

BIOGRAPHICAL SKETCH: ROGER FOSDICK (B. 11/18/36)

Education

B.Sc. Mechanical Engineering, Illinois Institute of Technology, 1959
Ph.D. Applied Mathematics, Brown University, 1963

Professional Experience

1969–present	Professor of Mechanics	Department of Aerospace Engineering and Mechanics University of Minnesota
1965–1969	Associate Professor of Mechanics	Department of Mechanics Illinois Institute of Technology
1962–1965	Assistant Professor of Mechanics	Department of Mechanics Illinois Institute of Technology
1959–1962	National Defense Act Fellow and Research Assistant	Graduate Student Division of Applied Mathematics Brown University
1961–1962	Visiting Fellow	Mathematics Department University of Durham, King’s College Newcastle-upon-Tyne, England
1964	Consultant Research Associate	ITT Research Institute (1 month) Division of Applied Mathematics Brown University (2 months)
1965	Resident Research Associate	Argonne National Laboratories (3 months)
1977	Visiting Professor	Department of Chemical Engineering Federal University of Rio de Janeiro COPPE, Brazil (2 months)
1980	Erskine Fellow and Visiting Professor	Department of Civil Engineering University of Canterbury Christchurch, New Zealand (2 months)
1982	Visiting Professor	Planta Piloto de Ingenieria Quimica Universidad Naçional del Sur Bahia Blanca, Argentina (2 months)

1986	Summer University Faculty	Thermomechanical and Physical Div. 1534 Sandia National Laboratories, Albuquerque, NM (2 months)
1987	CNR Visiting Professor	Instituto di Scienza delle Costruzioni Universita di Pisa, Pisa, Italy (2 months)
	Summer University Faculty	Thermomechanical and Physical Div.1534 Sandia National Laboratories, Albuquerque, NM (2 months)
1989	Visiting Professor	Instituto di Matematica Applicata Universita degli Studi di Padova Padova, Italy (May 19–June 7)
	Summer University Faculty	Thermomechanical and Physical Div. 1534 Sandia National Laboratories Albuquerque, NM (2 months)
1990–91	Program Coordinator	Institute for Mathematics and its Applications Phase Transitions and Free Boundaries University of Minnesota
1991	CNR Visiting Professor	Instituto di Matematica Applicata Universita degli Studi di Padova Padova, Italy
		Dipartimento di Ingegneria Strutturale Universita di Bari Bari, Italy
		Instituto di Scienza delle Costruzioni Universita di Pisa Pisa, Italy (May 27-June 22)
1994	Visiting Professor	Dipartimento di Ingegneria Strutturale Universita di Bari Bari, Italy
		Instituto di Scienza delle Costruzioni Universita di Pisa Pisa, Italy

		(May 21-June 15)
1997	CNR Visiting Professor	Dipartimento di Ingegneria Strutturale Universita di Bari Bari, Italy
		Instituto di Scienza delle Costruzioni Universita di Pisa Pisa, Italy (April 14-May 15)
2003	Visiting Professor	Dipartimento di Ingegneria Strutturale Universita di Bari Bari, Italy
		Department of Civil Engineering and Architecture Universita degli Studi di Parma Parma, Italy
		Instituto di Scienza delle Costruzioni Universita di Pisa Pisa, Italy (June-July)
2004	Visiting Professor	Dipartimento di Ingegneria Strutturale Universita di Bari Bari, Italy
		Dipartimento di Ingegneria Civile Universita di Roma "Tor Vergata" Rome, Italy (May-June)
2006	Visiting Professor	Dipartimento di Ingegneria Strutturale Universita di Bari Bari, Italy (January-June)
2008	Visiting Professor	Dipartimento di Ingegneria Civile Ambientale Universita di Bari Bari, Italy (May-June)
2010	Visiting Professor	Dipartimento di Ingegneria Civile Ambientale Universita di Bari Bari, Italy

Chairman (1979–1981)
Secretary (1972–1974)
Elected Service Member (1975–present)

Technical Sponsor in Non-Linear Elasticity
Applied Mechanics Division
ASME (1966–1968)

Corrosion Research Center
Management Committee
University of Minnesota (1981–present)

Institute for Mathematics and its Applications
Organizing Committee
Coordinator, 1990–91 Program on Phase Transitions and Free Boundaries
University of Minnesota (1990–91)

AHPCRC Researcher
Army High Performance Computing Research Center
University of Minnesota (1991–present)

Minnesota Supercomputer Institute
Research Program (1991–present)
Scientific Development and Visualization Laboratory Committee (1996–present)
Associate Fellow, Supercomputing Institute for Digital Simulation
and Advanced Computation (2000–present)

I.T. Honors and Awards Committee (1994–96), Chairman (1994)

External Advisory Board
Proyecto SENER-CONACYT HIDROCARBUROS 160015
UNAM - Instituto de Investigaciones en Materiales
University of Mexico (2012–present)

Graduate Student Supervision

Ph.D. Students

Karl Schuler (1967)
John J. Carey (1968)
Ben Geng Kao (1974)
J. E. Dunn (1978)
K. R. Rajagopal (1978)
G. MacSithigh (1982)
J. Patino (1984)
J. Powers (1985)

J. Walter (1986)
B. Hertog (1987)
Richard Stone
Ying Zhang (1990)
Sergio Qionones-Cisneros (1992)
Jang-Horng Yu (1993)
Darren Mason (1996)
Adair Aguiar (1998)
Eric Petersen (2001)
Huang Tang

Masters Students

John Carey (1966)
David Lamm (1968)
Pei Lan Chen (1973)
Tseng C. Wong (1974)
Richard Stone (1978)
Tim Berkopec (1978)
G. MacSithigh (1979)
Masami Nakagawa (1983)
Alex Kessler (1984)
Mark Cvetnic (1989)
Jang-Horng Yu (1989)
Eric Volkmann (1990)
James Speck (2002)
Bituporn Tontavanich (2014)

Post-Doctoral Scholars and Visitors

Richard James (9/78–9/80)
Yi-Chao Chen (9/85–6/86)
Antonio Vargas (9/88–3/90)
Michele Lanubile (1/90–6/90)
Ying Zhang (9/91–9/93)
Gianni Royer (4/93–10/93)
Corneliu Balan (9/94–6/95)
Clovis Barcellos (8/94–9/95)
Gearoid MacSithigh (9/94–6/95)
Gianni Royer (10/94–3/95)
Gianni Royer (8/95)
Gianni Royer (6/96–7/96)
Gianni Royer (8/98–9/98)
Gianni Royer (4/99–5/99)
Ying Zhang (5/99–6/99)
Gianni Royer (8/99–9/99)

Matt McCarthy (9/99–1/00)
Gianni Royer (1/00–5/00)
Gianni Royer (4/01)
Adair Aguiar (10/02)
Gianni Royer (4/03)
Gianni Royer (8/03)
Gianni Royer (8/04)
Pilade Foti (2/05)
Adair Aguiar (1/08)
Adair Aguiar (11/10–7/11)
Gianni Royer (1/13)
Pilade Foti (2/13)

Recent Meetings Organized

1. 48th Meeting of the Society for Natural Philosophy: “Advances in Fundamental and Applied Mechanics: A Bridge between the Physical Behavior and the Mathematical Modeling of Materials”. Foz do Iguacu, Brazil, January 4-8, 2010.
2. 51st Meeting of the Society for Natural Philosophy and joint IMA Participating Institutions Conference: “Mathematics and Mechanics in the Physical Sciences—A Tribute to James Serrin”. Minneapolis, MN, November 14–16, 2013.

Recent Special Lectures

1. Steady, Structured Shock Waves: Thermoelastic Materials. Plenary Lecture. 2nd Canadian Conference on Nonlinear Solid Mechanics. Simon Fraser University, Vancouver, Canada. June, 2002.
2. Three Lectures on Mathematical Research: Electrodynamics and Thermomechanics of Material Bodies; Coexistent Phase Mixtures in Anti-plane Shear; Self-interpenetration in Elasticity. Frontiers of Mathematical Research distinguished lecture series. Department of Mathematics, Texas A&M University, November 28–December 2, 2005.
3. Engagements in Continuum Mechanics. Lectio Doctoralis. Politecnico di Bari. Università di Bari, Bari, Italy. December 21, 2005.
4. Continuum Mechanics from the Perspective of Invariance. Truesdell Lecturer; Society for Natural Philosophy meeting at the University of Pittsburgh, September, 19-21, 2008.
5. The Elements of Thermodynamics and the Second Law for Ponderable Bodies. Invited Lecturer. International Rubber Science Hall of Fame symposium honoring Ronald Rivlin. Inauguration of Professor Ronald Rivlin into the International Rubber Science Hall of Fame. University of Akron, Ohio, November 6, 2008.
6. Four Lectures on Classical Continuum Thermodynamics and its Invariant Structure. Invited lecture series to the Department of Structural Engineering, University of Sao Paulo, School of Engineering at San Carlos, Brazil, August, 2009.
7. A Causality Approach to Particle Dynamics. Plenary Lecture. Engineering Science Medal. 47th Annual Meeting of the Society of Engineering Science. Iowa State University, Ames, Iowa. October, 2010.
8. The Elements of Thermodynamics and the Second Law for Ponderable Bodies. Plenary Lecture. PACAM XIII Meeting. Houston, Texas. May, 2013.

Books

1. *Shock Induced Transitions and Phase Structures in General Media*. The IMA Volumes in Mathematics and its Applications, **52**. Edited by J. E. Dunn, R. Fosdick, and M. Slemrod, Springer-Verlag, 1993.
2. *The Rational Spirit in Modern Continuum Mechanics*. Essays and Papers Dedicated to the Memory of Clifford Ambrose Truesdell III. Edited by Chi-Sing Man and Roger L Fosdick, Kluwer Academic Publishers, Dordrecht/Boston/London, 2004.
3. *Statistical Mechanics, Molecular Modeling, and the Notion of Stress—An Invited Collection*. Edited by Roger Fosdick and Eliot Fried, Springer Science Press, 2010.
4. *Methods and Tastes in Modern Continuum Mechanics*. Dedicated to the Memory of Donald E. Carlson. Edited by Roger Fosdick, Eliot Fried and Daniel Tortorelli, Springer Science Press, Dordrecht/ Heidelberg/ London/ New York. 2011.
5. *The Mechanics of Ribbons and Möbius Bands*. Edited by Roger Fosdick and Eliot Fried, Springer Science Press, 2016.

Publications

Short Publications Forewords and Prefaces

1. Eulogium, Clifford Ambrose Truesdell III. *J. Elasticity*, **55**, 167 (1999).
2. Foreword, A Primer in Elasticity by Paolo Podio-Guidugli. *J. Elasticity*, **58**, No.1, vii (2000).
3. Editorial, Paolo Podio-Guidugli on the occasion of his 60th birthday. *J. Elasticity*, **60**, 81 (2000).
4. Foreword, Soft Tissue Mechanics ed. by S.C. Cowin & J.D. Humphrey. *J. Elasticity*, **61**, No.1-3, vii (2000).
5. Editorial, Piero Villaggio on the occasion of his 70th birthday. *J. Elasticity*, **68**, 1 (2003).
6. In Recognition of the 70th Birthday of Piero Villaggio. *J. Elasticity*, **68**, 3-6 (2003). With G. Royer.
7. Foreword, Essays and Papers Dedicated to the Memory of Clifford Ambrose Truesdell III, ed. by Chi-Sing Man & Roger Fosdick. *J. Elasticity*, **70**, No.1-3, xi (2003).
8. Eulogium, Clifford Ambrose Truesdell III (b. February 18, 1919; d. January 14, 2000). *J. Elasticity*, **71**, No.1-3, xi (2003).
9. Foreword, An Introduction to Differential Geometry with Applications to Elasticity by Philippe G. Ciarlet. *J. Elasticity*, **78-79**, vii (2005).
10. Preface, A Collection of Papers on Surface Phenomena. *J. Elasticity*, **80**, 1 (2005). With D. Steigmann.
11. Preface, On the Past and Future of Natural Philosophy by Walter Noll. *J. Elasticity*, **84**, 1 (2006).
12. Foreword, Stroh Formalism and Rayleigh Waves by Kazumi Tanuma. *J. Elasticity*, **89**, 1 (2007).
13. Preface to: “The Area Rule for Simple Fluid Phase Transitions” by James Serrin. *J. Elasticity*, **90**, 127 (2008).

14. Foreword, The Variational Approach to Fracture by B. Bourdin, G. Francfort & J.-J. Marigo. *J. Elasticity*, **91**, 1 (2008).
15. Foreword, Memoriam to James K. Knowles (1931-2009). *J. Elasticity*, **98**, (2010).
16. Foreword, Statistical Mechanics, Molecular Modeling, and the Notion of Stress—An Invited Collection, Edited by Roger Fosdick & Eliot Fried. *J. Elasticity*, **100**, (2010).
17. Foreword, Papers Dedicated to the Memory of Donald E. Carlson, Edited by Roger Fosdick, Eliot Fried & Daniel A. Tortorelli. *J. Elasticity*, **105**, (2011).
18. Foreword, A Variational Approach to Fracture and Other Inelastic Phenomena by Gianpietro Del Piero. Published in *J. Elasticity*, **112**, (2013). *J. Elasticity*, **113**, (2013).
19. Foreword with Eliot Fried, Special Invited Collection on the Mechanics of Ribbons and Möbius Bands, Edited by Roger Fosdick & Eliot Fried. *J. Elasticity*, **119**, (2015).

Research Publications

20. Extremum principles in the theory of small elastic deformations superposed on large elastic deformations. In *Progress in Applied Mechanics*, The Prager Anniversary Volume, MacMillan Co., 1963. With R.T. Shield.
21. Small bending of a circular bar superposed on finite extension or compression. *Arch. Ration. Mech. Anal.*, **12**, 223–248 (1963). With R.T. Shield.
22. On the vector potential and the representation of a polyharmonic function in n-dimensions. *J. Math. Mech.* **4**, 573–588 (1965)
23. Remarks on Compatibility. In *Modern Developments in the Mechanics of Continua*, 109–127, Academic Press, 1966
24. Extremum principles in heat conduction for rigid heat conductors. *Acta Mechanica*, **4**, 241–272 (1967)
25. Visco-plastic flow of a thin circular plate. Proc. Tenth Midwestern Mech. Conference, 1967. With E.J. Appleby, J.J. Carey and P.G. Hodge, Jr.
26. On the displacement boundary-value problem of static linear elasticity theory. *ZAMP*, **19**, 219–233 (1968)
27. A note on non-uniqueness in linear elasticity theory. *ZAMP*, **19**, 906–912 (1968). With W.S. Edelstein.
28. Dynamically possible motions of incompressible, isotropic, simple materials. *Arch. Ration. Mech. Anal.*, **29**, 272–288 (1968)
29. On general measures of deformation. *Acta Mechanica*, **6**, 275–295 (1968). With A.S. Wineman.
30. A class of dynamically possible steady motions of incompressible, isotropic simple materials. *Int. J. Non-Linear Mech.*, **4**, 79–73 (1969).
31. On Ericksen’s problem for plane deformations with uniform transverse stretch. *Int. J. Engrg. Sci.*, **7**, 217–233 (1969). With K.W. Schuler
32. On four rheological relations. *Rheol. Acta*, **4**, 186–193 (1970). With B. Bernstein.
33. Non uniqueness of second order fluids under steady radial flow in annuli. *Int. J. Engrg. Sci.*, **7**, 555–569 (1969). With B. Bernstein.
34. On the complete representation of biharmonic functions. *SIAM J. Appl. Math* , **19**, 243–250 (1970)
35. A note on the C-N inequality. *ZAMP*, **21**, 1083–1084 (1970)

36. Elastic stability and the zero moment condition. *J. Elasticity*, **1**, 19–28 (1971)
37. Statically possible radially symmetric deformations in isotropic, incompressible elastic solids. *ZAMP*, **22**, 590–607 (1971)
38. Rectilinear steady flow of simple fluids. *Proc. Roy. Soc. London*, **A332**, 311–333 (1973). With J. Serrin.
39. The free surface on a liquid between cylinders rotating at different speeds, Part I. *Arch. Ration. Mech. Anal.*, **49**, 321–380, (1973). With D.D. Joseph.
40. The free surface on a liquid between cylinders rotating at different speeds, Part II. *Arch. Ration. Mech. Anal.*, **49**, 381–401 (1973). With G.S. Beavers and D.D. Joseph.
41. Thermodynamics, stability and boundedness of fluids of complexity 2 and fluids of second grade. *Arch. Ration. Mech. Anal.*, **56**, 191–252, (1974). With J. Dunn.
42. Global properties of continuum thermodynamic processes. *Arch. Ration. Mech. Anal.*, **59**, 97–109 (1975). With J. Serrin.
43. Global properties of continuum thermodynamic processes. Proc. 12th Annual Mtg. Soc. Engng. Sci., University of Texas at Austin, 185–191 (1975)
44. Universal flows in the simplest theories of fluids. *Annali Della Schola Normale Superiore Di Pisa*, **IV 2**, 323–341 (1977). With C. Truesdell.
45. Transverse deformations associated with rectilinear shear in elastic solids. *J. Elasticity*, **8**, 117–142 (1978). With B. Kao.
46. Uniqueness and drag for fluids of second grade in steady motion. *Int. J. Non-Linear Mech.*, **13**, 131–137 (1978). With K. Rajagopal.
47. Lemmas in thermodynamic stability: *A priori* inequalities and induced global bounds on thermodynamic states. *Arch. Ration. Mech. Anal.*, **67**, 183–224 (1978). With J.E. Dunn.
48. On an inequality in thermodynamic stability. In *Contemporary Developments in Continuum Mechanics and Partial Differential Equations*, eds. G. De LaPenha and L. Medeiros, North-Holland Math. Studies 30, 143–170 (1978).
49. On the impossibility of linear Cauchy and Piola-Kirchhoff constitutive theories for stress in solids. *J. Elasticity*, **9**, 83–89 (1979). With J. Serrin.
50. Anomalous features in the model of “second order fluids.” *Arch. Ration. Mech. Anal.*, **70**, 145–152 (1979). With K.R. Rajagopal.
51. The morphology and stability of material phases. *Arch. Ration. Mech. Anal.*, **74**, 1–99 (1980). With J.E. Dunn.
52. Thermodynamics and stability of fluids of third grade. *Proc. Roy. Soc. London*, **A 339**, 351–377 (1980). With K.R. Rajagopal.
53. Shearing motions and the formation of shocks in an elastic circular tube. *Quart. Appl. Math.*, **38**, 191–207 (1980). With G.P. MacSithigh.
54. The elastica and the problem of pure bending for a non-convex stored energy function. *J. Elasticity*, **11**, 165–186 (1981). With R.D. James.
55. Steady flow of a simple fluid around a rotating sphere. *Rheol. Acta.*, **19**, 675–697 (1980). With B.G. Kao.
56. Catastrophic instabilities and related results in a fluid of third grade. *Int. J. Non-Linear Mech.*, **16**, 191–198 (1981). With B. Straughan.
57. On the existence of a manifold for temperature. *Arch. Ration. Mech. Anal.*, **81**, 317–332 (1983). With K.R. Rajagopal.
58. Helical shear of an elastic, circular tube with a non-convex stored energy. *Arch. Ration. Mech. Anal.*, **84**, 31–53 (1983). With G. MacSithigh. Reprinted in *The Breadth and*

- Depth of Continuum Mechanics*. Ed. by C.M. Dafermos, D.D. Joseph, and F.M. Leslie, Springer-Verlag (1985).
59. Structure and dynamical stability of Gibbsian states. Lecture Notes in Mathematics Proceedings of the Laws and Structures of Continuum Thermomechanics, Minneapolis, MN, June, 1983. *New Perspectives in Thermodynamics*. Edited by J. Serrin, Springer-Verlag, 1985.
 60. Elementary implications of viscometry on the free surface profile for the problems of climbing and channel flow. *J. Non-Newtonian Fluid Mech.*, **15**, 127–144 (1984). With J. Castro.
 61. In recognition of the sixtieth birthday of J.L. Ericksen. *J. Elasticity*, **14**, 338 (1984).
 62. On the creeping motion of a simple fluid past a submerged sphere. In print, *Latin American J. Chem. Eng. Appl. Chem.* With J. Castro and C. Filipich.
 63. Minimization in incompressible nonlinear elasticity theory. *J. Elasticity*, **16**, 267–301 (1986). With G. MacSithigh.
 64. A plane non-linear shear for an elastic layer with a non-convex stored energy function. *Int. J. Solids Struct.*, **22**, No. 10, 1129–1135 (1986). With K. Rajagopal and G. MacSithigh.
 65. The influence of the bending stiffness in the motion of a belt. *J. Appl. Mech*, **53**, 266–270 (1986). With P. Villaggio.
 66. On the Gibbsian thermostatics of mixtures. *Arch. Ration. Mech. Anal.*, **93**, 203–221 (1986). Reprinted in *Analysis and Thermomechanics*, ed. by B.D. Coleman, M. Feinberg, and J. Serrin, Springer-Verlag, 1987. With J. Patino.
 67. Steady, structured shock waves. Part 1: Thermoelastic materials. *Arch. Ration. Mech. Anal.*, **104**, 295–365 (1988). With J.E. Dunn.
 68. A dissipation principle and its consequences for structures shock waves in thermoelastic materials. *Shock Waves in Condensed Matter*, 1987, 215–218, eds. S.C. Schmidt and N.C. Holmes, Elsevier Science Publishers B.V., 1988. With J.E. Dunn.
 69. A variational proof of the stress theorem of Cauchy. *Arch. Ration. Mech. Anal.*, **105**, 95–103 (1989). With E. G. Virga.
 70. Steady, structured shock waves of arbitrary intensity in thermoelastic materials. *Elastic Wave Propagation*, 1988, 133–140, eds. M.F. McCarthy and M.A. Hayes. Elsevier Science Publishers B.V., 1989. With J.E. Dunn.
 71. The Maxwell relation and Eshelby’s conservation law for minimizers in elasticity theory. *J. Elasticity*, **22**, 193–200 (1989). With B. Hertog.
 72. Material symmetry and crystals. *Arch. Ration. Mech. Anal.*, **110**, 43–72 (1990). With B. Hertog.
 73. Minimization in nonlinear elasticity theory for bodies reinforced with inextensible cords. *J. Elasticity*, **26**, 239–289 (1991). With G. MacSithigh.
 74. Steady, structured shock waves in a viscoelastic solid of differential type. *Int. J. Engrg. Sci.*, **28**, 469–483 (1990). With W.H. Warner and J.H. Yu.
 75. Normality and convexity of the yield surface in nonlinear plasticity. *Quart. Appl. Math.*, **21**, 117–127 (1993). With E. Volkmann.
 76. The torsion problem for a nonconvex stored energy function. *Arch. Rational Mech. Anal.*, **122**, 291–322 (1993). With Y. Zhang.
 77. The penalty method and the numerical solution of plane problems in nonlinear elastostatics. *MSI Report*, September 1993. With A. Aguiar.
 78. The Weierstrass condition for a special class of elastic materials. *J. Elasticity*, **34**,

- 167-184 (1994). With J. E. Dunn.
79. Coexistent phase mixtures in the anti-plane shear of an elastic tube. *Zeit. Angew. Math. Phys.*, **45**, 202-244 (1994). With Y. Zhang.
 80. Stress and the moment-twist relation in the torsion of a cylinder with a nonconvex stored energy function. *Zeit. Angew. Math. Phys.*, **46**, S146-171 (1995). With Y. Zhang.
 81. A structured phase transition for the anti-plane shear of an elastic circular tube. *Quart. J. Mech. & Appl. Math.*, **48**, 189-210 (1995). With Y. Zhang.
 82. Single phase energy minimizers for materials with nonlocal spatial dependence. *Quart. Appl. Math.*, **24**, 161-195 (1996). With D. Mason.
 83. The static state of a two-phase solid mixture in a stressed elastic bar. *Int. J. Solids & Structures*, **33**, 2267-2281 (1996). With G. Royer.
 84. Thermodynamics, stability and nonlinear oscillations of a viscoelastic solid Part 1: Differential type solids of second grade. *Int. J. Nonlinear Mech.*, **31**, 495-516 (1996). With J.-H. Yu.
 85. A note on the optimal state of a binary solid mixture in a stressed elastic bar. *Meccanica*, **31**, 519-525 (1996). With G. Royer and H. Weinberger.
 86. Numerical solution of singular problems in nonlinear elastostatics. Research Report (1995). With A. Aguiar.
 87. Alloy separation of a binary mixture in a stressed elastic sphere. *J. Elasticity*, **42**, 49-77 (1996). With G. Royer.
 88. Thermodynamics, stability and nonlinear oscillations of a viscoelastic solid, Part II: History type solids. *Int. J. Nonlinear Mech.*, **33**, 165-188 (1997). With J.-H. Yu.
 89. Vibration damping through the use of materials with memory. *Int. J. Solids & Structures*, **35**, 403-420 (1998). With Y. Ketema and J.-H. Yu.
 90. A nonlinear oscillator with history dependent force. *Int. J. Nonlinear Mech.*, **33**, 447-459 (1998). With Y. Ketema and J.-H. Yu.
 91. On a model of nonlocal continuum mechanics, Part I: Existence and Regularity. *SIAM J. Appl. Math.*, **58**, 1278-1306 (1998). With D. Mason.
 92. On a model of nonlocal continuum mechanics, Part II: Structure, Asymptotics and Computations. *J. Elasticity*, **48**, 51-100 (1997). With D. Mason.
 93. Dynamics of a viscoelastic spherical shell with a nonconvex strain energy function. *Quart. Appl. Math.*, **26**, 221-244 (1998). With Y. Ketema and J. -H. Yu.
 94. The state of pure shear. *J. Elasticity*, **52**, 91-98 (1998). With P. Belik.
 95. A thermoviscoelastic dynamic vibration absorber. *J. Applied Mechanics*, **65** (1998). With Y. Ketema.
 96. A singular problem in incompressible nonlinear elastostatics. *Math. Models and Methods in Appl. Sciences*, **10**, 1181-1207 (2000). With A. Aguiar.
 97. A rheological model for materials which support coexistent shear rates. *Int. J. Nonlinear Mech.*, **35**, 1023-1043 (2000). With C. Balan.
 98. Shape memory alloys for passive vibration damping. *J. Intelligent Material Systems and Structures*, **9**, 854-870 (1998). With Y. Ketema.
 99. Self-intersection in elasticity. *Int. J. Solids & Structures*, **38**, 4797-4823 (2001). With A. Aguiar.
 100. The Lagrange multiplier in incompressible elasticity theory. *J. Elasticity*, **55**, 193-200 (1999). With G. Royer.

101. On the rigid motion of a body. Draft available (1999). With J.E. Dunn.
102. The constraint of local injectivity in linear elasticity theory. *Proc. Roy. Soc.*, **457**, 2167-2187 (2001). With G. Royer.
103. Multiple natural states for an elastic isotropic material with polyconvex stored energy. *J. Elasticity*, **60**, 223-231 (2000). With G. Royer.
104. Numerical analysis of elastic problems with injectivity constraints. ECCM-2001, *European Conference on Computational Mechanics*, June 26-29, 2001, Cracow, Poland. With K. Obeidat, H. Stolarski & G. Royer.
105. The Lagrange multipliers and hyperstress constraint reactions in incompressible multipolar elasticity theory. *J. Mech. & Phys. Solids*, **50**, 1627-1647 (2002). With G. Royer.
106. "Response to: Discussion on 'A. Aguiar and R. Fosdick, Self-intersection in elasticity' [International Journal of Solids and Structures 38 (28) 4797-4825]". *Int. J. Solids & Structures*, **39**, 1729 (2002).
107. Rank 1 convexity for a class of incompressible elastic materials. *Rational Continua Classical and New*, ed. P. Podio-Guidugli & M Brocato, Springer-Verlag Italia, Milano, 2003. With J.E. Dunn & Y. Zhang.
108. Generalized Airy stress functions. *Meccanica*, **38**, 571-578 (2003). With K. Schuler.
109. About Clapeyron's theorem in linear elasticity. *J. Elasticity*, **72**, 145-172 (2003). With L. Truskinovsky.
110. Stress as a constraint reaction in rigid bodies. *J. Elasticity*, **74**, 265-276 (2004). With G. Royer.
111. A Stokes theorem for second order tensor fields and its implications in continuum mechanics. *Int. J. Nonlinear Mech.*, **40**, 381-386 (2005). With G. Royer.
112. A penalty interpretation for the Lagrange multiplier fields in incompressible multipolar elasticity theory. *Mathematics and Mechanics of Solids*, **10**, 389-413 (2005). With G. Royer.
113. Generalized Baker-Ericksen inequalities. *J. Elasticity*, **85**, 39-44 (2006). With M. Silhavy.
114. Chemomechanical equilibrium of bars. *J. Elasticity*, **84**, 167-188 (2006). With G. Royer.
115. Variational characterization of a quasi-rigid body. *J. Elasticity*, **87**, 211-238 (2007). With G. Royer.
116. A note on uniqueness in linear elastostatics. *J. Elasticity*, **88**, 79-86 (2007). With M. Piccioni and G. Puglisi.
117. Electrodynamics and thermomechanics of material bodies. *J. Elasticity*, **88**, 255-297 (2007). With H. Tang.
118. Bifurcation instability in linear elasticity with the constraint of local injectivity. *J. Elasticity*, **90**, 99-126 (2007). With Francesco Freddi & G. Royer.
119. A study of penalty formulations used in the numerical approximation of a radially symmetric elasticity problem. *J. Mech. Materials and Structures*, **3**, 1403-1427 (2008). With A. Aguiar and J. Sanchez.
120. Thermal effects on the vibration damping properties of shape memory alloys. *Journal of Intelligent Material Systems and Structures*, **20**, 1587-1601 (2009). With Y. Ketema.
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