CHRISTOPHER H.M. JENKINS

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Montana State University (406) 994-2203
Bozeman, MT 59717

DEGREES

Ph.D. Mechanical Engineering, Oregon State University
M.S. Mechanical Engineering, Oregon State University
B.S. Physics, Florida Institute of Technology

FIELDS OF SPECIALIZATION

Analysis and Design of Compliant and Ultra-Lightweight Structures
Computational and Experimental Mechanics Bio-Inspired Engineering
Theoretical and Experimental Structural Dynamics Mechanical Design

ACADEMIC POSITIONS

Professor and Head, MSU, 2005-present
Founder, Ultra-Lightweight Technologies Laboratory, SDSM&T, 2004
Chair, Mechanical Engineering Dept., SDSM&T, 2003- 2004
Professor, SDSM&T, 1998-2005
Founder, Compliant Structures Laboratory, SDSM&T, 1994
Coordinator, Materials Engineering and Science Ph.D. Program, SDSM&T, 1997- 2000
Associate Professor, SDSM&T, 1992-1998
Visiting Assistant Professor, Oregon State University, 1991-1992
Graduate Research Assistant (ONR funded), Oregon State University, 1988-1991
Instructor (Mechanical Engineering), Oregon State University, 1987-1988
Graduate Research Assistant (LLNL funded), Oregon State University, 1986
Graduate Teaching Assistant (Mechanical Engineering), Oregon State University, 1985-1987
Instructor (Physics), Linn-Benton Community College, 1984-1987
Instructor (Engineering), Mendocino Community College, 1981-1984

INDUSTRIAL AND CONSULTANT POSITIONS (Sample only)

GAARD Automation
Oregon State Department of Justice
Retech Inc.
North Coast Opportunities
M. Johnson Law Offices
City of Rapid City
Brown, Feehan, and Cline, PC
SRS Technologies, Inc.
Princeton University
Bradley, Arant, Rose, & White
Bradsky, Bradsky, and Bradsky
May, Johnson, Doyle, & Becker, PC
City of Ukiah CA
GATR Technologies, Inc.
Dakota Claims Service
Hi-Tech Investments
Litchfield/Cedarhill
Triton Industries
Boeing Company
Speed Control, Inc.
Moore & Kandaras
Alameda Applied Sciences

PROFESSIONAL ACTIVITIES

Registration

Registered Professional Engineer, State of California, no. 22962
Registered Professional Engineer, State of Montana, no. 17691
Registered Professional Engineer, State of Oregon, no. 12658
Registered Professional Engineer, State of South Dakota no. 5331

Awards and Appointments

Member, Editorial Advisory Board, AIAA Progress in Aeronautics and Astronautics series
Best Paper Award, 7th Gossamer Spacecraft Forum, for: Banik, J, Lively, P., Taleghani, B, and Jenkins, C.H. (2006), "Solar Sail Topology Variations due to On-Orbit Thermal Effects"
Editorial Board, *Eco-Architecture*, 2006 - present
Editorial Board, *Design & Nature Journal*, 2004 - present
Associate Fellow, American Institute for Aeronautics and Astronautics, 2004
Fellow, Wessex Institute of Great Britain, 2004
Collaborator, Northcentral States Nanosystems Consortium, 2003 - 2005
NASA Certificate of Recognition and NASA Tech Brief Award (NTR 30587) for "Controlled Gossamer Structures Deployment and Stability using Electro-Rheological Fluids, 2003.
Editorial Board, *Journal of Science Education and Technology*, 2001 -- 2003
Guest Editor, *AIAA Journal of Spacecraft and Rockets*, 2001
South Dakota Regents Excellence in Research Award, 2000
Governor's Teaching with Technology Award, 1999
AFOSR Research Associate, Phillips Laboratory, Kirtland AFB, 1996, 1997, 1998, 1999
Bike/Walk/Run Meritorious Service Award, City of Rapid City, 1996
NASA Summer Faculty Fellow, Goddard Space Flight Center, 1994, 1995
State of South Dakota Faculty Development Award, 1994
Outstanding Faculty Member Award, Pi Tau Sigma, 1993 - 1994
California Community Colleges Teaching Certificate (Engineering)
Energy Conservation Award, U.S. Department of Energy
Public Service Award, County of Mendocino

Committees and Service

Member, Intl Advisory Board, 3rd Intl Conf on Smart Materials, Structures, and Systems, 2008
Member, NASA New Millennium Program ST9 Peer Review Panel, 2006
Member, NASA New Millennium Program Technology Review Board, 2005 - present
Member, International Scientific Advisory Committee, Design and Nature 2006 Conference
Lead Instructor, AIAA Short course "Gossamer Spacecraft: Analysis and Design," April 29-30, 2006, Newport, RI.
Member, NASA James Webb Space Telescope Review Panel, 2005
Co-Instructor, ASEE Short course "Integrating Mechanics and Materials in Structural Design," June 2005, Portland, OR.

Member, AIAA Gossamer Spacecraft Program Committee, 2005
Site Reviewer, NASA New Millennium Program Technology Maturity Assessment Team, Summer 2004
Lead Instructor, AIAA Short course "Gossamer Spacecraft: Analysis and Design," April 17-18, 2004, Palm Springs, CA.
Member, AIAA Gossamer Spacecraft Program Committee, 2004 - present
Member, SD NASA EPSCoR Steering Committee, 2004 - 2005
Member, Executive Board of the Society for Experimental Mechanics, 2002 -- 2004
Lead Instructor, AIAA Short course "Gossamer Spacecraft: Theory and Applications," April 5-6, 2003, Norfolk, VA.
Panelist, Gossamer Spacecraft Forum, 43rd AIAA Structures/Dynamics/Materials Conf., 2002.
Member, Rushmore Conference on Nano Science and Engineering Steering Committee, 2002
Panelist, NASA Ultra-Long Duration Balloon Technical Review, 2001
General Chair, Gossamer Spacecraft Forum, 42nd AIAA Structures/Dynamics/Matls Conf., 2001.
Panelist, NASA NGST Sunshield/ISS Flight Experiment Technical Review, 2000
Co-Chair, Symposium on Innovative Methods for Teaching Mechanics and Materials in Engineering Design Education, Mechanics and Materials in Design 2000 Conf.
Technical Chair, Space Inflatables Forum, 41st AIAA Structures/Dynamics/Materials Conf., 2000
Chair, Graduate Education and Research Council, SDSM&T, 2000
Panelist, NASA Cross-Enterprise Technical Program Review, Langley Research Center, 1999
Chair, AIAA Inflatable Structures Working Group, 1998 - 1999
Chair, Composites Technical Division, Society for Experimental Mechanics, 1996 - 1998
Co-Chair, 25th Midwestern Mechanics Conference, 9/21-9/24, 1997
Secretary, Composites Technical Division, Society for Experimental Mechanics, 1994 - 1996
Vice-Chair, Educational Committee, Society for Experimental Mechanics, 1992 - 1994
Member, Materials Engineering and Science Advisory Council, 1994 - 2003
Chair, Bike/Walk/Run Task Force, City of Rapid City, 1993 - 1996
Member, Elasticity Committee, ASME, 1992 - 2002
Reviewer for: *Experimental Mechanics, Int J Solids & Structures, J of Applied Mechanics, J Engineering Education, J. Spacecraft and Rockets, Shock and Vibration, J. Rheology, J. Vibration and Acoustics*, Elsevier, Houghton Mifflin, 1992 - present
Co-Chair, Technology and Society Committee, Oregon State University, 1991 - 1992
Member, Developmentally Appropriate Practices Committee, 509J School District, Corvallis, OR, 1989 - 1990
Member, Housing Task Force, Mendocino County, CA, 1983
Member, Energy Commission, City of Ukiah, CA, 1981

Presentations

1. Invited Presentation, "Adaptive Space Structures," *NGST-STRL Workshop*, September 2007
2. Invited Presentation, "Compliant Structures in Nature and Engineering," *Biologists around the Design Table Workshop*, May 2007.
3. Invited Guest, "Gossamer Spacecraft," *The Space Show*, December 2006.
4. Invited Presentation, "Linking Mechanics and Materials in Structural Design: A New Approach," *Int Mech Engr Conf Expo, ASME*, Chicago, IL, 2006 (w/ S. Khanna).

5. Invited Presentation, "Use of Virtual Labs in Teaching Mechanics of Materials," *Int Mech Engr Conf Expo, ASME*, Chicago, IL, 2006 (w/ S. Khanna).
6. Invited Presentation, *Montana Society of Engineers*, Bozeman, MT, 2006.
7. Invited Keynote Lecture, *IASS-ICAM 5th Int. Congress on Computational Shell and Spatial Structures*, Salzburg, Austria, 2005
8. Invited Plenary Lecture, *AIAA Structures, Dynamics, and Materials Conference*, Austin, TX, 2005.
9. Invited Panelist, *Montana Aerospace Development Summit*, Butte, MT, 2005
10. Invited Lecture, *AFRL/NASA Large Space Systems Workshop*, Santa Fe, NM, 2005
11. Invited Presentation, *Inland Northwest Space Alliance Space Policy Institute*, Big Sky, MT, 2005.
12. Invited Conference Paper, *Int. Conf. on Metallurgical Coatings and Thin Films*, San Diego, CA, 2004
13. Invited Lecture, *Dept. of Mechanical Engineering*, Oregon State University, 2004
14. Invited Lecture, *AFRL/NASA Large Space Systems Workshop*, Hampton, VA, 2004
15. Invited Lecture, *Space Vehicles Directorate*, AFRL, Kirtland AFB, NM, 2003
16. Invited Lecture, *Dept. of Aerospace and Mechanical Engineering*, U. Columbia-Missouri, 2003
17. Presentation, *Space Optics Manufacturing Tech Days*, U. Alabama – Huntsville, 2003
18. Invited Keynote Lecture, *European Space Agency Workshop on Inflatable Space Structures*, ESTEC, Noordwijk, the Netherlands, 2002.
19. Invited Panelist, Gossamer Spacecraft Forum, *AIAA SDM Conf.*, Denver, CO, 2002
20. Invited Presentation, *Dept. of Structural Engineering*, U. California San Diego, 2001
21. Invited Presentation, *AFOSR Polymer Matrix Composites Program Review*, Long Beach, CA 2001
22. Invited Presentation, *Dept. of Mechanical Engineering*, Univ. of Wyoming, 2000
23. Invited Conference Paper, *SPIE Opto-Southwest*, Albuquerque, NM, 2000.
24. Invited Conference Paper, *IEEE Aerospace Conference*, Big Sky, MT, 2000.
25. Invited Panelist, *NASA Workshop on Gossamer Structures*, Oxnard, CA, 1999.
26. Invited Presentation, *NASA Workshop on Gossamer Structures*, Oxnard, CA, 1999.
27. Invited Conference Paper, *Adaptive Structures and Material Systems Symposium, Int Mech Engr Conf Expo, ASME*, Nashville, TN, 1999.
28. Invited Journal Paper, *J. Spacecraft and Rockets*, 1999.
29. Invited Speaker, *Dept. of Mechanical Engineering Seminar, Oregon State Univ.*, 1999.
30. Invited Conference Papers, *AIAA Adaptive Structures Forum*, St. Louis, MO, 1999.
31. Invited Poster Session, *Optical Society of America Annual Meeting*, Baltimore, MD, 1998.
32. Invited Conference Paper, *Adaptive Structures and Material Systems Symposium, at the Int Mech Engr Conf Expo, ASME*, Anaheim, CA, 1998.
33. Invited Journal Paper, *Smart Materials and Structures*, 1998.
34. Invited Conference Paper, *Symposium on Deployable Structures*, Cambridge, U.K., 1998.
35. Invited Speaker, *Dept. of Mechanical Engineering, Montana State Univ.*, 1997.
36. Invited Speaker, *Center for Engineering Infrastructure and Science in Space, Colorado State Univ.*, 1996.
37. Invited Panelist, *NASA/AAS Workshop on Inflatable Structures*, Houston, TX 1996.

38. Invited Conference Paper, *Symposium on Advances in Mechanics of Elastic and Bioelastic Membranes at the Int Mech Engr Conf Expo, ASME*, San Francisco, CA, 1996.
39. Invited Speaker, *Dept. of Mechanical Engineering*, Univ. of Wyoming, 1996.
40. Invited Conference Paper, *1996 Spring Conference, Society for Experimental Mechanics*, Nashville, TN, 1996.
41. Invited Speaker, *Dept. of Mechanical Engineering Seminar, Oregon State Univ.*, 1995.
42. Invited Speaker, *Dept. of Civil Engineering Graduate Seminar, Virginia Polytechnic and State Univ.*, 1994.

Professional Organization Membership

American Institute of Aeronautics and Astronautics (AIAA)
American Society of Engineering Educators (ASEE)
American Society of Mechanical Engineers (ASME)
Society for Experimental Mechanics (SEM)

PUBLICATIONS

Books and Book Chapters

1. Jenkins, C.H. (to appear). *Bio-Inspired Engineering*, Momentum Press.
2. Jenkins, C.H. (Editor) (2006). *Recent Advances in Gossamer Spacecraft*, AIAA Progress in Astronautics and Aeronautics Series, vol. 212.
3. Jenkins, C.H., Hossain, A., Woo, K., Igawa, H., Wang, J., Sleight, D., and Tessler, A. (2006), "Membrane Wrinkling," Chapter 3 in *Recent Advances in Gossamer Spacecraft* (C.H. Jenkins, editor), AIAA Progress in Astronautics and Aeronautics Series, vol. 212.
4. Vinogradov, A., Jenkins, C.H., Pollard, E., Su, J., Bar-Cohen, Y., Cadogan, D., and Lin, J. (2006), "Smart Materials for Gossamer Structures," Chapter 4 in *Recent Advances in Gossamer Spacecraft* (C.H. Jenkins, editor), AIAA Progress in Astronautics and Aeronautics Series, vol 212.
5. Jenkins, C.H. and Khanna, S.K. (2005). *Mechanics of Materials: A Modern Integration of Mechanics and Materials in Structural Design*, Elsevier.
6. Jenkins, C.H. (Editor) (2005). *Compliant Structures in Nature and Engineering*, WIT Press.
7. Jenkins, C.H. (2005). "Design for Compliance," in *Compliant Structures in Nature and Engineering*, (C. H. Jenkins, editor), WIT Press.
8. Jenkins, C.H., Schur, W.W., and Greschik, G. (2005). "Mechanics of Compliant Structures," in *Compliant Structures in Nature and Engineering*, (C. H. Jenkins, editor), WIT Press.
9. Chmielewski, A.B. and Jenkins, C.H. (2005), "Gossamer Spacecraft," in *Compliant Structures in Nature and Engineering*, (C. H. Jenkins, editor), WIT Press.
10. Kimpian, J and Jenkins, C.H. (2005), "Compliant Habitats," *Compliant Structures in Nature and Engineering*, (C. H. Jenkins, editor), WIT Press.
11. Jenkins, C. H. (2004), "Shape Control of Precision Gossamer Apertures," in *Electroactive Polymer Actuators 2nd Ed.* (Y. Bar-Cohen, ed.), SPIE, Chapter 20.
12. Jenkins, C.H. (2001), editor *Gossamer Spacecraft: Membrane/Inflatable Structure Technology for Space Applications*, AIAA Progress in Astronautics and Aeronautics Series, vol. 191.

13. Jenkins, C.H., Schur, W.W., and Greschik, G. (2001). "Mechanics of Membrane Structures," in *Gossamer Spacecraft: Membrane/Inflatable Structure Technology for Space Applications,* AIAA Progress in Astronautics and Aeronautics Series (C.H. Jenkins, ed.), vol. 191, Chapter 3.
14. Marker, D.K., Wilkes, J.M, Carreras, R.A., Rotge, J.R., Jenkins, C.H., and Ash, J.T. (2001). "Fundamentals of Membrane Optics," in *Gossamer Spacecraft: Membrane/Inflatable Structure Technology for Space Applications,* AIAA Progress in Astronautics and Aeronautics Series (C.H. Jenkins, ed.), vol. 191, Chapter 4.
15. Jenkins, C. H. (2001), "Shape Control of Precision Gossamer Apertures," in *Electroactive Polymer Actuators* (Y. Bar-Cohen, ed.), SPIE, Chapter 20.
16. Vinogradov, A.M., Jenkins, C.H., and Winter, R.M. (2001), "Cyclic Loading Effects on Durability of Polymer Systems," in *Durability 2000: Long Term Durability of Structural Materials* (Monteiro, P.J.M, Chong, K.P., Larsen-Basse, J., and Komvopoulos, K., editors), Elsevier.
17. Chmielewski, A.B. and Jenkins, C.H. (2000), "Gossamer Structures: Space Membranes, Inflatables and Other Expandables", in *Structures Technology for Future Aerospace Systems*, AIAA Progress in Astronautics and Aeronautics Series (A.K. Noor, ed.), vol. 188, Chapter 5.

18. Jenkins, C.H. (Editor) (1998). *Manual on Experimental Methods for Mechanical Testing of Composites, 2ed*. Society for Experimental Mechanics, Bethel, Conn.
19. Jenkins, C.H. (1998). "Viscoelastic Response of Composites," in *Manual on Experimental Methods for Mechanical Testing of Composites, 2ed* (C. H. Jenkins, ed.). Society for Experimental Mechanics, Bethel, Conn.
20. Jenkins, C.H. (1998). "Damage Detection in Composites by Dynamic Response," in *Manual on Experimental Methods for Mechanical Testing of Composites, 2ed* (C. H. Jenkins, ed.). Society for Experimental Mechanics, Bethel, Conn.

Technical Journals

1. Woo, K. and Jenkins, C.H. (in review), "Analysis of Crease-Wrinkle Interaction for Thin Sheets," *J. Spacecraft and Rockets.*
2. Hossain, A., Woo, K, and Jenkins, C.H. (to appear), "Static and Dynamic Analysis of Systematically Creased Membranes," *J. Advanced Materials.*
3. Igawa, H., Jenkins, C.H., Woo, K., and Moore, J.D. (2008), "Prediction of Center of Pressure for Deformed Solar Sails," *J. Spacecraft and Rockets,* **45**(4), 850-853.
4. Woo, K., Nandurkar, K., and Jenkins, C.H. (2008), "Effective Modulus of Creased Thin Membranes," *J. Spacecraft and Rockets*.**45(**1), 19-26.
5. Banik, J, Lively, P., Taleghani, B, and Jenkins, C.H. (2007), "Solar Sail Topology Variations due to On-Orbit Thermal Effects," *J. Spacecraft and Rockets*, **44**(3), 558-570.
6. Pollard, E.L. and Jenkins, C.H. (2007), "Shape Memory Alloy Deployment of Membrane Mirrors for Spaceborne Telescopes," *J. Spacecraft and Rockets*, **44**(1), 109-120.
7. Woo, K. and Jenkins, C.H. (2006), "Global/Local Analysis Strategy for Partly Wrinkled Membranes," *J. Spacecraft and Rockets* **43**(5), 1101-1106.

8. Hossain, A., Jenkins, C.H., Woo, K. and Igawa, H (2006), "Transverse Vibration Analysis of Partly Wrinkled Membranes," *J. Spacecraft and Rockets*, **43**(3), 626-637.
9. Jenkins, C.H. and Korde, U.A. (2006). "Experimental Membrane Vibrations: A Review and New Results," *J. Sound Vibration* **295** (3-5), 602-613.
10. Hossain, N.M.A., Lu, M, and Jenkins, C.H. (2006), "Finite Element Analysis of Nonuniformities in Spin Casting of Polymer Films," *J. Advanced Materials* **38(**3), 37-45.
11. Alam, M.S. and Jenkins, C.H. (2005), "Damage Tolerance in Naturally Compliant Structures," *J. Damage Mechanics* **14**, 365-384.
12. Woo, K., Igawa, H., and Jenkins, C.H. (2004), "Analysis of Wrinkling Behavior of Anisotropic Membrane," *Computer Modeling in Engineering and Science* **6**(4), 397-408.
13. Liu, Z.Y., Beniwal, S., Jenkins, C.H., and Winter, R.M. (2004), "The Coupled Thermal and Mechanical Influence on a Glassy Thermoplastic Polyamide: Nylon 6,6 under Vibro-Creep," *Mechanics of Time-Dependent Materials* **8** (3), 235-253.
14. Ash, J.T., Jenkins, C.H., Marker, D.K., and Wilkes, J.M. (2004), "Shape Achievement of Optical Membrane Mirrors using Coating/Substrate Intrinsic Stresses," *AIAA J. Spacecraft and Rockets* **41(4)**, 551-557.
15. Jenkins, C.H. and Schur, W.W. (2002), "Gore/Seam Architectures for Gossamer Structures," *AIAA J. Spacecraft and Rockets* **39(5),** 669-673.
16. Khanna, S.K., Jenkins, C.H., and Roylance, D. (2002). "A New Approach to Teaching Mechanics and Materials Science," *J Materials: Design and Applications* **216(L)**, 49-53.
17. Jenkins, C.H., Khanna, S.K., and Roylance, D. (2001). "Linking Design with Structural Mechanics and Materials," *J Materials: Design and Applications* **215(L)**, 147-154.
18. Roylance, D., Cohen, K., Jenkins, C.H., and Khanna, S.K. (2001). "Mechanics of Materials: A Material Science Perspective," *J Materials: Design and Applications* **215(L)**, 141-145.
19. Jenkins, C.H. and Faisal, S.M. (2001), "Thermal Load Effects on Precision Membranes," *J. Spacecraft Rockets*, **38**(2), 207-211 (invited).
20. Liu, X., Jenkins, C.H., and Schur, W.W. (2001). "Large Deflection Analysis of Pneumatic Envelopes using a Penalty Parameter Modified Material Model," *Finite Elements in Analysis Design* **37**, 233-251.
21. Rolyance, D.K., Jenkins, C.H., and Khanna, S.K. (2001), "Web Modules Linking Mechanics and Materials Science," *J. Materials Education* **23**, 137-142.
22. Liu, X., Jenkins, C.H., and Schur, W.W. (2000). "Fine Scale Analysis of Wrinkled Membranes," *Int. J. Computational Engr. Sci.* **1**(2), 281-298.
23. Yan, L., Pendleton, R.L., and Jenkins, C.H. (2000). "Short Synthetic Fiber Reinforced Cementitious Composites: Damping and Frequency Characteristics," *Int. J. Cement Concrete Research* **30**, 391-401.
24. Yan, L., Jenkins, C.H., and Pendleton,R.L. (2000). "Short Synthetic Fiber Reinforced Cementitious Composites: Damping and Interface Debonding," *Int. J. Cement Concrete Research* **30**, 403-410.
25. Roylance, D.K., Jenkins, C.H., and Dieter, G.E. (1999), "The Materials-Mechanics Linkage in the Engineering Curriculum," *J. Materials Education* **21**, 145-148.

26. Kalanovic, V.D., Jenkins, C.H., and Haugen, F. (1999). "Fuzzy Control of Membrane Wrinkling," *Intell Automation Soft Comput*.**5**, 139-148.
27. Jenkins, C.H., Kalanovic, V.D., Padmanabhan, K., and Faisal, S.M. (1999). "Intelligent Shape Control for Precision Membrane Antennae and Reflectors in Space," *Smart Matls. Struct* **8**, 1-11.
28. Jenkins, C.H., Haugen, F., and Spicher, W.H. (1998). "Experimental Measurement of Wrinkling in Membranes Undergoing Planar Deformation," *Exp Mech* **38**, 147-152.
29. Yan, L., Pendleton, R.L. and Jenkins, C.H. (1998). "Interface Morphologies in Polyolefin Fiber Reinforced Concrete Composites", *Composites pt A: Appl. Sci* **29A**, 643-650.
30. Jenkins, C.H. and Marker, D.K. (1998), "Surface Precision of Inflatable Membrane Reflectors," *J Solar Energy Eng* **120** (4), 298-305.
31. Marker, D.K. and Jenkins, C.H. (1997). "Surface Precision of Optical Membranes with Curvature," *Optics Express* **1**, 324-331.
32. Jenkins, C.H. and Kjerengtroen, L. (1997). "On the Sensitivity of Parameter Changes in Structural Damage Detection," *Shock and Vibration* **4**(1), 27-37.
33. Jenkins, C.H. (1996). "Nonlinear Dynamic Response of Membranes: State of the Art -- Update," *Appl Mech Rev* **49** (10), S41-S48.
34. Jenkins, C.H., Leonard, J.W., Walton, J.S., and Carpenter, E.B. (1994). "Experimental Investigation of Moored Buoys Using Advanced Video Techniques," *Ocean Eng* **22**, 317-335.
35. Broderick, L. and Jenkins, C. H. (1993). "Experimental Investigation of a Fluid-Filled Membrane Breakwater," *J. Waterway, Port, Coastal, Ocean Eng* **119**, 639 - 656.
36. Jenkins, C.H. and Leonard, J.W. (1993). "Dynamic Wrinkling of Viscoelastic Membranes," *J Appl Mech* **60**, 575-582.
37. Bella, D.A. and Jenkins, C.H. (1993). "The Functionary, the Citizen, and the Engineer," *J Engr Education* **82**, 38-42.
38. Jenkins, C.H. and Leonard, J.W. (1991). "Nonlinear Transient Deformation of Viscoelastic Membrane Structures," *Struct Eng Rev* **3**, 197-204.
39. Jenkins, C.H. and Leonard, J.W. (1991). "Nonlinear Dynamic Response of Membranes: State of the Art," *Appl Mech Rev* **44**, 319-328.
40. Danh, K., Mai, L., Poland, J., and Jenkins, C.H. (1991). "Frictional Resistance in Bicycle Wheel Bearings," *Cycling Science* **3**, 28-32.
41. Jenkins, C.H. and Calder, C.A. (1990). "Transient Analysis of a Tennis Racket using PC-Based Finite Elements and Experimental Techniques," *Exp Mech* **30**, 130-134.
42. Calder, C.A. and Jenkins, C.H. (1988). "Stress Analysis of a Helical Coil Automobile Spring Using Rosettes," *Exp Tech* **12**, 17-20.

Conference Presentations

1. Woo, K. and Jenkins, C.H. (2010), "Analysis of Wrinkling in Thin Sheets with Damage," *11th Gossamer Spacecraft Forum, 51th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Orlando, FL (in review).
2. Hossain, N.M., Milliren, E.C., Woo, K., and Jenkins, C.H. (2010), "The Effect of Fiber Diameter on the Strength of Lightweight Composites," *11th Gossamer Spacecraft Forum,*

51th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Orlando, FL (in review).

3. Jenkins, C.H., Denowh, C.H., and Woo, K. (2010), "Membrane Reflector Shape Control using a Bio-Inspired MRF-Foam Actuator," *11th Gossamer Spacecraft Forum, 51th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Orlando, FL (in review).
4. Sarrazin, J.C., Tortop, R., Francischetti, S., Jenkins, C.H., Korde, U.A., and Rutherford, S.A. (2009), "Ultra-Sonic Self-Healing of Polymers," *2nd Int. Conf. Self-Healing Materials – ICSHM 2009*, Chicago, IL.
5. Kellogg, K.C., Korde, U.A., Jenkins, C.H., Barnes, K.A., and Winter, R.M. (2009), "On the Use of Acoustic Excitation to Accelerate Self-Healing in Polymers," *2nd Int. Conf. Self-Healing Materials – ICSHM 2009*, Chicago, IL.
6. Woo, K. and Jenkins, C.H. (2009), "Effect of Crease Orientation on Wrinkle-Crease Interaction in Thin Sheets," *10th Gossamer Spacecraft Forum, 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Palm Springs, CA.
7. Larsen, J.J., Jenkins, C.H., Banik, J.A., and Murphey, T.W. (2009), "Critical Design Requirement Tradeoffs for General 1-D Structural Architectures," *10th Gossamer Spacecraft Forum, 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Palm Springs, CA.
8. Fraser, J.A., Jenkins, C.H., Gierow, P., and Patrick, B (2009), "Design of a Membrane Optical Beam-Splitter," *10th Gossamer Spacecraft Forum, 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Palm Springs, CA.
9. Larsen, J.J., Jenkins, C.H., Denowh, C., and Woo, K. (2009), "A Bio-Inspired Lightweight MRF-Foam Actuator," *10th Gossamer Spacecraft Forum, 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Palm Springs, CA.
10. Jenkins, C.H. and Larsen, J.J. (2008), "Deployment Schemes for 2-D Space Apertures and Mapping for Bio-Inspired Design," *Proceedings of the 6th International Conference on Computation of Shell and Spatial Structures IASS-IACM 2008*, Ithaca, NY.
11. Woo, K. and Jenkins, C.H. (2008), "Thickness Effect on Wrinkle-Crease Interaction for Thin Membranes," *9th Gossamer Spacecraft Forum, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Chicago, IL.
12. Rassi, E. and Jenkins, C.H. (2008), "Closed Form Design Equations for CTE Distribution in Ultra-Lightweight Optics," *9th Gossamer Spacecraft Forum, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Chicago, IL.
13. Korde, U.A., Wickersham, M.A., Kjerengtroen, L., Jenkins, C.H. (2007), "On Semi-Active Enhancement of the Dissipation Provided by Piezoelectric Films," *SPIE Smart Structures and Materials Conference*, San Diego, CA (invited).
14. Larsen, J.J. and Jenkins, C.H. (2007), "A Linear Peristaltic MRF/Foam Actuator," *SPIE Smart Structures and Materials Conference*, San Diego, CA.
15. Korde, U.A., Wickersham, M.A., Kjerengtroen, L., Jenkins, C.H. (2007), "A Piezoelectric System for Semi-Active Damping on Light-Weight Space Structures," *8th Gossamer Spacecraft Forum, 48th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Honolulu, HI

16. Woo, K. and Jenkins, C.H. (2007), "Analysis of Wrinkling Behavior of Creased Thin Membranes", *8th Gossamer Spacecraft Forum, 48th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Honolulu, HI.
17. Hossain, A., Woo, K., and Jenkins, C.H. (2007), "Dynamic Response of Systematically Creased Membranes", *8th Gossamer Spacecraft Forum, 48th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Honolulu, HI.
18. Korde, U.A. and Jenkins, C.H. (2006), "Studies on Small Rectangular Membranes with Actuation along the Boundary," 7th *Gossamer Spacecraft Forum, 47th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference*, Newport, RI.
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