| 42 | Bifurcations and instability in the adhesion of intrinsically curved rods. Mechanics Research Communications, 2013, 49, 13-16. | 1.0 | 15 |
| 43 | On Representations for Joint Moments Using a Joint Coordinate System. Journal of Biomechanical Engineering, 2013, 135, 114504. | 0.6 | 15 |
| 44 | Nonlinear stability criteria for tree-like structures composed of branched elastic rods. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 206-226. | 1.0 | 14 |
| 45 | Some comments on the absence of buckling of the ligamentous human spine in the sagittal plane. Mechanics Research Communications, 2012, 40, 11-15. | 1.0 | 7 |
| 46 | On the stability of a rod adhering to a rigid surface: Shear-induced stable adhesion and the instability of peeling. Journal of the Mechanics and Physics of Solids, 2012, 60, 827-843. | 2.3 | 46 |
| 47 | On forced oscillations of a simple model for a novel wave energy converter. Nonlinear Dynamics, 2012, 67, 1135-1146. | 2.7 | 10 |
| 48 | A Musculoskeletal model for the lumbar spine. Biomechanics and Modeling in Mechanobiology, 2012, 11, 19-34. | 1.4 | 230 |
| 49 | On Stability Analyses of Three Classical Buckling Problems for the Elastic Strut. Journal of Elasticity, 2011, 105, 117-136. | 0.9 | 28 |
| 50 | On the evolution of intrinsic curvature in rod-based models of growth in long slender plant stems. International Journal of Solids and Structures, 2011, 48, 1239-1247. | 1.3 | 22 |
| 51 | On the static equilibria of branched elastic rods. International Journal of Engineering Science, 2011, 49, 212-227. | 2.7 | 14 |
| 52 | Design and Development of a Novel Modular Spine Testing Apparatus. , 2011, , . | | 0 |
| 53 | On Cartesian stiffness matrices in rigid body dynamics: an energetic perspective. Multibody System Dynamics, 2010, 24, 441-472. | 1.7 | 9 |
| 54 | Minimizing errors associated with calculating the location of the helical axis for spinal motions. Journal of Biomechanics, 2010, 43, 2822-2829. | 0.9 | 22 |

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| 55 | On the dynamics of a novel ocean wave energy converter. Journal of Sound and Vibration, 2010, 329, 5058-5069. | 2.1 | 31 |
| 56 | Interclinician and intraclinician variability in the mechanics of the pivot shift test for posterolateral rotatory instability (PLRI) of the elbow. Journal of Shoulder and Elbow Surgery, 2010, 19, 1150-1156. | 1.2 | 9 |
| 57 | On the Stiffness Matrix of the Intervertebral Joint: Application to Total Disk Replacement. Journal of Biomechanical Engineering, 2009, 131, 081007. | 0.6 | 18 |
| 58 | An Evolution Equation for Plant Growth. , 2009, , . | | 0 |
| 59 | On the use of quaternions and Eulerâ€“Rodrigues symmetric parameters with moments and moment potentials. International Journal of Engineering Science, 2009, 47, 595-609. | 2.7 | 12 |
| 60 | On the Use of Quaternions to Characterize the Dynamics of a Vertebral Motion Segment. , 2009, , . | | 0 |
| 61 | Surgeon Experience Level Affects Mechanics of the Pivot Shift Test for Posterolateral Rotatory Instability of the Elbow. , 2009, , . | | 0 |
| 62 | Dual-mode temperature compensation for a comb-driven MEMS resonant strain gauge. Sensors and Actuators A: Physical, 2008, 144, 374-380. | 2.0 | 29 |
| 63 | Modeling the growth and branching of plants: A simple rod-based model. Journal of the Mechanics and Physics of Solids, 2008, 56, 3021-3036. | 2.3 | 26 |
| 64 | The Dual Euler Basis: Constraints, Potentials, and Lagrangeâ€™s Equations in Rigid-Body Dynamics. Journal of Applied Mechanics, Transactions ASME, 2007, 74, 256. | 1.1 | 18 |
| 65 | Curve Encirclement and Protein Structure. Physical Review Letters, 2007, 99, 158103. | 2.9 | 0 |
| 66 | On the restrictions imposed by non-affine material symmetry groups for elastic rods: application to helical substructures. European Journal of Mechanics, A/Solids, 2007, 26, 701-711. | 2.1 | 7 |
| 67 | On dissipation-induced destabilization and brake squeal: A perspective using structured pseudospectra. Journal of Sound and Vibration, 2007, 308, 1-11. | 2.1 | 18 |
| 68 | A Material Momentum Balance Law for Rods. Journal of Elasticity, 2007, 86, 155-172. | 0.9 | 31 |
| 69 | The attitudes of constant angular velocity motions. International Journal of Non-Linear Mechanics, 2006, 41, 787-795. | 1.4 | 6 |
| 70 | On Transverse and Rotational Symmetries in Elastic Rods. Journal of Elasticity, 2006, 82, 31-47. | 0.9 | 7 |
| 71 | The energy jump condition for thermomechanical media in the presence of configurational forces. Continuum Mechanics and Thermodynamics, 2006, 18, 361-365. | 1.4 | 8 |
| 72 | Geometrical Derivation of Lagrangeâ€™s Equations for a System of Rigid Bodies. Mathematics and Mechanics of Solids, 2006, 11, 401-422. | 1.5 | 10 |

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|---|---|---|---|
| 73 | On the transient dynamics of a multi-degree-of-freedom friction oscillator: a new mechanism for disc brake noise. Journal of Sound and Vibration, 2005, 287, 901-917. | 2.1 | 37 |
| 74 | Modeling MEMS resonators with rod-like components accounting for anisotropy, temperature, and strain dependencies. International Journal of Solids and Structures, 2005, 42, 6523-6549. | 1.3 | 2 |
| 75 | A method for relaxing parameter constraints in rigid body dynamics. International Journal of Non-Linear Mechanics, 2005, 40, 715-727. | 1.4 | 2 |
| 76 | On Navigation Systems for Motorcycles: The Influence and Estimation of Roll Angle. Journal of Navigation, 2005, 58, 375-388. | 1.0 | 1 |
| 77 | On Some Peculiar Aspects of Axial Motions of Closed Loops of String in the Presence of a Singular Supply of Momentum. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 541-545. | 1.1 | 10 |
| 78 | On the Nonlinear Dynamics of Tether Suspensions for MEMS. Journal of Vibration and Acoustics, Transactions of the ASME, 2004, 126, 326-331. | 1.0 | 15 |
| 79 | On the equations of motion for rigid bodies with surface growth. International Journal of Engineering Science, 2004, 42, 2159-2174. | 2.7 | 11 |
| 80 | Steady motions of an axisymmetric satellite: an atlas of their bifurcations. International Journal of Non-Linear Mechanics, 2004, 39, 921-940. | 1.4 | 6 |
| 81 | On the Dynamics of a Deformable Satellite in the Gravitational Field of a Spherical Rigid Body. Celestial Mechanics and Dynamical Astronomy, 2003, 86, 1-28. | 0.5 | 5 |
| 82 | On energetics and conservations for strings in the presence of singular sources of momentum and energy. Acta Mechanica, 2003, 165, 27-45. | 1.1 | 11 |
| 83 | Automotive disc brake squeal. Journal of Sound and Vibration, 2003, 267, 105-166. | 2.1 | 679 |
| 84 | On potential energies and constraints in the dynamics of rigid bodies and particles. Mathematical Problems in Engineering, 2002, 8, 169-180. | 0.6 | 9 |
| 85 | Title is missing!. Regular and Chaotic Dynamics, 2002, 7, 49. | 0.3 | 45 |
| 86 | ON COUPLED LONGITUDINAL AND LATERAL VIBRATIONS OF ELASTIC RODS. Journal of Sound and Vibration, 2001, 247, 835-856. | 2.1 | 6 |
| 87 | A class of motions of elastic, symmetric Cosserat points: existence, bifurcation, and stability. International Journal of Non-Linear Mechanics, 2001, 36, 353-374. | 1.4 | 5 |
| 88 | On the Material Symmetry of Elastic Rods. Journal of Elasticity, 2000, 60, 35-56. | 0.9 | 7 |
| 89 | A Novel Approach to Vehicle Dynamics using the Theory of a Cosserat Point and its Application to Collision Analyses of Platooning Vehicles. Vehicle System Dynamics, 1999, 32, 85-108. | 2.2 | 6 |
| 90 | Hoberman's Sphere, Euler Parameters and Lagrange's Equations. Journal of Elasticity, 1999, 56, 171-180. | 0.9 | 15 |

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| 91 | A treatment of shocks in one-dimensional thermomechanical media. Continuum Mechanics and Thermodynamics, 1999, 11, 339-352. | 1.4 | 21 |
| 92 | Elastic Rods with Moderate Roration. Journal of Elasticity, 1997, 48, 193-216. | 0.9 | 4 |
| 93 | A properly invariant theory of infinitesimal deformations of an elastic Cosserat point. Zeitschrift Fur Angewandte Mathematik Und Physik, 1996, 47, 179-193. | 0.7 | 7 |
| 94 | Some Remarks on Invariance Requirements for Constrained Rods. Mathematics and Mechanics of Solids, 1996, 1, 343-348. | 1.5 | 14 |
| 95 | Reversible dynamical systems: Dissipation-induced destabilization and follower forces. Applied Mathematics and Computation, 1995, 70, 273-282. | 1.4 | 4 |
| 96 | A properly invariant theory of small deformations superposed on large deformations of an elastic rod. Journal of Elasticity, 1995, 39, 97-131. | 0.9 | 10 |
| 97 | Elastic equilibria of translating cables. Acta Mechanica, 1995, 108, 189-206. | 1.1 | 9 |
| 98 | Global bifurcations in the forced vibration of a damped string. International Journal of Non-Linear Mechanics, 1993, 28, 337-351. | 1.4 | 20 |
| 99 | Resonant torsional vibrations: an application to dynamic viscometry. Archive of Applied Mechanics, 1993, 63, 437-451. | 1.2 | 9 |
| 100 | Non-linear, non-planar and non-periodic vibrations of a string. Journal of Sound and Vibration, 1992, 153, 413-435. | 2.1 | 66 |
| 101 | Cascades of homoclinic orbits to, and chaos near, a Hamiltonian saddle-center. Journal of Dynamics and Differential Equations, 1992, 4, 95-126. | 1.0 | 102 |
| 102 | New Representations for the Curvature Tensor of a Surface with Application to Theories of Elastic Shells. Journal of Elasticity, 0, , 1. | 0.9 | 0 |