# Larry A Taber

## List of Publications by Year in descending order



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|---|---|---|---|
| 78 papers | 4,113 citations | 101543<br>36 h-index | 118850<br>62 g-index |
| 83 all docs | 83 docs citations | 83 times ranked | 2957 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Biomechanics of Growth, Remodeling, and Morphogenesis. Applied Mechanics Reviews, 1995, 48, 487-545. | 10.1 | 534 |
| 2 | Stress-Modulated Growth, Residual Stress, and Vascular Heterogeneity. Journal of Biomechanical Engineering, 2001, 123, 528-535. | 1.3 | 258 |
| 3 | Axons Pull on the Brain, But Tension Does Not Drive Cortical Folding. Journal of Biomechanical Engineering, 2010, 132, 071013. | 1.3 | 216 |
| 4 | Theoretical Study of Stress-Modulated Growth in the Aorta. Journal of Theoretical Biology, 1996, 180, 343-357. | 1.7 | 143 |
| 5 | Growth and remodeling in a thick-walled artery model: effects of spatial variations in wall constituents. Biomechanics and Modeling in Mechanobiology, 2008, 7, 245-262. | 2.8 | 137 |
| 6 | The role of mechanical forces in dextral rotation during cardiac looping in the chick embryo. Developmental Biology, 2004, 272, 339-350. | 2.0 | 125 |
| 7 | Biomechanics of Cardiovascular Development. Annual Review of Biomedical Engineering, 2001, 3, 1-25. | 12.3 | 113 |
| 8 | Biophysical mechanisms of cardiac looping. International Journal of Developmental Biology, 2006, 50, 323-332. | 0.6 | 102 |
| 9 | Dynamic patterns of cortical expansion during folding of the preterm human brain. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3156-3161. | 7.1 | 94 |
| 10 | Cardiac looping in experimental conditions: Effects of extraembryonic forces. Developmental Dynamics, 2002, 224, 413-421. | 1.8 | 91 |
| 11 | Towards a unified theory for morphomechanics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 3555-3583. | 3.4 | 86 |
| 12 | Mechanics of head fold formation: investigating tissue-level forces during early development. Development (Cambridge), 2010, 137, 3801-3811. | 2.5 | 86 |
| 13 | Computational models for mechanics of morphogenesis. Birth Defects Research Part C: Embryo Today Reviews, 2012, 96, 132-152. | 3.6 | 81 |
| 14 | Not just inductive: a crucial mechanical role for the endoderm during heart tube assembly. Development (Cambridge), 2012, 139, 1680-1690. | 2.5 | 79 |
| 15 | Mechanical aspects of cardiac development. Progress in Biophysics and Molecular Biology, 1998, 69, 237-255. | 2.9 | 76 |
| 16 | Material Properties and Residual Stress in the Stage 12 Chick Heart During Cardiac Looping. Journal of Biomechanical Engineering, 2004, 126, 823-830. | 1.3 | 76 |
| 17 | Residual stress in the adult mouse brain. Biomechanics and Modeling in Mechanobiology, 2009, 8, 253-262. | 2.8 | 76 |
| 18 | Mechanical Asymmetry in the Embryonic Chick Heart During Looping. Annals of Biomedical Engineering, 2003, 31, 1327-1336. | 2.5 | 75 |

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|---|---|---|---|
| 19 | Mechanics of cardiac looping. Developmental Dynamics, 1995, 203, 42-50. | 1.8 | 73 |
| 20 | Theoretical study of Beloussovâ€™s hyper-restoration hypothesis for mechanical regulation of morphogenesis. Biomechanics and Modeling in Mechanobiology, 2008, 7, 427-441. | 2.8 | 73 |
| 21 | Modeling Heart Development. Journal of Elasticity, 2000, 61, 165-197. | 1.9 | 72 |
| 22 | Role of actin polymerization in bending of the early heart tube. Developmental Dynamics, 2005, 233, 1272-1286. | 1.8 | 66 |
| 23 | Computational modeling of morphogenesis regulated by mechanical feedback. Biomechanics and Modeling in Mechanobiology, 2008, 7, 77-91. | 2.8 | 62 |
| 24 | On the Effects of Residual Stress in Microindentation Tests of Soft Tissue Structures. Journal of Biomechanical Engineering, 2004, 126, 276-283. | 1.3 | 61 |
| 25 | A Theory for Transverse Deflection of Poroelastic Plates. Journal of Applied Mechanics, Transactions ASME, 1992, 59, 628-634. | 2.2 | 52 |
| 26 | Morphogenetic adaptation of the looping embryonic heart to altered mechanical loads. Developmental Dynamics, 2006, 235, 1822-1829. | 1.8 | 50 |
| 27 | Optical Coherence Tomography as a Tool for Measuring Morphogenetic Deformation of the Looping Heart. Anatomical Record, 2007, 290, 1057-1068. | 1.4 | 49 |
| 28 | A Nonliner Poroelastic Model for the Trabecular Embryonic Heart. Journal of Biomechanical Engineering, 1994, 116, 213-223. | 1.3 | 46 |
| 29 | Computational study of growth and remodelling in the aortic arch. Computer Methods in Biomechanics and Biomedical Engineering, 2008, 11, 525-538. | 1.6 | 43 |
| 30 | Tissue growth constrained by extracellular matrix drives invagination during optic cup morphogenesis. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1405-1421. | 2.8 | 43 |
| 31 | Computational Model for the Transition From Peristaltic to Pulsatile Flow in the Embryonic Heart Tube. Journal of Biomechanical Engineering, 2007, 129, 441-449. | 1.3 | 41 |
| 32 | On Modeling Morphogenesis of the Looping Heart Following Mechanical Perturbations. Journal of Biomechanical Engineering, 2008, 130, 061018. | 1.3 | 41 |
| 33 | Morphomechanics: transforming tubes into organs. Current Opinion in Genetics and Development, 2014, 27, 7-13. | 3.3 | 40 |
| 34 | Bending of the Looping Heart: Differential Growth Revisited. Journal of Biomechanical Engineering, 2014, 136, . | 1.3 | 39 |
| 35 | Opening Angles and Material Properties of the Early Embryonic Chick Brain. Journal of Biomechanical Engineering, 2010, 132, 011005. | 1.3 | 36 |
| 36 | Spatial and Temporal Variations of Cortical Growth during Gyrogenesis in the Developing Ferret Brain. Cerebral Cortex, 2013, 23, 488-498. | 2.9 | 36 |

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|---|---|---|---|
| 37 | Bending and twisting the embryonic heart: a computational model for c-looping based on realistic geometry. Frontiers in Physiology, 2014, 5, 297. | 2.8 | 35 |
| 38 | Computational Model for Early Cardiac Looping. Annals of Biomedical Engineering, 2006, 34, 1655-69. | 2.5 | 33 |
| 39 | The role of mechanical forces in the torsional component of cardiac looping. Annals of the New York Academy of Sciences, 2010, 1188, 103-110. | 3.8 | 33 |
| 40 | Simple and accurate methods for quantifying deformation, disruption, and development in biological tissues. Journal of the Royal Society Interface, 2014, 11, 20140685. | 3.4 | 31 |
| 41 | A new hypothesis for foregut and heart tube formation based on differential growth and actomyosin contraction. Development (Cambridge), 2017, 144, 2381-2391. | 2.5 | 31 |
| 42 | A New Method for Measuring Deformation of Folding Surfaces During Morphogenesis. Journal of Biomechanical Engineering, 2008, 130, 061010. | 1.3 | 28 |
| 43 | Mechanical effects of the surface ectoderm on optic vesicle morphogenesis in the chick embryo. Journal of Biomechanics, 2014, 47, 3837-3846. | 2.1 | 28 |
| 44 | A poroelastic model for cell crawling including mechanical coupling between cytoskeletal contraction and actin polymerization. Journal of Mechanics of Materials and Structures, 2011, 6, 569-589. | 0.6 | 27 |
| 45 | Regional differences in actomyosin contraction shape the primary vesicles in the embryonic chicken brain. Physical Biology, 2012, 9, 066007. | 1.8 | 27 |
| 46 | Mechanical Stress as a Regulator of Cytoskeletal Contractility and Nuclear Shape in Embryonic Epithelia. Annals of Biomedical Engineering, 2011, 39, 443-454. | 2.5 | 26 |
| 47 | How mechanical forces shape the developing eye. Progress in Biophysics and Molecular Biology, 2018, 137, 25-36. | 2.9 | 25 |
| 48 | Myosin-based contraction is not necessary for cardiac c-looping in the chick embryo. Anatomy and Embryology, 2006, 211, 443-454. | 1.5 | 24 |
| 49 | Regional epicardial strain in the embryonic chick heart during the early looping stages. Journal of Biomechanics, 2003, 36, 1135-1141. | 2.1 | 21 |
| 50 | Contraction and stress-dependent growth shape the forebrain of the early chicken embryo. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 65, 383-397. | 3.1 | 21 |
| 51 | A New Method to Measure Cortical Growth in the Developing Brain. Journal of Biomechanical Engineering, 2010, 132, 101004. | 1.3 | 20 |
| 52 | A potential role for differential contractility in early brain development and evolution. Biomechanics and Modeling in Mechanobiology, 2012, 11, 1251-1262. | 2.8 | 20 |
| 53 | Automatic Generation of User Material Subroutines for Biomechanical Growth Analysis. Journal of Biomechanical Engineering, 2010, 132, 104505. | 1.3 | 17 |
| 54 | Molecular and mechanical signals determine morphogenesis of the cerebral hemispheres in the chicken embryo. Development (Cambridge), 2019, 146, . | 2.5 | 17 |

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|---|---|---|---|
| 55 | Computational and experimental study of the mechanics of embryonic wound healing. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 28, 125-146. | 3.1 | 16 |
| 56 | Pattern Formation in a Nonlinear Membrane Model for Epithelial Morphogenesis. Acta Biotheoretica, 2000, 48, 47-63. | 1.5 | 14 |
| 57 | Why is cytoskeletal contraction required for cardiac fusion before but not after looping begins?. Physical Biology, 2015, 12, 016012. | 1.8 | 12 |
| 58 | Reduced embryonic blood flow impacts extracellular matrix deposition in the maturing aorta. Developmental Dynamics, 2018, 247, 914-923. | 1.8 | 12 |
| 59 | Probing Regional Mechanical Properties of Embryonic Tissue Using Microindentation and Optical Coherence Tomography. Methods in Molecular Biology, 2015, 1189, 3-16. | 0.9 | 12 |
| 60 | Theoretical model for myocardial trabeculation. Developmental Dynamics, 2001, 220, 226-237. | 1.8 | 10 |
| 61 | Tracking Morphogenetic Tissue Deformations in the Early Chick Embryo. Journal of Visualized Experiments, 2011, , e3129. | 0.3 | 9 |
| 62 | Damped and persistent oscillations in a simple model of cell crawling. Journal of the Royal Society Interface, 2012, 9, 1241-1253. | 3.4 | 8 |
| 63 | On integrating experimental and theoretical models to determine physical mechanisms of morphogenesis. BioSystems, 2012, 109, 412-419. | 2.0 | 8 |
| 64 | How the embryonic chick brain twists. Journal of the Royal Society Interface, 2016, 13, 20160395. | 3.4 | 8 |
| 65 | Continuum Modeling in Mechanobiology. , 2020, , . | | 8 |
| 66 | Apoptosis generates mechanical forces that close the lens vesicle in the chick embryo. Physical Biology, 2018, 15, 025001. | 1.8 | 6 |
| 67 | Mechanisms of Brain Morphogenesis. , 2013, , 337-349. | | 2 |
| 68 | Large-Strain Behavior of Unsymmetric Laminates. Journal of Applied Mechanics, Transactions ASME, 1988, 55, 738-740. | 2.2 | 1 |
| 69 | Editorial. Biomechanics and Modeling in Mechanobiology, 2016, 15, 759-760. | 2.8 | 1 |
| 70 | A Chemomechanical Model for Regulation of Contractility in the Embryonic Brain Tube. Journal of Elasticity, 2021, 145, 77-98. | 1.9 | 1 |
| 71 | Problems in Soft Tissue Biomechanics. , 2020, , 155-208. | | 1 |
| 72 | Surface Strains in the Looping Embryonic Chick Heart Measured Using Optical Coherence Tomography. , 2007, , . | | 0 |

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|---|---|---|---|
| 73 | Special issue on mechanics of development. Biomechanics and Modeling in Mechanobiology, 2013, 12, 3-4. | 2.8 | 0 |
| 74 | A new wrinkle on the brain. Nature Physics, 2018, 14, 435-436. | 16.7 | 0 |
| 75 | Mechanics of head fold formation: investigating tissueâ€level forces during early development. FASEB Journal, 2011, 25, 301.2. | 0.5 | 0 |
| 76 | Shape Is Not Enough to Test Hypotheses for Morphogenesis. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 325-331. | 0.5 | 0 |
| 77 | Physical Mechanisms Create and Loop the Embryonic Heart. FASEB Journal, 2019, 33, 16.2. | 0.5 | 0 |
| 78 | Morphogenesis. , 2020, , 401-517. | | 0 |