



**Professor James Gordon Simmonds (1935-2015)**

See:

[http://pt.wikipedia.org/wiki/James\\_G.\\_Simmonds](http://pt.wikipedia.org/wiki/James_G._Simmonds)

<http://ce.virginia.edu/faculty/simmondsjg.html>

[http://www.seas.virginia.edu/pubs/enews/enews\\_feb12/simmonds.php](http://www.seas.virginia.edu/pubs/enews/enews_feb12/simmonds.php)

<http://orlabs.oclc.org/identities/lccn-n82-11628/>

<http://library.brown.edu/find/Author/Home?author=Simmonds%2C%20James%20G.>

[http://www.goodreads.com/author/show/494888.James\\_G\\_Simmonds](http://www.goodreads.com/author/show/494888.James_G_Simmonds)

<http://www.barnesandnoble.com/c/james-g.-simmonds>

<http://www.amazon.com/James-G.-Simmonds/e/B001IU10J6>

**Partial Obituary (From The Daily Progress, Charlottesville, Virginia, December 13, 2015):**

Dr. Simmonds joined the faculty at the University of Virginia in 1966 as a member of the Department of Applied Mathematics and Computer Science after completing his PhD at the Massachusetts Institute of

Technology, and his post-doctorate at Harvard University. In 1998 he became Professor Emeritus, and continued his service to the University in a variety of ways until his death, including his involvement with the Jefferson Scholars program. He made outstanding contributions to his field, including authoring over 120 papers, three books, and translating an advanced text from French to English. During his career, he received numerous awards and honors, including the Distinguished Professor award from UVA, and most recently the Warner Koiter Medal from the American Society of Mechanical Engineers. In addition to his distinguished academic career, Jim was a champion and supporter of many causes and organizations. In 2001, he was the recipient of the Nature Conservancy of Virginia's Volunteer of the Year Award. He touched many lives through his teaching, community service and devotion to family and friends. He was a kind and generous soul with a huge inquisitive mind.

### **Education:**

S.B. (aeronautical engineering)      Massachusetts Institute of Technology, 1958  
S.M. (aeronautical engineering)      Massachusetts Institute of Technology, 1958  
Ph.D. (applied mathematics)      Massachusetts Institute of Technology, 1965

### **Experience:**

- *Mathematical Physics Branch of the Theoretical Mechanics Division, National Aeronautics and Space Administration, Langley Field, Hampton, Virginia (Active Duty USAF, 1959-1962), 1958-1962*
- *Research Associate, Massachusetts Institute of Technology, Cambridge, Massachusetts, postdoctoral work under the supervision of Professor Eric Reissner, 1964-1965*
- *Research Fellowship in Structural Mechanics, Harvard University, Cambridge, Massachusetts, under the supervision of Professor Bernard Budiansky, 1965-1966*
- *Department of Applied Mathematics and Computer Science, School of Engineering and Applied Science, University of Virginia, Charlottesville, Virginia*
- *Assistant Professor, 1966-1968*
- *Associate Professor, 1968-1971*
- *Professor, 1971-1986*
- *Lawrence R. Quarles Professor of Engineering and Applied Science, September 1986-1998*
- *Chairman, July 1989-June 1994*
- *Professor emeritus, June, 1998-*
- *Chairman, Applied Mechanics Group, School of Engineering and Applied Science, University of Virginia, Charlottesville, Virginia, 1968-1971*
- *Visiting Professor, Department of Solid Mechanics, Technical University of Denmark, Fall 1971*
- *NATO postdoctoral fellowship, Laboratory for Applied Mechanics, Technical University of Delft, Holland, Spring 1972*
- *Visiting Professor, Department of Aeronautical Engineering, Israel Institute of Technology, May-June 1984 (Lena and Ben Fohrman Lectureship Fund)*
- *Visiting Professor, Laboratoire de Mécanique et Technologie, ENS de Cachan, Université Paris 6, 1994-1995.*

### **Professional Societies:**

- *American Academy of Mechanics, Fellow*

- *American Association for the Advancement of Science (AAAS)*
- *American Society of Mechanical Engineers (ASME), Fellow*
- *International Society for the Interaction of Mechanics and Mathematics*
- *Mathematics Association of America (MAA)*
- *Society for Industrial Applied Mathematics (SIAM)*
- *Society for Natural Philosophy*

### **Professional Service:**

- *Associate Editor, "Journal of Applied Mechanics" (1985-1991)*
- *Presidential Young Investigators Awards Panel, National Science Foundation*
- *Chair, Nominating Committee, American Academy of Mechanics*
- *Joint AMS, MAA, SIAM Committee on Preparation for College Teaching*
- *Board of Editors, Quarterly of Applied Mathematics, (1996- )*
- *Associate Editor, "Applied Mechanics Reviews" (1996- )*

### **Past Major University and Engineering School Committees:**

- *Jefferson Scholars (National Selection Committee and math examiner)*
- *Many Ph.D. Advisory/Examining Committees*
- *University Teaching Awards Committee*
- *SEAS Committee on Minority Affairs*
- *Advisory Committee, Center for Multi-Ethnic and Cultural Affairs*
- *SEAS Promotions and Tenure Committee*
- *Faculty Forum (Executive Committee)*
- *Task Force on Restructuring the Office of African-American Affairs*
- *Coordinator, SEAS Conversation on Teaching*
- *Committee to Revise Promotion and Tenure Criteria in SEAS*
- *Faculty Senate*
- *University-wide Faculty Grievance Committee (Chair)*

### **Honors:**

- *2011 The Koiter Medal of the American Society of Mechanical Engineers*
- *2006 The Worcester Reed Warner Medal of the American Society of Mechanical Engineers*
- *2005 The University of Virginia Engineering Foundation's Award for distinguished Service*
- *2001 Outstanding Volunteer Award of The Nature Conservancy of Virginia*
- *The Raven Society, 1996*
- *Pólya Award of the Mathematical Association of America for best expository paper of 1995*

- *Elected Fellow of the American Society of Mechanical Engineers, 1992*
- *Appointed to the Lawrence R. Quarles Chair of Engineering and Applied Science, 1986*
- *Elected Fellow of the American Academy of Mechanics, 1984*
- *The University of Virginia Alumni Association's Distinguished Professor Award, 1983*
- *President's and Visitor's Research Prize in the Natural Sciences and Mathematics for 1980 (for a paper with A. Libai)*
- *MacWade Award, University of Virginia, 1980 (for outstanding service to the School of Engineering)*
- *Honors Program in Aeronautical Engineering (MIT)*
- *Tau Beta Pi (MIT, 1956)*

## **Publications:**

### **Books:**

1. *Simmonds, J. G., A Brief on Tensor Analysis, Springer-Verlag, 1982 (ISBN: 0-387-90639-8), (Translated into Hungarian and published by Muszaki Konyukiado, 1985). 2<sup>nd</sup> Ed. Springer-Verlag, 1994 ISBN: 0-387-94088-X (4th printing, 2000). Special printing of 1000 copies of 2<sup>nd</sup> Ed. for sale on mainline China only (2009).*
2. *Simmonds, J. G., and Mann, J. E., Jr., A First Look at Perturbation Theory, (Robt. Krieger Publishing Co., 1986), (ISBN 0-89874-816X). 2nd Ed. Dover Publications, 1998 (ISBN 0-486-67551-3).*
3. *Libai, A., and Simmonds, J.G., The Nonlinear Theory of Elastic Shells, 2nd Ed. Cambridge University Press, 1998 (ISBN 0-521-47236-9).*
4. *Ladevèze, P. (author) and Simmonds, J. G. (translator and editor), Nonlinear Computational Structural Mechanics (Mécanique Non Linéaire des Structures, Hermès, 1996), Springer-Verlag, 1999, ISBN 0-387-98594-8.*

### **Refereed Publications:**

5. *Simmonds, J. G., "The General Equations of Equilibrium of Rotationally Symmetric Membranes and Some Static Solutions for Uniform Centrifugal Loading," NASA TN D-816 (May 1961).*
6. *Simmonds, J. G., "The Transverse Vibrations of a Flat Spinning Membrane," Journal of the Aerospace Sciences, Vol. 29 (January 1962), pp. 16-18.*
7. *Simmonds, J. G., "The Finite Deflection of a Normally Loaded, Spinning Elastic Membrane," Journal of the Aerospace Sciences, Vol. 29 (October 1962), pp. 1180-1189.*
8. *Simmonds, J. G., "The In-Plane Vibrations of a Flat, Spinning Disk", NASA TN D-521, (December 1962).*
9. *Simmonds, J. G., "Axisymmetric Transverse Vibrations of a Spinning Membrane Clamped at Its Center," AIAA Journal, Vol. 1 (May 1963), pp. 1224-1225.*
10. *Lardner, T. J., and Simmonds, J. G., "Lateral Deformation of Shallow Shells of Revolution," International Journal of Solids and Structures, Vol. 1 (October 1965), pp. 377-384.*
11. *Reissner, E., and Simmonds, J. G., "Asymptotic Solutions of Boundary Value Problems for Semi-Infinite Circular Cylindrical Shells," Journal of Mathematics and Physics, Vol. 45 (March 1966), pp. 1-22.*
12. *Simmonds, J. G., "Influence Coefficients for Semi-Infinite and Infinite Circular Cylindrical Shells," Journal of Mathematics and Physics, Vol. 45 (June 1966), pp. 127-149.*

13. Simmonds, J. G., "A Set of Simple, Accurate Equations for Circular Cylindrical Elastic Shells," *International Journal of Solids and Structures*, Vol. 2 (October 1966), pp. 524-541.
14. Simmonds, J. G., "Modifications of the Timoshenko Beam Equations Necessary for Thin-Walled Circular Tubes," *International Journal of the Mechanical Sciences*, Vol. 9 (May 1967), pp. 237-244.
15. Simmonds, J. G., "Green's Functions for Closed, Elastic Spherical Shells: Exact and Accurate Approximate Solutions," *Koninklijke Nederlandse Akademie van Wetenschappen*, Vol. 71, Series B (1968), pp. 236-249.
16. Simmonds, J. G., "Further Reduction of Equation (20) for Arbitrary Shells of Non-Zero Gaussian Curvature." *Theory of Thin Shells*, (Springer-Verlag, 1969), pp. 157-160 (appendix to a paper by J. L. Sanders, Jr.).
17. Danielson, D. A. and Simmonds, J. G., "Accurate Buckling Equations for Arbitrary and Cylindrical Elastic Shells," *International Journal of the Engineering Sciences*, Vol. 7 (1969), pp. 459-468.
18. Simmonds, J. G. and Danielson, D. A., "New Results for the Buckling Loads of Axially Compressed Cylindrical Shells Subject to Relaxed Boundary Conditions," *Journal of Applied Mechanics*, Vol. 37 (1970), pp. 93-100.
19. Sanders, J. L. Jr., and Simmonds, J. G., "Concentrated Forces on Shallow Cylindrical Shells," *Journal of Applied Mechanics*, Vol. 37 (1970), pp. 367-373.
20. Simmonds, J. G., "Simplification and Reduction of the Sanders- Koiter Linear Shell Equations for Various Midsurface Geometries," *Quarterly of Applied Mathematics*, Vol. 28 (1970), pp. 259-275.
21. Simmonds, J. G., and Danielson, D. A., "Nonlinear Shell Theory with a Finite Rotation Vector," *Koninklijke Nederlandse Akademie van Wetenschappen*, Vol. B73, Series B (1970), pp. 460-478.
22. Danielson, D. A. and Simmonds, J. G., "A Proof of the Accuracy of a Set of Simplified Buckling Equations for Circular Cylindrical Shells," *Developments in Theoretical and Applied Mechanics*, Vol. 5 (University of North Carolina Press, 1971), pp. 1015-1028.
23. Simmonds, J. G., "Extension of Koiter's  $L_2$ -Error Estimate to Approximate Shell Solutions with No Strain Energy Functional," *Zeitschrift für angewandte Mathematik und Physik*, Vol. 22 (1971), pp. 339-345.
24. Simmonds, J. G., "An Improved Estimate for the Error in the Classical, Linear Theory of Plate Bending," *Quarterly of Applied Mathematics*, Vol. 29 (1971), pp. 439-447.
25. Simmonds, J. G., "A Legendre Function Inequality," *SIAM Review*, Vol. 13 (1971), pp. 577-78.
26. Simmonds, J. G., and Danielson, D. A., "Nonlinear Shell Theory with Finite Rotation and Stress-Function Vectors," *Journal of Applied Mechanics*, Vol. 39 (1972), pp. 1085-1090. (See also p. 636 of Vol. 40 for a discussion of the paper.)
27. Simmonds, J. G., "Pointwise Displacement Errors in Linear Shell Theory Resulting from Errors in the Stress-Strain Relations," *Zeitschrift für angewandte Mathematik und Physik*, Vol. 23 (1972).
28. Koiter, W. T., and Simmonds, J. G., "Foundations of Shell Theory," *Theoretical and Applied Mechanics, Proceedings of the 13th International Congress of Theoretical and Applied "Mechanics"* (Springer-Verlag, 1973), pp. 150-176.
29. Nau, R. W., and Simmonds, J. G., "Calculation of the Low Natural Frequencies of Clamped Cylindrical Shells by Asymptotic Methods," *International Journal of Solids and Structures*, Vol. 9 (1973), pp. 591-605.
30. Simmonds, J. G., "A Necessary Condition for the Non-Occurrence of von Mises Yielding in Impulsively Loaded Plates," *Journal of Applied Mechanics*, Vol. 40 (June 1973), pp. 615-616.
31. Simmonds, J. G., and Tropf, C. G., "The Fundamental (Normal Point Load) Solution for a Shallow Hyperbolic Paraboloidal Shell," *SIAM Journal of Applied Mathematics*, Vol. (July 1974), pp. 102-120.
32. Niordson, F. I., and Simmonds, J. G., "An Improved Stodola- Method for Computing Close Eigenvalues," *Foundations of Deformable Media (Galerkin 100th Birthday Volume)*, *Izdatel'stro "Nauka"* (Moscow, 1975), pp. 413-419.
33. Simmonds, J. G., "Reduction of the Linear Sanders-Koiter Shell Equations for Non-Developable Midsurfaces to Two Coupled Equations," *Journal of Applied Mechanics*, Vol. 42 (June 1975), pp. 511-512.
34. Latta, G. E., and Simmonds, J. G., "The Sanders-Koiter Shell Equations Can Be Reduced to Two Coupled Equations for All Minimal Midsurfaces," *Quarterly of Applied Mathematics*, Vol. 27 (July 1975), pp. 170-174.

35. Simmonds, J. G., "Rigorous Expunction of Poisson's Ratio from the Reissner-Meissner Shell Equations," *International Journal of Solids and Structure*, Vol. II (September 1975), pp. 1051-1056.
36. Simmonds, J. G., and Bradley, M. R., "The Fundamental Solution for a Shallow Shell with an Arbitrary Quadratic Midsurface," *Journal of Applied Mechanics*, Vol. 43 (June 1976), pp. 286-290.
37. Simmonds, J. G., and Bradley, M. R., "Stress-Intensity Factors for Very Short Cracks in Arbitrary Pressurized Shells," *Journal of Applied Mechanics*, Vol. 43 (December 1976), pp. 657-662.
38. Simmonds, J. G., "Recent Advances in Shell Theory," *Advances in Engineering Science*, 13th Annual Meeting, Society of Engineering Science, NASA CP-2001 (1976), pp. 617-626.
39. Simmonds, J. G., "Saint-Venant's Principle for Semi-Infinite Shells of Revolution," *Recent Advances in Engineering Science: Proceedings of the 10th Annual Meeting Society Engineering Sciences*, Vol. 8 (Boston: Scientific Publishers, 1977), pp. 367-374.
40. Latta, G. E., Simmonds, J. G., and Bradley, M. R., "Analytical and Numerical Calculation of Stress-Intensity Factors in a Pressurized Cylindrical Shell With a Clamped Crack," *Journal of Applied Mechanics*, Vol. 44 (June 1977), pp. 264-270.
41. Nicholson, J. W., and Simmonds, J. G., "Timoshenko Beam Theory Is Not Always More Accurate Than Elementary Beam Theory," *Journal of Applied Mechanics*, Vol. 44 (June 1977), pp. 337-338. (See also pp. 357-360 and 797-799 for a discussion of the paper.)
42. Simmonds, J. G., Bradley, M. R., and Nicholson, J. W., "Stress-Intensity Factors for Arbitrarily Oriented Cracks in Shallow Shells," *Journal of Applied Mechanics*, Vol. 45 (March 1978), pp. 135-141.
43. Simmonds, J. G., "Accurate Nonlinear Equations and a Perturbation Solution for the Free Vibrations of a Circular Elastic Ring," *Journal of Applied Mechanics*, Vol. 46 (March 1979), pp. 156-160.
44. Simmonds, J. G., "Surfaces with Metric and Curvature Tensors that Depend on One Coordinate Only Are General Helicoids," *Quarterly of Applied Mathematics*, Vol. 37 (April 1979), pp. 82-85.
45. Simmonds, J. G., and Libai, A., "Exact Equations for the Inextensional Deformation of Cantilevered Plates," *Journal of Applied Mechanics*, Vol. 46, (September 1979), pp. 631-636. (Awarded the President's and Visitors' Research Prize in the Natural Sciences and Mathematics for the year 1980).
46. Simmonds, J. G., and Libai, A., "Alternate Exact Equations for the Inextensional Deformation of Arbitrary, Quadrilateral, and Triangular Plates," *Journal of Applied Mechanics*, Vol. 46 (December 1979), pp. 895-900..
47. Simmonds, J. G., "Special Cases of the Nonlinear Shell Equations," *Trends in Solid Mechanics, the Koiter 65<sup>th</sup> Birthday Volume* (Delft Univ. Press, 1979), pp. 211-223.
48. Simmonds, J. G., "Six Different Stress Functions for Membranes of Revolution," *Mechanics Today, Vol. 5, The Reissner Anniversary Volume* (Pergamon Press, 1980), pp. 475-482.
49. Nicholson, J. W., and Simmonds, J. G., "Sanders' Energy-Release Rate Integral for Arbitrarily Loaded Shallow Shells and Its Asymptotic Evaluation for a Cracked Cylinder," *Journal of Applied Mechanics*, Vol. 47 (June 1980), pp. 363-369.
50. Simmonds, J. G., and Nicholson, J. W., "Stress-Intensity Factors for Cracked Shallow Shells," *15th International Congress of Theoretical and Applied Mechanics, postprints, North Holland (1980) pp. 397-404.*
51. Libai, A., and Simmonds, J. G., "Large-Strain Constitutive Laws for the Cylindrical Deformations of Shells," *International Journal of Nonlinear Mechanics*, Vol. 16 (1981), pp. 91-103.
52. Simmonds, J. G., "Exact Equations for the Large Inextensional Motion of Elastic Plates," *Journal of Applied Mechanics*, Vol. 48 (March 1981), pp. 109-112.
53. Simmonds, J. G., and Nicholson, J. W., "Sanders' Energy-Release Rate Integral and Conservation Laws in Finite Elastostatics," *Archive for Rational Mechanics and Analysis*, Vol. 76 (1981), pp. 1-8.
54. Simmonds, J. G., and Duva, J., "Thickness Effects are Minor in the Energy-Release Rate Integral for Bent Plates Containing Elliptic Holes or Cracks," *Journal of Applied Mechanics*, Vol. 48 (June 1981), pp. 320-326.

55. Kretsinger, R. H., Mann, J. E., and Simmonds, J. G., "Evaluation of the Role of Intestinal Calcium Binding Protein in the Transcellular Diffusion of Calcium," Proc. 5th Workshop on Vitamin D, (A. W. Norman, ed.), (1982), pp. 233-248.
56. Libai, A., and Simmonds, J. G., "Nonlinear Elastic Shell Theory," Advances in Applied Mechanics, (J. Hutchinson and T. Y. Wu, eds.), (Academic Press, 1983), Vol. 23, Chapter 4, pp. 271-371, (ISBN: 0-12-002023-8).
57. Libai, A., and Simmonds, J. G., "Highly Nonlinear Cylindrical Deformations of Rings and Shells", International Journal of Nonlinear Mechanics, Vol. 18 (1983), pp. 181-197.
58. Nicholson, J. W., Weidman, S. T., and Simmonds, J. G., "Sander's Energy-Release Rate Integral for a Circumferentially Cracked Shell," Journal of Applied Mechanics, Vol. 50 (June 1983), pp. 373-378.
59. Simmonds, J. G., "Closed-Form, Axisymmetric Solution of the von Karman Plate Equations for Poisson's Ratio One-Third," Journal of Applied Mechanics, Vol. 50, (December 1983), pp. 897-898.
60. Simmonds, J. G., "The Shell Game," Proc. 12<sup>th</sup> Junior Science and Humanities Symposium, (E. Soudek, ed.), (1983), pp. 9-13.
61. Simmonds, J. G., "General Helicoidal Shells Undergoing Large, One-Dimensional Strains or Large Inextensional Deformation," International Journal of Solids & Structures, Vol. 20 (1984), pp. 13-30.
62. Simmonds, J. G., "Moment Potentials," American Journal of Physics, Vol. 52 (September 1984), pp. 851-852.
63. Simmonds, J. G., "The Nonlinear Thermodynamical Theory of Shells: Descent from 3-Dimensions Without Thickness Expansions," Flexible Shells: Theory and Application, (E. L. Axelrad and F. A. Emmerling eds.), (Springer-Verlag, 1984), pp. 1-11.
64. Frakes, J. P., and Simmonds, J. G., "Asymptotic Solutions of the von Karman Equations for a Circular Plate under a Concentrated Load," Journal of Applied Mechanics, Vol. 52, (June 1985), pp. 326-330.
65. Simmonds, J. G., "The Strain Energy Density of Rubber-Like Shells," International Journal of Solids & Structures, Vol. 21 (1985), pp. 67-77.
66. Simmonds, J. G., "A New Displacement Form for the Nonlinear Equations of Motion of Shells of Revolution," Journal of Applied Mechanics, Vol. 52 (September 1985), pp. 507-509.
67. Fulton, J. P., and Simmonds, J. G., "Large Deformation Under Vertical Edge Loads of Annular Membranes with Various Strain Energy Densities," International Journal of Non-Linear Mechanics, Vol. 21 (1986), pp. 257-267.
68. Simmonds, J. G., "The Strain-Energy Density of Rubber-Like Shells of Revolution Undergoing Torsionless, Axisymmetric Deformation (Axishells)," Journal of Applied Mechanics, Vol. 53 (September 1986), pp. 593-596.
69. Mansfield, L., and Simmonds, J. G., "The Reverse Spaghetti Problem: Drooping Motion of an Elastica Issuing from a Rigid Horizontal Guide," Journal of Applied Mechanics, Vol. 54 (March 1987), pp. 147-150.
70. Simmonds, J. G., and Libai, A., "A Simplified Version of Reissner's Nonlinear Equations for a First-Approximation Theory of Shells of Revolution," Computational Mechanics, Vol. 2 (1987), pp. 99-103.
71. Simmonds, J. G., and Libai, A., "Asymptotic Forms of a Simplified Version of the Nonlinear Reissner Equations for Clamped Elastic Spherical Caps Under Outward Pressure," Computational Mechanics, Vol. 2 (1987), pp. 231-244.
72. Simmonds, J. G., "The Strain-Energy Density of Compressible, Rubber-Like Axishells," Journal of Applied Mechanics, Vol. 54 (June 1987), pp. 453-454.
73. Libai, A., and Simmonds, J. G., The Nonlinear Theory of Elastic Shells: One Spatial Dimension, (Academic Press, 1988) (ISBN 0-12-447940-5).
74. Simmonds, J. G., "Pointwise Errors in the Classical and Reissner's Linear Theory of Plates, Especially for, Concentrated Loads," Journal of Elasticity, Vol. 23 (1990), pp. 219-232.
75. Simmonds, J. G., "A Necessary Condition on the Strain-Energy Density for a Circular, Rubber-Like Plate to Have a Finite Deflection Under a Concentrated Load," Journal of Applied Mechanics, Vol. 56 (June 1989), pp. 484-486.
76. Simmonds, J. G., and Horn, M. A., "Asymptotic Analysis of the Nonlinear Equations of an Infinite, Rubber-Like Slab Under an Equilibrated Vertical Line Load," Journal of Elasticity, Vol. 24 (1990), pp. 105-127.

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78. Duva, J. M., and Simmonds, J. G., "An Accurate Elementary Static Theory of Laminated Thermoelastic Beams," *International Journal of Solids and Structures*, Vol. 26 (1990), pp. 761-771.
79. Horgan, C. O., Payne, L. E., and Simmonds, J. G., "Existence, Uniqueness, and Decay Estimates for Solutions in the Nonlinear Theory of Elastic, Edge-Loaded, Circular Tubes," *Quarterly of Applied Mathematics*, Vol. 48 (1990), pp. 341-359.
80. Simmonds, J. G., "Don't Compute 'Til You See the Whites of Their Eyes," *Proc. Symposium on Analytical and Computational Methods for Shells* (A.K. Noor, et. al. eds) American Society of Mechanical Engineers, New York, 1989, pp. 91-107.
81. Duva, J. M., and Simmonds, J. G., "The Usefulness of Elementary Theory for the Linear Vibrations of a Layered, Orthotropic Elastic Beam and Corrections Due to Two-Dimensional End Effects," *Journal of Applied Mechanics*, Vol. 58 (March 1991), pp. 175-180.
82. Horgan, C. O. and Simmonds, J. G. "Asymptotic Analysis of an End-Loaded Transversely Isotropic Elastic, Semi-Infinite Strip Weak in Shear," *International Journal of Solids and Structures*, Vol. 27 (1991), pp. 1895-1914.
83. Duva, J. M., and Simmonds, J. G., "The Influence of Two-Dimensional End Effects on the Natural Frequencies of Cantilevered Beams Weak in Shear," *Journal of Applied Mechanics*, Vol. 59 (March 1992), pp. 230-232.
84. England, R., and Simmonds, J. G., "Simplifications under the Kirchhoff Hypothesis of Taber's Nonlinear Theory for the Axisymmetric Bending and Torsion of Elastic Shells of Revolution," *International Journal of Solids and Structures*, Vol. 28 (1991), pp. 507-515.
85. Simmonds, J. G., and Warne, P., "Azimuthal Shear of Compressible or Incompressible, Nonlinearly Elastic Polar-Orthotropic Tubes of Infinite Extent," *International Journal of Non Linear Mechanics*, Vol. 27 (1992), pp. 447-464.
86. Crafter, E. C., Heise, R. M., Horgan, C. O., and Simmonds, J. G., "The Eigenvalues for a Self-Equilibrating, Semi-Infinite, Elastically Anisotropic Strip," *Journal of Applied Mechanics*, Vol. 60 (June 1993), pp. 276-281.
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88. Simmonds, J. G., "Simplified Proofs of Three Theorems on the Kinematics of Axisymmetric Deformation of Shells of Revolution," *Quarterly of Applied Mathematics*, Vol. 52 (1994), pp. 283-287.
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95. Simmonds, "Analytic Functions, Ideal Fluid Flow, and Bernoulli's Equation." *SIAM Review*, Vol. 38 (1996), pp. 666-667.



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99. Ladevèze, P., and Simmonds, J. G., "New Concepts for Linear Beam Theory with Arbitrary Geometry and Loading," *European Journal of Mechanics, A/Solids* Vol. 17 (1998), pp. 377-402.
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