

Curriculum Vitae

Bo Song, Ph.D.

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Immigration Status

U.S. Permanent Resident (since April 2005)

Education

2000	Ph.D. , <i>Solid Mechanics</i> , University of Science and Technology of China
1995	B.S. , <i>Theoretical and Applied Mechanics</i> , University of Science and Technology of China

Professional Experience

04/2008 – present	Limited-Term Technical Staff , <i>Sandia National Laboratories</i> , Livermore, California, USA.
06/2006 – 04/2008	Senior Research Scientist , <i>School of Aeronautics and Astronautics & School of Materials Engineering, Purdue University</i> , West Lafayette, Indiana, USA.
06/2005 – 05/2006	Aeronautical and Astronautical Researcher , <i>School of Aeronautics and Astronautics, Purdue University</i> , West Lafayette, Indiana, USA.
08/2003 – 06/2005	Research Assistant Professor , <i>Department of Aerospace and Mechanical Engineering, The University of Arizona</i> , Tucson, Arizona, USA.
11/2000 – 07/2003	Postdoctoral Research Associate , <i>Department of Aerospace and Mechanical Engineering, The University of Arizona</i> , Tucson, Arizona, USA.

- 07/2000 – 10/2000 **Research Associate**, *Department of Mechanics and Mechanical Engineering, University of Science and Technology of China, Hefei, Anhui, China.*
- 03/1996 – 01/1998 **Graduate Teaching Assistant**, *Department of Mechanics and Mechanical Engineering, University of Science and Technology of China, Hefei, Anhui, China.*
- 09/1995 – 06/2000 **Graduate Research Assistant**, *Department of Mechanics and Mechanical Engineering, University of Science and Technology of China, Hefei, Anhui, China.*

Professional Affiliations

Sigma Xi – The Scientific Research Society, *Member*
American Society of Mechanical Engineers (ASME), *Member*
Society for Experimental Mechanics (SEM), *Member*

Professional Services

Secretary (since June 2008), Dynamic Behavior of Materials Technical Division, Society for Experimental Mechanics

Track/Session Organizer or Co-organizer at International Conference:

2009 SEM Annual Conference and Exposition on Experimental and Applied Mechanics, June 1-3, 2009, Albuquerque, New Mexico, USA.

2006 International Mechanical Engineering Congress and Exposition (IMECE), November 5-11, 2006, Chicago, Illinois, USA.

Session Chair or Co-chair at International Conferences:

SEM XI International Congress and Exposition on Experimental and Applied Mechanics, June 2-5, 2008, Orlando, Florida, USA.

2007 SEM Annual Conference and Exposition on Experimental and Applied Mechanics, June 3-6, 2007, Springfield, Massachusetts, USA.

2006 SEM Annual Conference and Exposition on Experimental and Applied Mechanics, June 4-7, 2006, Saint Louis, Missouri, USA.

2005 SEM Annual Conference and Exposition on Experimental and Applied Mechanics, June 7-9, 2005, Portland, Oregon, USA.

SEM X International Congress and Exposition on Experimental and Applied Mechanics, June 7-10, 2004, Costa Mesa, California, USA.

2003 SEM Annual Conference and Exposition on Experimental and Applied Mechanics, June 2-4, 2003, Charlotte, North Carolina, USA.

Journal Reviewer:

Experimental Techniques
Review of Scientific Instruments
International Journal of Impact Engineering
Journal of Biomechanics
Journal of the Mechanical Behavior of Biomedical Materials
Experimental Mechanics
Composites Science and Technology
Journal of Materials Science
Materials Letters
IMECE-ASME

Research Interests

Dynamic Behavior of Materials at High Strain Rates
Impact Biomechanics
Experimental Impact Mechanics
Wave Propagation in Solids and Structures

List of Publications

Book Proposal

1. Chen, W., and **Song, B.**, 2008, Kolsky Bar, World Scientific Publishers.

Book Chapters

2. Chen, W. W., and **Song, B.**, 2008, "Dynamic Characterization of Soft Materials," In: *Dynamic Failure of Materials and Structures*, Springer Publishers, (Invited, submitted).
3. **Song, B.**, 2008, "The Kolsky Bar Techniques for Dynamic Characterization of Materials at High Rates," In: *Studies on the Frontier of Modern Mechanics and Applications*, Press of University of Science and Technology of China, (invited, submitted).
4. **Song, B.**, and Chen, W., 2008, "Chapter 7: Mechanical Responses of Soft Materials to High-Rate Loading," In: *Soft Nanomaterials*, American Scientific Publishers, (invited, in press).
5. **Song, B.**, Jiang, X., and Chen, W., 2005, "Pulse Shaping Techniques in Split Hopkinson Pressure Bar (SHPB) Experiments," *Dynamic Responses of Materials and Structures* (Editor: Y. L. Bai), Press of University of Science and Technology of China, pp109-181 (invited, in Chinese).
6. Kriven, W. M., Rosczyk, B. R., Kremeyer, K., **Song, B.**, and Chen, W., 2003, "Transformation Toughening of a Calcium Zirconate Matrix by Dicalcium Silicate under Ballistic Impact," In: *27th International Cocoa Beach Conference on Advanced Ceramics and Composites: A* (Editors: W. M. Kriven, and H-T Lin), *Ceramic Engineering and Science Proceedings*, Vol. 24, No.3, pp383-388.
7. Chen, W., **Song, B.**, Frew, D. J., and Forrestal, M. J., 2002, "Recent Developments in Split Hopkinson Bar Technique," In: *Ceramic Armor Materials by Design* (Editors: J. W. McCauley, A. Crowson, W. A. Gooch, Jr., A. M. Rajendran, S. J. Bless, K. V. Logan, M. Normandia, and S. Wax), *Ceramic Transactions*, Vol. 134, pp217-224.

8. **Song, B.**, Chen, W., Weerasooriya, T., 2002, "Impact Response and Failure Behavior of A Glass/Epoxy Structural Composite Material," In: *Proceedings of the Second International Conference on Structural Stability and Dynamics* (Editors: C. M. Wang, G. R. Liu, and K. K. Ang), World Scientific Publishing Co. Pte. Ltd., Singapore, pp949-954.

Publications in International Peer-Reviewed Journals

9. **Song, B.**, Lu, W.-Y., and Chen, W., 2008, "Strain-rate – Temperature Superposition Behavior of Polymethylene Diisocyanate (PMDI) Based Rigid Polyurethane Foams with Different Densities," to be submitted.
10. **Song, B.**, Forrestal, M. J., Chen, W., and Montgomery, S. T., 2008, "Mechanical Properties of an Alumina-filled Epoxy I. Experiments," to be submitted to *Journal of Composite Materials*.
11. **Song, B.**, Antoun, B. R., Nie, X., and Chen, W., 2008, "High-rate Characterization of 304L Stainless Steel at Elevated Temperatures for Recrystallization Investigation," to be submitted to *Experimental Mechanics*.
12. Pilcher, A., Wang, X., Niebur, G., Mason, J., **Song, B.**, Cheng, M., and Chen, W., 2008, "High Strain Rate Testing of Bovine Cancellous Bone," *Transactions of the ASME, Journal of Biomechanical Engineering* (accepted).
13. **Song, B.**, Lu, W.-Y., Syn, C. J., and Chen, W., 2008, "Effects of Strain Rate, Density, and Temperature on Compressive Properties of Polymethylene Diisocyanate (PMDI) Based Rigid Polyurethane Foams," *Journal of Materials Science* (accepted).
14. **Song, B.**, Chen, W., and Luk, V., 2008, "Impact Compressive Response of Dry Sand," *Mechanics of Materials* (accepted).
15. Martin, B. E., Chen, W., **Song, B.**, and Akers, S., 2008, "Moisture Effects on the High-rate Behavior of Sand," *Mechanics of Materials* (accepted).
16. Nie, X., **Song, B.**, Ge, Y., Chen, W., and Weerasooriya, T., 2008, "A Split Hopkinson Tension Bar for Extra-Soft Specimens," *Experimental Mechanics* (in press).
17. **Song, B.**, Syn, C. J., Grupido, C. L., Chen, W., and Lu, W.-Y., 2008, "A Long Split Hopkinson Pressure Bar (LSHPB) for Intermediate-rate Characterization of Soft Materials," *Experimental Mechanics*, Vol. 48, No. 6, pp809-815.
18. **Song, B.**, Chen, W., and Lu, W.-Y., 2007, "Mechanical Characterization at Intermediate Strain Rates for Rate Effects on An Epoxy Syntactic Foam," *International Journal of Mechanical Sciences*, Vol. 49, No. 12, pp1336-1343.
19. **Song, B.**, Chen, W. W., Ge, Y., and Weerassoriya, T., 2007, "Radial Inertia Effects in Kolsky Bar Testing of Extra-Soft Materials," *Experimental Mechanics*, Vol. 47, No. 5, pp659-670.
20. **Song, B.**, Chen, W., Antoun, B. R., and Frew, D. J., 2007, "Flow Stress Obtained on Ductile Specimens Deforming at High Strain Rates," *Experimental Mechanics*, Vol. 47, No. 5, pp671-679.
21. **Song, B.**, Chen, W. W., Ge, Y., and Weerassoriya, T., 2007, "Dynamic and Quasi-static Compressive Response of Porcine Muscle," *Journal of Biomechanics*, Vol. 40, No. 13,

pp2999-3005.

22. **Song, B.**, Chen, W., and Lu, W-Y., 2007, "Compressive Mechanical Response of A Low-Density Epoxy Foam at Various Strain Rates," *Journal of Materials Science*, Vol. 42, No. 9, pp7502-7507.
23. Chen, W. W., Rajendran, A. M., **Song, B.**, and Nie, X., 2007, "Dynamic Fracture of Ceramics in Armor Applications," *Journal of the American Ceramic Society*, Vol. 90, No. 4, pp1005-1018 (invited feature article).
24. Chen, W. W., and **Song, B.**, 2006, "Temperature Dependence of a NiTi Shape Memory Alloy's Superelastic Behavior at a High Strain Rate," *Journal of Mechanics of Materials and Structures*, Vol. 1, No. 2, pp339-356.
25. **Song, B.**, and Chen, W., 2006, "Energy for Specimen Deformation in a Split Hopkinson Pressure Bar Experiment," *Experimental Mechanics*, Vol. 46, No.3, pp407-410.
26. **Song, B.**, Forrestal, M. J., and Chen, W., 2006, "Dynamic and Quasi-static Propagation of Compaction Waves in a Low Density Epoxy Foam," *Experimental Mechanics*, Vol. 46, No. 2, pp127-136.
27. **Song, B.**, Chen, W., Liu, Z., and Erhan, S., 2006, "Compressive Properties of Epoxidized Soybean Oil/Clay Nanocomposites," *International Journal of Plasticity*, Vol. 22, No. 8, pp1549-1568.
28. **Song, B.**, Chen, W., Liu, Z., Erhan, S. Z., 2006, "Compressive Mechanical Behavior of Soybean Oil-Based Polymers at Low and High Strain Rates," *Journal of Applied Polymer Science*, Vol. 99, No. 5, pp2759-2770.
29. Pan, Y., Chen, W., and **Song, B.**, 2005, "The Upper Limit of Constant Strain Rate in a Split Hopkinson Pressure Bar Experiment," *Experimental Mechanics*, Vol. 45, No. 5, pp440-446.
30. **Song, B.**, and Chen, W., 2005, "Split Hopkinson pressure bar techniques for characterizing soft materials," *Latin American Journal of Solids and Structures*, Vol. 2, No. 2, pp113-152 (Invited paper).
31. Chen, W., and **Song, B.**, 2005, "Dynamic Compression Testing on Polymeric Foams," In: "Experiments in Automotive Engineering – Optical Techniques", SAE Transactions, 2005 SAE World Congress, April 11-14, 2005, Detroit, MI, USA.
32. **Song, B.**, Chen, W., Yanagita, T., and Frew, D. J., 2005, "Temperature Effects on Dynamic Compressive Behavior of An Epoxy Syntactic Foam," *Composite Structures*, Vol. 67, No. 3, pp289-298.
33. **Song, B.**, Chen, W., Yanagita, T., and Frew, D. J., 2005, "Confinement Effects on the Dynamic Compressive Properties of An Epoxy Syntactic Foam," *Composite Structures*, Vol. 67, No. 3, pp 279-287.
34. **Song, B.**, Chen, W., and Jiang X., 2005, "Split Hopkinson Pressure Bar Experiments on Polymeric Foams," *International Journal of Vehicle Design*, Vol. 37, Nos. 2/3, pp185-198 (Invited Paper).
35. **Song, B.**, Chen, W., Dou, S., and Winfree, N. A., 2005, "Strain-rate Effects on Elastic and Early Cell-collapse Responses of a Polystyrene Foam," *International Journal of Impact Engineering*, Vol. 31, No. 5, pp509-521.

36. **Song, B.**, and Chen, W., 2004, "Loading and Unloading SHPB Pulse Shaping Techniques for Dynamic Hysteretic Loops," *Experimental Mechanics*, Vol. 44, No. 6, pp 622-627.
37. Cheng, M., Chen, W., and **Song, B.**, 2004, "Phenomenological Modeling of the Stress-Stretch Behavior of EPDM Rubber with Loading-Rate and Damage Effects," *International Journal of Damage Mechanics*, Vol. 13, No. 4, pp371-381.
38. **Song, B.**, and Chen, W., 2004, "Dynamic Stress Equilibrium on a Rubber Specimen during a Split Hopkinson Pressure Bar Experiment," *Experimental Mechanics*, Vol. 44, No. 3, pp300-312.
39. **Song, B.**, Chen, W., and Frew, D. J., 2004, "Quasi-static and Dynamic Compressive and Failure Behaviors of An Epoxy Syntactic Foam". *Journal of Composite Materials*, Vol. 38, No. 11, pp915-936.
40. **Song, B.**, and Chen, W., 2004, "Dynamic Compressive Behavior of EPDM Rubber under Nearly Uniaxial Strain Conditions," *Transactions of the ASME, Journal of Engineering Materials & Technology*, Vol. 126, No. 2, pp213-217.
41. **Song, B.**, Chen, W., and Cheng, M., 2004, "A Novel Model for Uniaxial Strain-Rate-Dependent Stress-Strain Behavior of EPDM Rubber in Compression or Tension," *Journal of Applied Polymer Science*, Vol. 92, No. 3, pp1553-1558.
42. **Song, B.**, Chen W., and Weerasooriya, T., 2003, "Quasi-static and Dynamic Compressive Behaviors of a S-2 Glass/SC15 Composite," *Journal of Composite Materials*, Vol. 37, No. 19, pp1723-1743.
43. **Song, B.**, and Chen, W., 2003, "Dynamic Compressive Constitutive Behavior of EPDM Rubber," *Transactions of the ASME, Journal of Engineering Materials & Technology*, Vol. 125, No. 3, pp294-301.
44. Chen, W., **Song, B.**, Frew, D. J., and Forrestal, M. J., 2003, "Dynamic Small Strain Measurements of Metal Specimen with a Split Hopkinson Bar," *Experimental Mechanics*, Vol. 43, No. 1, pp20-23.

Publications in International Conferences

45. Kuokkala, V-T., Kokkonen, J., **Song, B.**, Chen, W., Olejnik, L., and Rosochowski, A., "Dynamic Response of Severe Plastic Deformation Processed 1070 Aluminum at Various Temperatures," *Proceedings of the 18th Technical Meeting of DYMAT, The Behaviour of Bulk Nanomaterials and Metallic Glasses under Dynamic Loading*, Bourges, France, September 10-12, 2008.
46. Song, B., Lu, W.-Y., and Chen, W., "Effects of Temperature and Loading Rate on the Mechanical Properties of a Polymethylene Diisocyanate (PMDI) Foam," *Proceedings of the 236th ACS National Meeting & Exposition*, Philadelphia, Pennsylvania, August 17-21, 2008.
47. Nie, X., **Song, B.**, Ge, Y., Chen, W., and Weerasooriya, T., "Dynamic Tensile Testing of Soft Materials," *Proceedings of the XIth International Congress and Exposition on Experimental and Applied Mechanics*, Orlando, Florida, June 2-5, 2008.
48. **Song, B.**, Chen, W., and Forrestal, M. J., "Dynamic Compressive Properties of an

- Alumina-Filled Epoxy at Various Rates of Loading," *Proceedings of the XIth International Congress and Exposition on Experimental and Applied Mechanics*, Orlando, Florida, June 2-5, 2008.
49. Lu, W.-Y., Antoun, B., Brown, A., Chen, W., and **Song, B.**, "Interface Delamination Fracture Toughness Experiments at Various Loading Rates," *Proceedings of the XIth International Congress and Exposition on Experimental and Applied Mechanics*, Orlando, Florida, June 2-5, 2008.
 50. Zhang, J., **Song, B.**, Pintar, F. A., Yogannandan, N., Chen, W., and Gennarelli, T. A., "A Pilot Study on High Strain Rate Material Properties of Brain Simulant," *Proceedings of the 45th Rocky Mountain Bioengineering Symposium*, Copper Mountain, Colorado, April 4-6, 2008.
 51. Rhorer, R., Chin, J. W., Chen, W. W., **Song, B.**, and Nie, X., "Aging Effects on the Dynamic Tensile Response of Zylon Fibers," *Proceedings of the 2007 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Springfield, Massachusetts, June 3-6, 2007.
 52. Antoun, B. R., Korellis, J. K., and **Song, B.**, "Techniques for Testing 304L Stainless Steel over a Wide Range of Temperatures," *Proceedings of the 2007 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Springfield, Massachusetts, June 3-6, 2007.
 53. **Song, B.**, Chen, W., Ge, Y., and Weerasooriya, T., "Dynamic Compressive Behavior of Porcine Muscle at High Rates," *Proceedings of the 2007 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Springfield, Massachusetts, June 3-6, 2007.
 54. **Song, B.**, Chen, W., and Luk, V., "Strain Rate and Stress State Effects on the Dynamic Compressive Response of A Fine Sand," *Proceedings of the 2007 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Springfield, Massachusetts, June 3-6, 2007.
 55. **Song, B.**, Antoun, B. R., and Chen, W., "Dynamic High-temperature Compressive Response of A 304L Steel," *Proceedings of the 2007 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Springfield, Massachusetts, June 3-6, 2007.
 56. Chen, W., and **Song, B.**, "Dynamic Compressive Response of Polymeric Nanocomposites," *Proceedings of the 14th International Conference on Computational & Experimental Engineering and Sciences*, Miami, Florida, January 3-8, 2007.
 57. **Song, B.**, Chen, W., Antoun, B. R., and Frew, D. J., "Determination of Early Flow Stress in Ductile Specimens by Using SHPBs," *Proceedings of the 2006 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Saint Louis, Missouri, June 4-7, 2006.
 58. **Song, B.**, Chen, W., and Weerasooriya, T., "Radial Inertia Effects in Hopkinson Bar Experiments on Extra-soft Materials," *Proceedings of the 2006 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Saint Louis, Missouri, June 4-7, 2006.
 59. Lu, W.-Y., Jin, H., Korellis, J., Gwinn, K., Chen, W., and **Song, B.**, "Dynamic Loading of LIGA Structures," *Proceedings of the 2006 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, Saint Louis, Missouri, June 4-7, 2006.

60. **Song, B.**, Chen, W., and B.R. Antoun, "Examination of Dynamic Flow Stresses for Ductile Materials Obtained by a Split Hopkinson Pressure Bar," *Proceedings of the 2005 International Conference on Computational & Experimental Engineering and Sciences*, December 1-6, 2005, Chennai, India.
61. **Song, B.**, Forrestal, M. J., and Chen, W., "Propagation of Stress and Compaction Waves in A Polymeric Foam," *Proceedings of the 2005 SEM Annual Conference & Exposition on Experimental and Applied Mechanics*, June 7-9, 2005, Portland, Oregon, USA.
62. **Song, B.**, Chen, W., Liu, Z., and Erhan, S., "Compressive Properties of Epoxidized Soybean Oil/Clay Nanocomposites," *Proceedings of the Plasticity '05*, January 4-8, 2005, Kauai, Hawaii, USA.
63. **Song, B.**, and Chen, W., "A SHPB Pulse Shaping Technique for Dynamic Stress-Strain Loops," *Proceedings of the 2004 SEM X International Congress & Exposition on Experimental and Applied Mechanics*, June 7-10, 2004, Costa Mesa, California, USA.
64. Cheng, M., Chen, W., and **Song, B.**, "Phenomenological Modeling of the Stress-Stretch Behavior of EPDM Rubber with Loading-Rate and Damage Effects," *Proceedings of IMECE 2003: 2003 ASME International Mechanical Engineering Congress and RD&D Exposition*, November 16-21, 2003, Washington DC, (IMECE 2003-44278), USA.
65. **Song, B.**, Chen, W., and Weerasooriya, T., "Dynamic Compressive Response and Failure Behavior of a Glass/Epoxy Composite," *Proceedings of the 2003 SEM Annual Conference & Exposition on Experimental and Applied Mechanics*, June 2-4, 2003, Charlotte, North Carolina, USA.
66. Chen, W., **Song, B.**, and Cheng, M., "Dynamic Tests of Soft Materials with Hopkinson Bars," *Proceedings of the 9th International Conference on the Mechanical Behaviour of Materials*, May 25-29, 2003, Geneva, Switzerland.
67. **Song, B.**, Chen, W., and Frew, D. J., "Split Hopkinson Bar Testing of an Aluminum with Pulse Shaping," *Proceedings of the JSME/ASME International Conference on Materials and Processing*, October 15-18, 2002, Honolulu, Hawaii, USA.

Abstracts in International Conferences

68. **Song, B.**, Antoun, B. R., and Chen, W., "Recrystallization in a 304L Stainless Steel During Dynamic Deformation at High Temperatures," *Proceedings of 2008 SES meeting*, University of Illinois at Urbana-Champaign, Illinois, October 12-15, 2008.
69. Frew, D. J., **Song, B.**, Nie, X., and Chen, W. W., "Shock Response of Micromachined Accelerometers," *Proceedings of the XIth International Congress and Exposition on Experimental and Applied Mechanics*, Orlando, Florida, June 2-5, 2008.
70. Antoun, B. R., **Song, B.**, Chen, W. W., and Brown, A. A., "Static and Dynamic Recrystallization in 304L Stainless Steel," *Proceedings of the XIth International Congress and Exposition on Experimental and Applied Mechanics*, Orlando, Florida, June 2-5, 2008.
71. **Song, B.**, Chen, W., and Luk, V., "Strain Rate and Stress State Effects on the Dynamic Compressive Response of A Fine Sand," (IMECE2007-43271), *2007 International Mechanical Engineering Congress & Exposition (IMECE'07)*, Seattle, WA, November 11-15, 2007.

72. Chen, W., Lu, W-Y., Song, B., "Dynamic Loading of LIGA Structures: Experiments and Simulations," 9th U.S. National Congress on Computational Mechanics, San Francisco, CA, July 23-26, 2007.
73. **Song, B.**, Ge, Y., Chen, W., and Weerasooriya, T., "High Rate Behavior of Biological Tissues," ASME Applied Mechanics and Materials Conference (McMat 2007), Austin, TX, June 3-7, 2007.
74. Chen, W., Ge, Y., **Song, B.**, and Weerasooriya, T., "Characterization of Soft Biological Tissues under Dynamic Compression," (IMECE2006-13432), 2006 *International Mechanical Engineering Congress & Exposition (IMECE'06)*, Chicago, Illinois, November 5-10, 2006.
75. Lu, W-Y., Jin, H., Gwinn, K., **Song, B.**, and Chen, W., "Response of LIGA Structures to Impact Loading," (IMECE2006-13489), 2006 *International Mechanical Engineering Congress & Exposition (IMECE'06)*, Chicago, Illinois, November 5-10, 2006.
76. Chen, W., Frew, D. J., and **Song, B.**, "Shock Response of Micromachined Accelerometers," (IMECE2006-15089), 2006 *International Mechanical Engineering Congress & Exposition (IMECE'06)*, Chicago, Illinois, November 5-10, 2006.
77. **Song, B.**, Chen, W., Liu, Z., Erhan, S. Z., "Dynamic Compressive Behavior of Epoxidized Soybean Oil/Clay Nanocomposites," 15th U.S. National Congress on Theoretical and Applied Mechanics, June 25-30, 2006, University of Colorado at Boulder.
78. **Song, B.**, Chen, W., and Lu, W., "Compressive Response of Polymeric Foams at Low, Intermediate, and High Strain Rates," 2005 *International Mechanical Engineering Congress and Exposition (IMECE'05)*, November 5-11, 2005, Orlando, Florida.
79. **Song, B.**, Forrestal, M. J., and Chen, W., "Quasi-Static Propagation of Compaction Waves in a Low Density Epoxy Foam," 2004 *International Mechanical Engineering Congress and Exposition (IMECE'04)*, November 14-19, 2004, Anaheim, California.
80. Yanagita, T., **Song, B.**, and Chen, W., "Quasi-Static to Dynamic Compressive Response of A Low-Density Rigid Polyurethane Foam," 2004 *International Mechanical Engineering Congress and Exposition (IMECE'04)*, November 14-19, 2004, Anaheim, California.
81. Pilcher, A., Wang, X., Niebur, G., Mason, J., **Song, B.**, Cheng, M., and Chen, W., "High Strain Rate Behavior of Cancellous Bone," *SEM X International Congress and Exposition on Experimental and Applied Mechanics*, June 7-10, 2004, Costa Mesa, California.
82. **Song, B.**, Chen, W., Liu, Z., and Erhan, S. Z., "Dynamic Compressive Properties of Epoxidized Soybean Oil/Clay Nanocomposites," 2003 *ASME International Mechanical Engineering Congress and RD&D Exposition*, November 16-21, 2003, Washington, D.C., USA.
83. **Song, B.**, Chen, W., Yanagita, T., "Temperature and Confinement Effects on Dynamic Compressive and Failure Behaviors of An Epoxy Syntactic Foam," 2003 *ASME International Mechanical Engineering Congress and RD&D Exposition*, November 16-21, 2003, Washington, D.C., USA.
84. **Song, B.**, Chen, W., and Frew, D., J., "Dynamic Compressive Response and Failure Behavior of an Epoxy Syntactic Foam Under Uniaxial Stress Loading," 2003 *ASME International Mechanical Engineering Congress and RD&D Exposition*, November 16-21, 2003, Washington, D.C., USA.

85. **Song, B.**, Chen, W., Kang, J., and Winfree, N., "High Strain-rate Compressive Elastic Behavior of a Polymeric Foam," *Proceedings of the 2003 SEM Annual Conference & Exposition on Experimental and Applied Mechanics*, June 2-4, 2003, Charlotte, North Carolina, USA.
86. **Song, B.**, and Chen, W., "Dynamic Compressive Stress-Strain Behavior of a Soft Rubber," In: *Contemporary Research in Theoretical and Applied Mechanics* (Editors: R. C. Batra, and E. G. Henneke), *Proceedings of the 14th U.S. National Congress of Theoretical and Applied Mechanics*, June 23-28, 2002, Blacksburg, Virginia, p. 247.

Publications in Chinese Peer-Reviewed Journals (with English Abstracts)

87. **Song Bo**, Hu Shisheng, Zhang Hanhong, Pan Yi, Jin Ziming, Shen Feng, and Zhong Weihua, 2001, "Experimental Research of Overpressure of Shock Wave Transmitted into Airtight Container," *Journal of Ballistics*, Vol.13, No.3, pp. 68-72.
88. Hu Shisheng, Song Li, and **Song Bo**, 2000, "The Analysis and Calculation on the Impact Penetration of FRALL," *Chinese ACTA Armamentarii*, Vol.21, No.2, pp.190-192.
89. **Song Bo**, Hu Shisheng, and Wang Lili, 2000, "Influence On the Transmitted Intensity of Shock Wave Through Different Tactic Orders of Layered Materials," *Chinese ACTA Armamentarii*, Vol.21, No.3, pp.272-274.
90. **Song Bo**, Hu Shisheng, and Liu Jianfei, 1999, "Shock Wave in Foam Plastic". *Journal of Experimental Mechanics*, Vol.14, No.3, pp273-278.
91. **Song Bo**, Hu Shisheng, and Liu Jianfei, 1999, "Application of RPUF's Constitutive Equation in Packaging Design," *Packaging Engineering*, Vol.20, No.4, pp20-23.
92. **Song Bo**, Hu Shisheng, and Liu Xiaomin, 1999, "Molecular Motive Mechanism of Polymer's Thermo-elastic-inversion Phenomenon," *Polymer Materials Science and Engineering*, Vol.15, No.4, pp1-3.
93. Hu Shisheng, Liu Jianfei, Wang Zhengdao, and **Song Bo**, 1999, "Cushioning and Damping of Vibration of Low Density Porous Material," *Journal of Vibration and Shock*, Vol.18, No.2, pp39-42.
94. Song Li, Hu Shisheng, and **Song Bo**, 1999, "Displacement Measurement of A Projectile During the Penetration Process," *Journal of Ballistics*, Vol.11, No.1, pp20-23.
95. **Song Bo**, Song Li, and Hu Shisheng, 1998, "Coupling Solved Method of SHPB Experimental Data Processing," *Explosion and Shock Waves*, Vol.18, No.2, pp167-171.
96. Hu Shisheng, **Song Bo**, Liu Xiaomin, and Feng Jianping, 1997, "Experimental Research of PMMA Loss Modulus Temperature Spectrum Under Constant Strain Rate," *Explosion and Shock Waves*, Vol.17, No.1, pp63-67.

Technical Reports

97. Lu, W.-Y., Foulk, J. W. III., Huestis, E. M., Connelly, K., **Song, B.**, and Yang, N., "Size Effects in Continuum Modeling," Sandia Report, SAND2008-6024, September, 2008.

Lectures and Seminars

1. **“Recent Advances in Split Hopkinson Pressure Bar (SHPB) Technique”**. *The 7th National Symposium on Impact Dynamics*, Kunming, China, September 17-24, 2005.
2. **“Dynamic Characterization of Engineering Materials with Split Hopkinson Pressure Bars”**. *The University of Science and Technology of China*, Hefei, China; and *Beijing Jiaotong University*, Beijing, China, September, 2005.
3. **“Characterization of Extra-Soft Biological Tissues under Dynamic Loading”**. *Department of Biomedical Engineering, Wayne State University*, Detroit, MI, January, 2006.
4. **“Validity Check in Dynamic Characterization of A 4340 Steel Using A Split Hopkinson Pressure Bar (SHPB)”**. *Sandia National Laboratories*, Livermore, CA, August, 2007.
5. **“Dynamic High-temperature Compressive Response of 304L Stainless Steel”**. *University of Science and Technology of China*, Hefei, China, November, 2007.
6. **“The SHPB Techniques for Characterizing Mechanical Properties of Materials at High Rates”**. *Ningbo University*, Ningbo, China, November, 2007.
7. **“High-rate Characterization of Alumina-filled Epoxy with Split Hopkinson Pressure Bar (SHPB)”**. *Physical & Engineering Sciences Center, Sandia National Laboratories*, Livermore, CA, October 2008.