

## A. Refereed Archival Publications

A1.	J. Casey and P.M. Naghdi, "A Remark on the Use of the Decomposition $F = FeF_{pin}$ Plasticity," <i>Journal of Applied Mechanics</i> , 47 (1980) 672-675.
A2.	A. Seidenberg and J. Casey, "The Ritual Origin of the Balance," <i>Archive for History of Exact Sciences</i> , 23 (1980) 179-226.
A3.	J. Casey and P.M. Naghdi, "An Invariant Infinitesimal Theory of Motions Superposed on a Given Motion," <i>Archive for Rational Mechanics and Analysis</i> , 76(1981) 355-391.
A4.	J. Casey and P.M. Naghdi, "On the Characterization of Strain-Hardening in Plasticity," <i>Journal of Applied Mechanics</i> , 48 (1981) 285-296.
A5.	J. Casey, "Small Deformations Superposed on Large Deformations in a General Elastic-Plastic Material," <i>International Journal of Solids and Structures</i> , 19 (1983) 1115-1146.
A6.	J. Casey and P.M. Naghdi, "A Remark on the Definition of Hardening, Softening and Perfectly Plastic Behavior," <i>Acta Mechanica</i> , 48 (1983) 91-94.
A7.	J. Casey and P.M. Naghdi, "On the Nonequivalence of the Stress-Space and Strain Space Formulations of Plasticity," <i>Journal of Applied Mechanics</i> , 50 (1983) 350-354.
A8.	J. Casey, "A Treatment of Rigid Body Dynamics," <i>Journal of Applied Mechanics</i> , 50 (1983) 905-907 and 51 (1984) 227.
A9.	J. Casey and H.H. Lin, "Strain-Hardening Topography of Elastic-Plastic Materials," <i>Journal of Applied Mechanics</i> , 50 (1983) 795-801.
A10.	J. Casey and P.M. Naghdi, "On the Use of Invariance Requirements for the Intermediate Configurations Associated with the Polar Decomposition of a Deformation Gradient," <i>Quarterly of Applied Mathematics</i> , 41 (1983) 339-342.
A11.	J. Casey and P.M. Naghdi, "Further Constitutive Results in Finite Plasticity," <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 37 (1984) 23 1-259.
A12.	J. Casey and H. Jahedmotlagh, "On the Strength-Differential Effect in Plasticity," <i>International Journal of Solids and Structures</i> , 20 (1984) 377-393.
A13.	J. Casey, "A Simple Proof of a Result in Finite Plasticity," <i>Quarterly of Applied Mathematics</i> , 42 (1984) 61-71.
A14.	J. Casey and H.H. Lin, "Calculated Hardening, Softening and Perfectly Plastic Responses of a Special Class of Materials," <i>Acta Mechanica</i> , 51 (1984) 49-67.

A15.	J. Casey and H.H. Lin, "Oscillatory Shearing of a Class of Elastic-Plastic Materials, ZAMP, 35 (1984) 216-226.
A16.	J. Casey and M. Tseng, "A Constitutive Restriction Related to Convexity of Yield Surfaces in Plasticity," ZAMP, 35 (1984) 478-496.
A17.	J. Casey and P.M. Naghdi, "Physically Nonlinear and Related Approximate Theories of Elasticity, and their Invariance Properties," Archive for Rational Mechanics and Analysis, 88 (1985) 59-82.
A18.	J. Casey and T.D. Sullivan, "Pressure Dependency, Strength-Differential Effect, and Plastic Volume Expansion in Metals," International Journal of Plasticity, 1 (1985) 39-61.
A19.	J. Casey, "Approximate Kinematical Relations in Plasticity," International Journal of Solids Structures, 21 (1985) 671-682.
A20.	J. Casey, "On Finitely Deforming Rigid-Plastic Materials," International Journal of Plasticity, 2 (1986) 247-277.
A21.	J. Casey and H.H. Lin, "Subcritical, Critical and Supercritical Directions of Loading in Plasticity," J de Méanique Theorique et Appliquee5 (1986) 685-701.
A22.	J. Casey and V.C Lam, "On the Relative Angular Velocity Tensor," Transactions of the ASME, Journal of Mechanisms, Transmissions, and Automation in Design, 108(1986) 399-400.
A23.	J. Casey and C.E. Smith, "When is the Direction of Angular Momentum Fixed in a Rigid Body?," ZAMM 66 (1986) 559-561.
A24.	J. Casey and V.C. Lam, "A Tensor Method for the Kinematical Analysis of Systems of Rigid Bodies," Mechanism and Machine Theory, 21 (1986) 87-97.
A25.	J. Casey and W. Stadler, "A Remark on the Principle of Angular Momentum for Systems of Particles," ZAMM, 66 (1986) 190-192.
A26.	J. Casey, "Problem: Determination of Acceleration of Moving Frame," American Journal of Physics, 54 (1986) 731.
A27.	J. Casey, "Connections between Kinematics of Line, Area, and Volume Elements, Journal of Elasticity, 17 (1987)71-74.
A28.	J. Casey, "Subcritical, Critical and Supercritical Directions of Stress-Rate in Finite Rigid Plasticity," Acta Mechanica, 66 (1987) 269-273.
A29.	J. Casey and V.C. Lam, "On the Reduction of the Rotational Equations of Rigid Body Dynamics," Meccanica, 22 (1987) 41-42.

A30.	J. Casey and P.M. Naghdi, "On the Relationship between the Eulerian and Lagrangian Descriptions of Finite Rigid Plasticity," <i>Archive for Rational Mechanics and Analysis</i> , 102 (1988) 351-375.
A31.	J. Casey, "The Bobbing Buoy," <i>The Physics Teacher</i> , (January 1988) 33.
A32.	J. Casey, "Problem: Wrapping a String around an Object," <i>American Journal of Physics</i> , 57 (1989) 311 and 373.
A33.	J. Casey and P.M. Naghdi, "On the Lagrangian Description of Vorticity," <i>Archive for Rational Mechanics and Analysis</i> , 115 (1991) 1-14.
A34.	J. Casey, "On Infinitesimal Deformation Measures," <i>Journal of Elasticity</i> , 28 (1992) 257-269.
A35.	J. Casey, "The Principle of Rigidification," <i>Archive for History of Exact Sciences</i> , 43 (1992) 329-383.
A36.	J. Casey, "On Clairaut's Hydrostatics," <i>American Journal of Physics</i> , 60 (1992) 549-554.
A37.	J. Casey, and P.M. Naghdi, "A Prescription for the Identification of Finite Plastic Strain," <i>International Journal of Engineering Science</i> , 30 (1992) 1257-1278.
A38.	J. Casey, "The Elasticity of Wood," <i>The Physics Teacher</i> , 31 (1993) 286-288.
A39.	J. Casey, "Using a Surface Triangle to Explore Curvature," <i>Mathematics Teacher</i> , 87 (1994) 69-77.
A40.	J. Casey, "Geometrical Derivation of Lagrange's Equations for a System of Particles," <i>American Journal of Physics</i> , 62 (1994) 836-847.
A41.	J. Casey, "Exploring Properties of Forces in Equilibrium," <i>The Physics Teacher</i> , 32(1994)364-367.
A42.	J. Casey and S. Krishnaswamy, "Problem: Which Rigid Bodies Have Constant Inertia Tensors?", <i>American Journal of Physics</i> , 63 (1995) 276 and 281.
A43.	J. Casey, "A Treatment of Internally Constrained Materials," <i>Journal of Applied Mechanics</i> , 62 (1995) 542-544.
A44.	J. Casey, "On the Advantages of a Geometrical Viewpoint in the Derivation of Lagrange's Equations for a Rigid Continuum," <i>Theoretical, Experimental and Numerical Contributions to the Mechanics of Fluids and Solids, Special Issue of Journal of Applied Mechanics and Physics</i> , 46 (1995) S805-S847.
A45.	J. Casey, "A Remark on Consequences of the Work Assumption of Naghdi and Trapp for Elastic-Plastic Materials", <i>Journal of Applied Mechanics and Physics (ZAMP)</i> 46 (1995) 982-988.

A46.	J. Casey, "On Materiality Criteria for Vector Fields and Vector-Lines", <i>Mathematics and Mechanics of Solids</i> , 1 (1996) 219-226.
A47.	J. Casey and S. Krishnaswamy, "On Constrained Thermoelastic Materials," <i>Contemporary Research in the Mechanics and Mathematics of Materials</i> , edited by R. C. Batra and M. F. Beatty, 359-371. <i>J. L. Ericksen Volume</i> (1996) 359-371.
A48.	J. Casey, "Perfect and Not-so-Perfect Rollers," <i>Mathematics Teacher</i> , 91 (1998) 12-20.
A49.	J. Casey, "On Elastic-Thermo-Plastic Materials at Finite Deformations," <i>International Journal of Plasticity</i> , 14 (1998) 173-191.
A50.	J. Casey and S. Krishnaswamy, "A Characterization of Internally Constrained Thermoelastic Materials," <i>Mathematics and Mechanics of Solids</i> , 3 (1998) 71-89.
A51.	J. Casey, "Making Measurements on Curved Surfaces," in <i>Geometry at Work</i> , MAA Volume, edited by C. A. Gorini, <i>Mathematical Association of America and Cambridge University Press</i> , 2000.
A52.	E. Baesu and J. Casey, "A Treatment of Internally Constrained Elastic-Plastic Materials," <i>International Journal of Engineering Science</i> , 38 (2000) 1677-1698.
A53.	J. Casey and P. Papadopoulos, "Material Transport of Sets and Fields," <i>Mathematics and Mechanics of Solids</i> , 7 (2002) 647-676.
A54.	J. Casey, "On Loading Criteria in Plasticity," <i>C. R. Mécanique</i> , 330 (2002) 285-290.
A55.	A. A. Brown, J. Casey and D. J. Nikkel, "Experiments Conducted in the Context of the Strain-Space Formulation of Plasticity," <i>International Journal of Plasticity</i> , 19(2003) 1965-2005.
A56.	J. Casey, "On Volterra Dislocations of Finitely Deforming Continua," <i>Mathematics and Mechanics of Solids</i> , 9 (2004) 473-492.
A57.	J. Casey, "On a Basic Power Decomposition in Lagrangian Mechanics," <i>Journal of Applied Mechanics</i> , 57 (2004).
A58.	J. Casey, "Pseudo-Rigid Continua: Basic Theory and a Geometrical Derivation of Lagrange's Equations," <i>Proceedings of the Royal Society, A</i> 460 (2004) 2021-2049.
A59.	J. Casey, "On Ericksen's Theorem for Unconstrained Hyperelastic Materials," <i>Journal of Elasticity</i> , 76 (2004) 191-197.
A60.	J. Casey, "A Remark on Cauchy-Elasticity," <i>International Journal of Non-Linear Mechanics</i> , 40 (2005) 331-339.
A61.	J. Casey and O. M. O'Reilly, "Geometrical Derivation of Lagrange's Equations for a System of Rigid Bodies," <i>Mathematics and Mechanics of Solids</i> , 11 (2006) 401-422.

A62.	J. Casey, " <a href="#">The ideal pseudo-rigid continuum</a> ," Proceedings of the Royal Society A462 (2006) 3185-3195.
A63.	J. Casey, "Areal Velocity and Angular Momentum for Non-Planar Problems in Particle Mechanics," American Journal of Physics, 75 (2007) 677-685.
A64.	J. Casey, "A New Definition of a Pseudo-Rigid Continuum," Note di Matematica, 27 (2007) 43-53.
A65.	J. Casey, "A Remark on the Definition of Angular Velocity," ZAMM, 89 (2009) 922-930.
A66.	J. Casey, "Siacci's Resolution of the Acceleration Vector for a Space Curve," Meccanica, 46 (2011) 471-476.
A67.	L. T. Wheeler and J. Casey, "Fréchet Differentiation of the Stretch and Rotation Tensors," Mathematics and Mechanics of Solids, 16 (2011) 753-768.
A68.	J. Casey, "On the Representation of Rigid Body Rotational Dynamics in Hertzian Configuration Space," International Journal of Engineering Science, 49 (2011) 1388-1396.
A69.	J. Casey, "Nonlinear Thermoelastic Materials with Viscosity, and Subject to Internal Constraints: a Classical Continuum Mechanics Approach," Journal of Elasticity, 104(2011) 91-104.
A70.	J. Casey, "On the Derivation of Jump Conditions in Continuum Mechanics," International Journal of Structural Changes in Solids, 3 (2011) 61-84.
A71.	J Casey and M.M. Carroll, "A Comment on the Formation of Objective Response Functions," Journal of Elasticity, 107 (2012) 125-130.
A72.	J. Casey, "Applying the Principle of Angular Momentum to Constrained Systems of Point Masses," American Journal of Physics, 82 (2014) 165-168 and <b>83</b> (2015), 185.
A73.	J. Casey, "A Remark on the Conception of a Body in Continuum Mechanics," Mathematics and Mechanics of Solids, 20 (2015) 292-300.
A74.	J. Casey, "Kinematical aspects of Levi-Civita Transport of Vectors and Tensors Along a Surface Curve," Journal of Elasticity, 119 (2015) 213-249.
A75.	J. Casey, "A Convenient Form of the Multiplicative Decomposition of the Deformation Gradient," Mathematics and Mechanics of Solids, 22 (2017) 528-537.
A76.	J. Casey, "A Convenient Form of the Multiplicative Decomposition of the Deformation Gradient," Mathematics and Mechanics of Solids, <b>22</b> (2017), 528-537.
A77.	J. Casey, "A Discussion of Multiplicative Decompositions and Strain Measures," Journal of Elasticity, (2021), <a href="https://doi.org/10.1007/s10659-021-09867-z">https://doi.org/10.1007/s10659-021-09867-z</a>

A78.	J. Casey, "Comment on <i>Kepler's second law and Conservation of Angular Momentum</i> " (by P. Spolter), <i>Physics Essays</i> , <b>30</b> (2017) 388-391.
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## B. Non-Refereed Publications

B1.	J. Casey, "Design Concepts for High-Speed Flywheel Propulsive Systems for Road Vehicles, Technology Ireland (September 1971) 1-6.
B2.	J. Casey, "The Tool and the Sculpture," <i>Structure</i> (an Irish arts magazine) 1(Spring 1972) 9-11.
B3.	J. Casey, Review of <i>Classical Mechanics - A Modern Perspective</i> by V.D. Barger and M.G. Olsson, <i>Transactions of the ASME, 96, Journal of Dynamic Systems, Measurement and Control</i> (1974) 372-373.
B4.	J. Casey, Review of <i>A Source Book in Classical Analysis</i> , ed. by G. Birkhoff, <i>Transactions of the ASME, Journal of Dynamic Systems, Measurement and Control</i> , 98 (1976) 448-449.
B5.	J. Casey and P.M. Naghdi, "Discussion: A Correct Definition of Elastic and Plastic Deformation and Its Computational Significance," <i>Journal of Applied Mechanics</i> , 48 (1981) 983-984.
B6.	J. Casey and P.M. Naghdi, "On the Formulation of Strain-Space Plasticity with Multiple Loading Surfaces," <i>Journal of Applied Mechanics</i> , 49 (1982) 460-461.
B7.	J. Casey and P.M. Naghdi, "Discussion: Computational Aspects of Strain-Space Plasticity," <i>Journal of Engineering Mechanics</i> , 110 (1984) 485-487.
B8.	J. Casey and P.M. Naghdi, "Strain-Hardening Response of Elastic-Plastic Materials, Chapter 4 of <i>Mechanics of Engineering Materials</i> , edited by C.S. Desai and R.H. Gallagher, John Wiley & Sons. (1984) 61-89.
B9.	J. Casey and P.M. Naghdi, "Constitutive Results for Finitely Deforming Elastic-Plastic Materials," in <i>Constitutive Equations. Macro and Computational Aspects</i> , edited by K.J. Willam, ASME (1984) 53-71.
B10.	J. Casey, Review of <i>Mechanics of Solids with Applications to Thin Bodies</i> , by G. Wempner, <i>Crystal Lattice Defects and Amorphous Materials</i> , 10 (1984) 182-183.
B11.	"Discussion: On the Nonequivalence of the Stress Space and Strain Space Formulations of Plasticity Theory," <i>Journal of Applied Mechanics</i> , 51 (1984) 448-449.
B12.	J. Casey and P.M. Naghdi, "Dynamics of a Nearly Rigid Continuum," <i>Proceedings of CRDC Conference, U.S. Army, Aberdeen, Maryland</i> , (1984) 547-552.

B13.	J. Casey, Review of Nonlocal Theory of Material Media, by D. Rogula, Applied Mechanics Reviews, 39 (1986) 707-708.
B14.	J. Casey, "Discussion: Invariance Considerations in Large Strain Elasto-Plasticity, Journal of Applied Mechanics, 54 (1987) 247.
B15.	J. Casey, "Eulerian versus Lagrangian Descriptions of Rate-Type Constitutive Theories," Proceeding of the Third International Conference on Constitutive Laws for Engineering Materials, edited by C.S. Desai et al., (1991) 15-20.
B16.	J. Casey, "Recent Developments in Finite Rigid Plasticity," in Anisotropy and Localization of Plastic Deformation, edited by J.-P. Boehler and A.S. Khan, (1991) 291-296.
B17.	J. Casey and P.M. Naghdi, "On the Identification of Plastic Strain at Finite Deformations," in Defects and Anelasticity in the Characteristics of Crystalline Solids, AMD Vol. 148 (ed. L.M. Brock), ASME, 1992, 11-33 (with P.M. Naghdi).
B18.	J. Casey, "Structural Mechanics and its Debt to Architecture," (essay review), Physics Today, July 1992, 65-67.
B19.	J. Casey, "Paul M. Naghdi 1924-1994," Journal of Applied Mechanics, 61 (1994) 509-510.
B20.	J. Casey and M. J. Crochet, "Paul M. Naghdi (1924-1994)," in Theoretical, Experimental, and Numerical Contributions to the Mechanics of Fluids and Solids, Special Issue of Journal of Applied Mechanics and Physics, 46 (1995) S3-S32 (with M.J. Crochet).
B21.	J. Casey and M.M. Carroll, "Discussion: A Treatment of Internally Constrained Materials", Journal of Applied Mechanics, 63 (1996) 240.
B22.	J. Casey and A. Kaplan, "Adhémar-Jean Claude Barré de Saint-Venant: 23 August 1797-6 January 1886," Mathematics and Mechanics of Solids, 2 (1997) 371-378.
B23.	D. J. Nikkel, Jr., A. A. Brown and J. Casey, "Evolution of Anisotropic Yield Behavior," in Thrust Area Report, Engineering, Research, Development and Technology, UCRL 53868-97 (1998) 5-1 - 5-5.
B24.	D. J. Nikkel, Jr., A. A. Brown and J. Casey, "Modeling of Anisotropic Inelastic Behavior," in Engineering, Research, Development and Technology, UCRL 53868-98, FY 98 (1998) 6-1 - 6-6.
B25.	E. Baesu and J. Casey, "On Internally Constrained Elastic-Plastic Materials," Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation (Proceedings of Plasticity '99: The Seventh International Symposium on Plasticity and its Current Applications), edited by A. S. Khan, (1999) 3-6.

B26.	J. Casey, "On Elastic-Thermo-Plastic Materials at Finite Deformations," Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation (Proceedings of Plasticity '99: The Seventh International Symposium on Plasticity and its Current Applications), edited by A. S. Khan, (1999) 19-22.
B27.	J. Casey and D. S. Nath, "On Finitely Deforming Elastic-Viscoplastic Materials," Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation (Proceedings of Plasticity '99: The Seventh International Symposium on Plasticity and its Current Applications), edited by A. S. Khan (1999) 23-26.
B28.	J. Casey, Contribution to The New York Times in College & University Science Disciplines (1999) 18-19.
B29.	J. Casey, "Strain-Temperature and Strain-Entropy Constraints in Finite Thermoelasticity," Finite Thermoelasticity, edited by J. Casey and A. Abeyaratne, AMD-Vol. 236 (1999) 45-65.
B30.	J. Casey, "Co-Material and Contra-Material Fields," Plastic and Viscoplastic Response of Materials and Metal Forming: Proceedings of Plasticity '00, eds. A. S. Khan, H. Zhang and Y. Yuan, Neat Press, Fulton (2000), 38-40.
B31.	J. Casey, "Connections," Mathematics Teacher, 94 (2001) 628.
B32.	J. Casey, "Weingarten's Theorem for Volterra Dislocations at Large and Small Deformations," Dislocations, Plasticity and Metal Forming (Proceedings of Plasticity '03: The Tenth International Symposium on Plasticity and its Current Applications), edited by A. S. Khan, R. Kazmi, and J. Zhou, (2003) 334-336.
B33.	J. Casey, "Pseudo-Rigid Bodies Viewed as Globally Constrained Continua," CD-ROM Proceedings of 21st International Congress of Theoretical and Applied Mechanics, 15-21 August 2004, Warsaw, Poland (ISBN 83-89697-01-1, (2004).
B34.	J. Casey, Review of Fields, Flows and Waves: An Introduction to Continuum Models, by D. F. Parker, Physics Today, 54 (2004) 78-79.
B35.	J. Casey, " <a href="#">Calculus</a> ," Text for Calculus Exhibit in 'The Mathematical Sciences at Berkeley: Rare Books and Manuscripts from the Collections of the Bancroft Library,' Doe Library Exhibition, University of California, Berkeley, September 30-December 31, 2005.
B36.	J. Casey, <a href="#">Undergraduate Research at The Bancroft Library</a> , Bancroftiana, No. 133, Fall 2008, pp. 14-15.
B37.	J. Casey, "Michael M. Carroll, Mathematics and Mechanics of Solids," 16 (2011) 453-466.



B38.	J. Casey and E. Chen, "Famous ME Alum: Archie F. Williams, 1915-1993," Berkeley Mechanical Engineering Department Alumni Newsletter, Fall 2012.
B39.	J. Casey, "Preface: Kumbakonam Ramamani Rajagopal," Mathematics and Mechanics of Solids, 20 (2015) 4-8.

### C. Books and Special Volumes

C1.	J. Casey and M.J. Crochet (Editors), Theoretical, Experimental, and Numerical Contributions to the Mechanics of Fluids and Solids, Special Issue of Journal of Applied Mechanics and Physics (ZAMP), 46 (1995) S1 - S847.
C2.	J. Casey, <a href="#">Exploring Curvature</a> , Vieweg & Sohn, Braunschweig/Wiesbaden, 1996.
C3.	J. Casey and R. Abeyaratne (Editors), "Finite Thermoelasticity," AMD-Vol.236, ASME, 1999.
C4.	J. Casey and G. Bao (Editors), "Mechanics in Biology," AMD-Vol. 242, ASME, 2000.
C5.	J. Casey, A Bertram, and E. Krempl (Guest Editors), Special Issue of International Journal of Plasticity on Finite Plasticity and Viscoplasticity - Theoretical, Experimental, and Computational Aspects, 19 (2003), Issue 11.
C6.	Special Issues of Mathematics and Mechanics of Solids in Honor of M.M. Carroll and in Celebration of his 75th Birthday, 16, Issues 5-7, 2011.
C7.	J. Casey (Guest Editor), Special Issues of Mathematics and Mechanics of Solids in Honor of K.R. Rajagopal, 20 (2015), Nos. 1-3.