

Sridhar Krishnaswamy's COMPLETE PUBLICATIONS LIST

(as of October 2006)

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Chapters in Books

[B6] Sridhar Krishnaswamy, "Photoacoustic Methods of Materials Characterization," *SEM Handbook on Experimental Mechanics*, revised ed. W. Sharpe, Springer (in preparation) {¶ invited}

[B5] Sridhar Krishnaswamy, "Theory and Applications of Laser Ultrasonic Techniques," in *Ultrasonic Nondestructive Evaluation: Engineering and Biological Material Characterization*, ed T. Kundu, CRC Press. {¶ invited}

[B4] Sridhar Krishnaswamy, "Optical Methods of Inspecting Composites", in *Comprehensive Composite Materials*, vol. 5, NDE, Smart Structures and Testing, ed. R.L. Crane, pp 447-468, Elsevier, (2000). {¶ invited}

[B3] Sridhar Krishnaswamy, "Techniques for Non-Birefringent Objects: Coherent Shearing Interferometry and Caustics", in *Photomechanics*, ed. P.Rastogi, Topics in Applied Physics, vol. 77, Springer, (1999). {¶ invited}

[B2] Sridhar Krishnaswamy, (1998) "Fiber-Optic Sensors for Process Monitoring and Quality Control " in *Sensing for Materials Characterization, Processing and Manufacturing*, Vol. 1, ed G.A. Birnbaum and B. A. Auld, ASNT publications. {¶ invited}

[B1] Sridhar Krishnaswamy, (1997) "Optical Caustics" in "Optical Measurement Techniques and Applications", edited by P.K. Rastogi, Artech House. {¶ invited}

Refereed Journal Publications

2006

[57] Gabriela Petculescu, Jan Achenbach, and Sridhar Krishnaswamy. "Evaluation of delaminations and impact damage in composites using the A_0 Lamb mode" *Smart Structures and Materials*

[56] Li Sun, Salil Kulkarni, Jan Achenbach, and Sridhar Krishnaswamy (Sep 2005) *Couplant-effect independent technique for acoustic nonlinearity measurements*, to appear in *Journal of the Acoustical Society of America*

[55] Feifei Zhang, Carmen Lilley, and Sridhar Krishnaswamy, (July 2005), “Bulk-wave and Guided-wave Photoacoustic Evaluation of the Mechanical Properties of Aluminum / Silicon Nitride Double-layer Thin Films,” *Ultrasonics*, (to appear)

[54] Yi Qiao, Yi Zhou, and Sridhar Krishnaswamy, (July 2006), “Adaptive two-wave mixing wavelength demodulation of Fiber Bragg Grating dynamic strain sensors”, *Applied Optics*, vol. 45, No. 21, pp 5132-5142.

[54] Feifei Zhang, Sridhar Krishnaswamy, Dong Fei, Douglas A. Rebinsky, Bao Feng, (2006)“Ultrasonic Characterization of Mechanical Properties of Diamond-Like Carbon Hard Coatings” *Thin Solid Films*, vol. 503, pp250-258.

[53] S. Kulkarni , L. Sun, B. Moran, Sridhar Krishnaswamy, and J.D. Achenbach, (2006), “A Probabilistic Method to Predict Fatigue Crack Initiation”, *International Journal of Fracture*, vol. 137, pp9-17

[52] Younghoon Sohn and Sridhar Krishnaswamy, (2006), “A near-field scanning laser source technique and a microcantilever ultrasound receiver for detection of surface-breaking defects,” in *Measurement Science and Technology*, vol. 17, pp809-818.

2004

[51] S.W. Choi, J.H. Lee, A.J. Nam, and Sridhar Krishnaswamy, “Application of Scanning Laser Source Technique for Nondestructive Flaw Detection,” *Key Engineering Materials*, vol. 270, p787-792, 2004

[50] P. Fomitchov, A.K. Kromine, Sridhar Krishnaswamy, and J.D. Achenbach, “Imaging of Damage in Sandwich Composite Structures Using a Scanning Laser Source Technique,”*Composites B*, vol 35, Issues 6-8, p557-562, 2004.

[49] Younghoon Sohn and Sridhar Krishnaswamy, “Interaction of a Scanning Laser-generated Ultrasonic Line Source with a Surface-breaking Flaw,” *J. Acoust. Soc. Am.* vol.115, No.1, 2004

2003

[48] P. Fomitchov and Sridhar Krishnaswamy, “Response of a Fiber Bragg-Grating Ultrasound Sensor,” *Optical Engineering*, vol 42, No 4, pp956-963 (April 2003).

2002

[47] Zhou Yi, Todd W. Murray and Sridhar Krishnaswamy, “Photoacoustic imaging of surface wave slowness using multiplexed two-wave mixing interferometry,” *IEEE UFFC*, vol. 49, No. 8, p1118-1123, (August 2002)

[46] P. Fomitchov, A. Kromine, and Sridhar Krishnaswamy, "Photoacoustic probes for nondestructive testing and biomedical applications," Applied Optics, vol 41, No. 22, (August 2002).

[45] Y.Sohn and Sridhar Krishnaswamy, "Mass-spring lattice model of the scanning laser source technique," Ultrasonics, vol. 39, p543-551, (2002).

[44] P. F. Fomitchov, Y. Kim, A.Kromine, and Sridhar Krishnaswamy, " Laser Ultrasonic Array for Cure Monitoring of Polymer-matrix Composites," the Journal of Composite Materials , vol. 36, No.15, p1889-1901, (2002)

[43] P. F. Fomitchov, T.W. Murray and Sridhar Krishnaswamy, " Intrinsic Fiber Optic Sensor Array using Multiplexed Two-wave Mixing Interferometry," Applied Optics , vol 41, No.7, (March 2002).

[42] C.M. Hernandez, T.W. Murray, and Sridhar Krishnaswamy, "Photoacoustic Characterization of the Mechanical Properties of Thin Films," Applied Physics Letters , vol. 80, No. 4, 2002.

2001

[41] Todd W. Murray and Sridhar Krishnaswamy, (2001), "Multiplexed Interferometer for Ultrasonic Imaging Applications," Optical Engineering, vol. 40, No. 7, pp1321-1328.

[40] Joon-soo Bae and Sridhar Krishnaswamy, (2001), "Subinterfacial Cracks in Bimaterial Systems Subjected to Mechanical and Thermal Loading," Engineering Fracture Mechanics, vol. 68, pp1081-1094.

2000

[39] Todd W. Murray, Hemmo Tuovinen, and Sridhar Krishnaswamy, (2000), "Adaptive Optical Array Receivers for Detection of Surface Acoustic Waves," Applied Optics, vol. 39, No. 19, pp 3276-3284.

[38] P. Fomitchov, Alex Kromine, Sridhar Krishnaswamy, J.D. Achenbach, (May 2000), "Sagnac-Type Fiber-Optic Array Sensor for Detection of Bulk Ultrasonic Waves," IEEE UFFC Transactions. Vol. 47, No.3, pp584-590.

[37] A. Kromine, P. Fomitchov, Sridhar Krishnaswamy, J.D. Achenbach, (Feb 2000), "A Scanning Laser Source Technique for Detecting Surface-Breaking Cracks," in Materials Evaluation, vol.58, No.2, pp.173-177.

[36] P. Fomitchov, Sridhar Krishnaswamy, J.D. Achenbach, (July 2000), "Extrinsic and Intrinsic Fiber-Optic Sagnac Ultrasound Sensor," Optical Engineering, vol 39, No. 7, pp 1972-1984.

[35] Hansuk Lee and Sridhar Krishnaswamy, (Sep 2000), "Quasistatic Propagation of Subinterfacial Cracks in a Three-Point Bend Bimaterial Geometry," Journal of Applied Mechanics, Sep 2000, vol. 67 pp. 444-452.

[34] M. Ghandehari, Sridhar Krishnaswamy, and S. Shah, (Sep 2000), "Dimensional Factors in Bond Failure of Reinforced Concrete," Journal of Applied Mechanics, vol 67, NO. 4, pp740-748, Dec 2000.

1999

[33] T.W. Murray, Sridhar Krishnaswamy, J.D. Achenbach, (1999), "Laser generation of ultrasound in films and coatings," Applied Physics Letters, vol.74, No.23, pp3561-3563.

[32] M. Ghandehari, Sridhar Krishnaswamy, S. Shah, (1999), " Technique for Evaluating the Kinematics between Rebar and Concrete," J. Engineering Mechanics, vol. 125, No. 2.

1998

[31] Hemmo Tuovinen and Sridhar Krishnaswamy, (1998), "Directionally-Sensitive Adaptive Heterodyne Line Receiver for Ultrasound Detection on Rough Surfaces," Applied Physics Letters, vol. 73, No. 16, pp2236-2238.

1997

[30] P. Fomitchov, Liusheng Wang and Sridhar Krishnaswamy, (1997), "Advanced Image Processing Techniques for Automatic Nondestructive Evaluation of Adhesively-Bonded Structures Using Speckle Interferometry," in J. Nondestructive Evaluation, vol. 16, No. 4, 1997

[29] P. Fomitchov and Sridhar Krishnaswamy, (1997), " A compact dual purpose camera for shearography and electronic speckle pattern interferometry," in Measurement Science and Technology, vol. 8, pp 581-583.

[28] Sridhar Krishnaswamy, B.F. Pouet and T.C. Chatters, (1997), "Additive-Subtractive Phase-Modulated Electronic Speckle Interferometry: Fringe Visibility Under Partial Decorrelation," Optics and Lasers in Engineering, vol. 26, p 179-197. (¶ Invited paper)

[27] Z. Guo, J.D. Achenbach, and Sridhar Krishnaswamy, (1997), "EMAT Generation and Laser Detection of Single Lamb Wave Modes," Ultrasonics, vol. 35, pp 423-429.

[26] P. Fomitchov, Sridhar Krishnaswamy and J. D. Achenbach, (1997), "Compact phase-shifted Sagnac Interferometer for Ultrasound Detection," in Optics and Laser Technology, vol. 29, No. 6, pp.333-338, 1997 .

[25] T. Belytschko, A. Bayliss, C. Brinson, S. Carr, W. Kath, S. Krishnaswamy, B. Moran, J. Nocedal and M. Peshkin, (1997), "Mechanics in the Engineering First Curriculum at Northwestern University," Int. J. Engineering Education, vol. 13, No.6.

[24] J.F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1997), "Response of an Embedded Fiber-Optic Ultrasound Sensor," Journal of the Acoustical Society of America, vol. 101, No. 1, pp. 257-263.

[23] J.F. Dorigi, Sridhar Krishnaswamy, and J.D. Achenbach, (1997), "A fiber optic ultrasonic system to monitor the cure of epoxy," in ASNT's Research in Nondestructive Evaluation, vol. 9, pp13-24.

1996

[22] L.S. Wang and Sridhar Krishnaswamy, (1996), "Shape Measurement Using Additive-Subtractive Speckle Interferometry," Measurement Science and Technology, vol. 7, pp. 1748-1754.

[21] B.F. Pouet and Sridhar Krishnaswamy, (1996), "Dynamic Holographic Interferometry by Photorefractive Crystals for Quantitative Deformation Measurements," Applied Optics, vol. 35, No. 5, pp. 787-794.
(¶ selected for SPIE's Milestone series on Holographic Interferometry)

[20] Liusheng Wang and Sridhar Krishnaswamy, (1996), "Additive-Subtractive Speckle Interferometry: Extraction of Phase Data in Noisy Environments," Optical Engineering, vol.35, No. 3, pp. 794-801.

[19] B.F. Pouet, R.K. Ing, Sridhar Krishnaswamy, and D. Royer, (1996) "Heterodyne interferometer using two wave mixing in photorefractive crystals for ultrasound detection on rough surfaces," Applied Physics Letters, vol. 69, No. 25.

[18] H. Lee and Sridhar Krishnaswamy, (1996), "A Compact Polariscope and Shearing Interferometer for Mapping Stress Fields in Bimaterial Systems," Experimental Mechanics, vol. 36, No. 4, pp.404-411.

1995

[17] J. F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1995), "Stabilization of an Embedded Fiber-Optic Fabry-Perot Sensor for Ultrasound Detection," IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control, vol. 42, No. 5, pp. 820-824.

[16] T.C. Chatters, B. F. Pouet and Sridhar Krishnaswamy, (1995), "Additive-Subtractive Phase-Modulated Shearography with Synchronized Acoustic Stressing," Experimental Mechanics, vol. 35, No. 2, pp. 159-165.

[15] B.F. Pouet and Sridhar Krishnaswamy, (1995) "A Technique for the Removal of Speckle Phase in Electronic Speckle Interferometry," Optics Letters, vol. 20, No.3, pp. 318-320.

1994

[14] B. F. Pouet and Sridhar Krishnaswamy, (1994), "Additive-Subtractive Phase-Modulated Electronic Speckle Interferometry: Analysis of Fringe Visibility," Applied Optics, vol. 33, No. 28, pp. 6609-6616.

[13] X. Deng, A.J. Rosakis and Sridhar Krishnaswamy, (1994), "Dynamic Crack Propagation in Elastic Plastic Solids Under Non-K-Dominance Conditions," European Journal of Mechanics, A/Solids, vol. 13, No. 3, pp. 327-350.

1993

[12] B.F. Pouet and Sridhar Krishnaswamy, (1993), "Additive-Subtractive Decorrelated ESPI Technique," Optical Engineering, vol. 32, No. 6, pp. 1360-1369. (*selected for SPIE's Milestone series on Speckle Interferometry*)

[11] B.F. Pouet, Tom Chatters, and Sridhar Krishnaswamy, (1993), "Synchronized Reference-Updating Technique for Electronic Speckle Interferometry," Journal of Nondestructive Evaluation, vol. 12, No. 2, pp. 133-138.

[10] M.A. Ahmadshahi, Sridhar Krishnaswamy, S. Nemat-Nasser, (1993), "Dynamic Holographic-Electronic Speckle Pattern Interferometry," Journal of Applied Mechanics, vol. 60, No. 4, pp. 866-874.

1992

[9] J. Huang, Sridhar Krishnaswamy and J.D. Achenbach, (1992), "Laser-Generation of Narrow-Band Surface Waves," Journal of the Acoustical Society of America, vol. 92, No. 5, pp. 2527-2531.

[8] Sridhar Krishnaswamy, H.V. Tippur and A.J. Rosakis, (1992), "Measurement of Transient Crack Tip Deformation Fields Using the Method of Coherent Gradient Sensing," Journal of Mechanics and Physics of Solids, vol. 40, No. 2, pp. 339-372.

1991

[7] Sridhar Krishnaswamy, (1991), "An Algorithm for Computer Tracing of Interference Fringes," Applied Optics, vol. 30, No. 13, pp. 1624-1628.

[6] Sridhar Krishnaswamy and A.J. Rosakis, (1991), "On the Extent of Dominance of Asymptotic Elastodynamic Crack-Tip Fields; Part I: An Experimental Study Using Bifocal Caustics," Journal of Applied Mechanics, vol. 58, pp. 87-94.

[5] Sridhar Krishnaswamy, A.J. Rosakis and G. Ravichandran, (1991), "On the Extent of Dominance of Asymptotic Elastodynamic Crack-Tip Fields; Part II: A Numerical Investigation of Three-Dimensional and Transient Effects," Journal of Applied Mechanics, vol. 58, pp. 95-103.

[4] H.V. Tippur, Sridhar Krishnaswamy and A.J. Rosakis, (1991), "A Coherent Gradient Sensor for Crack Tip Deformation Measurements: Analysis and Experimental Results," International Journal of Fracture, vol. 48, pp. 193-204.

[3] H.V. Tippur, Sridhar Krishnaswamy and A.J. Rosakis, (1991), "Optical Mapping of Crack Tip Deformation Using the Methods of Transmission and Reflection Coherent Gradient Sensing: A Study of Crack Tip K-dominance," International Journal of Fracture, vol. 52, pp. 91-117.

1990

[2] A.J. Rosakis, Sridhar Krishnaswamy and H.V. Tippur, (1990), "On the Application of the Optical Method of Caustics to the Investigation of Transient Elastodynamic Crack Problems: Limitations of the Classical Interpretation," Optics and Lasers in Engineering, vol. 13.

[1] A.T. Zehnder, A.J. Rosakis and Sridhar Krishnaswamy, (1990), "Dynamic Measurement of the J-Integral in Ductile Metals: Comparison of Experimental and Numerical Techniques," International Journal of Fracture, vol. 42, No. 3, pp. 209-230.

Patents/Inventions

US Patent No: 5,481,356: "Apparatus and Method for Nondestructive Testing Using Additive-Subtractive Phase-Modulated Interferometry," B.F. Pouet, T.C. Chatters, and Sridhar Krishnaswamy (1996). Technology licensed to Laser Technology Inc, PA.

Technical Interviews

E-interview with SK published in SPIE's OPTICAL TESTING DIGEST 1 October 1996 Volume 1: Issue 4 which can be found online at:
http://www.spie.org/otd/OTD_Oct96.html

Work Cited in Popular Press / Professional Press

[2] "Adaptive Optical Interferometers Speed Inspection"
SENSOR TECHNOLOGY ALERT, July 21, 2000, John Wiley & Sons, Inc., New York, NY 10158

[1] "Robust Optical Interferometry Tool for Disbond Detection"
NASA Tech Briefs, vol. 18, No. 11, (Nov. 1994)

List of Conference Publications

Fully refereed conference publications are so indicated (ASME, ICF proceedings). SPIE, IEEE-UFFC, IUTAM and Rev. Prog. QNDE papers are only partially reviewed.

2006

[89] Yi Qiao and Sridhar Krishnaswamy, "Structural Health Monitoring System for Detecting Impact Events and Acoustic Emissions," Proceedings of the Third European Workshop on Structural Health Monitoring, 2006, Ed. A. Guemes, DEStech Publications Inc.

[88] Yi Qiao and Sridhar Krishnaswamy, Multiplexed adaptive two-wave mixing wavelength demodulation of fiber Bragg grating sensor for monitoring both dynamic strains and quasi-static drifts," SPIE vol. 6167, Smart Structures and Materials 2006: Smart Sensor Technology and Measurement Systems; Daniele Inaudi et al; Eds., March 2006

[87] Y. Zhou, G. Petculescu. I.M. Komsky, and Sridhar Krishnaswamy, (March 2006), "High resolution ultrasonic imaging system with laser-based generation:, SPIE vol 6177, Health Monitoring and Smart Nondestructive Evaluation of Structural and Biological Systems IV; Tribikram Kundu; Ed.

2005

[86] Feifei Zhang, Sridhar Krishnaswamy, Carmen M. Lilley, (Dec 2005), "Bulk-wave and Guided-wave Photoacoustic Evaluation of the Mechanical Properties of Al / Si₃N₄ Double-layer Thin Films," ICCES 2005 Proceedings {held in Chennai, India, Dec 2005).

[85] Yi Qiao, Yi Zhou, and Sridhar Krishnaswamy, Oct 2005, "Adaptive two-wave mixing wavelength demodulation of fiber Bragg grating sensor," SAMPE Proceedings

[84] Yi Qiao, Yi Zhou and Sridhar Krishnaswamy, "Novel wavelength demodulation scheme for fiber Bragg grating sensors based on adaptive two-wave mixing interferometry" American Institute of Physics, vol. 24, ed. D.O. Thompson and D.E. Chimenti, 2005

[83] L. Sun, S. S. Kulkarni, B. Moran, S. Krishnaswamy and J. D. Achenbach, "A method to eliminate couplant-dependent variability in acoustic nonlinearity measurements in fatigued components," American Institute of Physics, vol. 24, ed. D.O. Thompson and D.E. Chimenti, 2005

[82] Feifei Zhang, Sridhar Krishnaswamy, Carmen Lilley, "Photoacoustic Evaluation of the Mechanical Properties of Aluminum/Silicon Nitride Thin Films" American Institute of Physics, vol. 24, ed. D.O. Thompson and D.E. Chimenti, 2005

[81] G. Petculescu, S. Krishnaswamy, and J. D. Achenbach, "Selective Excitation Of Lamb-Waves For Damage Detection In Composites," American Institute of Physics, vol. 24, ed. D.O. Thompson and D.E. Chimenti, 2005

[80] G. Petculescu, Y. Zhou, I. Komsky, and S. Krishnaswamy, "Laser-Generated Ultrasonic Source For A Real-Time Dry-Contact Imaging System," American Institute of Physics, vol. 24, ed. D.O. Thompson and D.E. Chimenti, 2005

[79] Yi Qiao, Yi Zhou, Sridhar Krishnaswamy, "Adaptive two-wave mixing wavelength demodulation of fiber Bragg grating sensor for monitoring dynamic strains", Proc. SPIE Vol. 5758, p. 20-27, Smart Structures and Materials 2005: Smart Sensor Technology and Measurement Systems; Eric Udd, Daniele Inaudi; Eds., May 2005

[78] L. Sun, S. S. Kulkarni, B. Moran, S. Krishnaswamy, J. D. Achenbach, "An acoustic nonlinearity measurement technique with built-in couplant effect elimination", Proc. SPIE Vol. 5768, p. 363-368, Health Monitoring and Smart Nondestructive Evaluation of Structural and Biological Systems IV; Tribikram Kundu; Ed. , May 2005

[77] Younghoon Sohn, Sridhar Krishnaswamy, " A scanning laser source and a microcantilever ultrasound receiver for detection of surface flaws in microdevices ," Proc. SPIE Vol. 5768, p. 185-195, Health Monitoring and Smart Nondestructive Evaluation of Structural and Biological Systems IV; Tribikram Kundu; Ed.

[76] Feifei Zhang, Sridhar Krishnaswamy, Dong Fei, Douglas A. Rebinsky, Photoacoustic characterization of the mechanical properties of thin film materials," Proc. SPIE Vol. 5766, p. 89-98, Testing, Reliability, and Application of Micro- and Nano-Material Systems III; Robert E. Geer, Norbert Meyendorf, George Y. Baaklini, Bernd Michel; Eds., May 2005

2004

[75] Y. Sohn and Sridhar Krishnaswamy, "*Scanning Laser Source Using Monopolar Rayleigh Waves,*" American Institute of Physics, CP700, vol. 23, ed. D.O. Thompson and D.E. Chimenti, p278-285., 2004

[74] Yi Zhou and Sridhar Krishnaswamy, "*Large Array Laser Ultrasonic Detector Based on Multiplexed Two Wave Mixing Using Infrared Long Pulse Laser Source,*" American Institute of Physics, CP700, vol. 23, ed. D.O. Thompson and D.E. Chimenti, p310-317., 2003

[73] Feifei Zhang and Sridhar Krishnaswamy, "Ultrasonic Characterization of the Mechanical Properties of Micro- and Nano-structured Thin Films," ICCES 2004 Proceedings {held in Madeira, Portugal, July 2004)

[72] S. Kulkarni, L. Sun, B. Moran, Sridhar Krishnaswamy, J.D. Achenbach, and D. Le, "A Conceptual HUMS of Fatigue Damage in Rotorcraft Components," in Proceedings of the Second European Workshop on Structural Health Monitoring 2004, (held in Munich July 7-9, 2004). p348-355.

2003

[71] Zhou Yi, F. Zhang and Sridhar Krishnaswamy, "*Laser ultrasonic applications of multiplexed two-wave mixing interferometry*," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 22, AIP 657, 2003.

[70] C. Hernandez and Sridhar Krishnaswamy, "*Laser ultrasonic characterization of residual stresses in thin films*," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 22, AIP 657., 2003

2002

[69] Zhou Yi, F. Zhang and Sridhar Krishnaswamy, "Laser ultrasonic applications of multiplexed two-wave mixing interferometry," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 22, AIP Conf. Proc..{Bellingham WA, July 14-19, 2002}.

2001

[68] P.F. Fomitchov, T. W. Murray and Sridhar Krishnaswamy, "Intrinsic Fiber-Optic Ultrasonic Sensor Array Using Multiplexed Two-Wave Mixing Interferometry," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 21, AIP Conf. Proc..{Brunswick ME, July 29-Aug 3, 2001}.

[67] Carmen M. Hernandez, Todd W. Murray, and Sridhar Krishnaswamy, "Laser Ultrasonic Measurement of Mechanical Properties of Nanometer-Sized Thin Film MEMS Structures," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 21, AIP Conf. Proc..{Brunswick ME, July 29-Aug 3, 2001}.

[66] P. A. Fomitchov, Y. Sohn, A.K. Kromine, J.D. Achenbach, and Sridhar Krishnaswamy, "Scanning Laser Source Technique for Ultrasonic Imaging of Surface-Breaking Defects: Experiments and Modeling," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 21, AIP Conf. Proc..{Brunswick ME, July 29-Aug 3, 2001}.

[65] P.F. Fomitchov, and Sridhar Krishnaswamy, "Fiber Bragg-Grating Ultrasound Sensor for Process Monitoring and NDE Applications," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 21, AIP Conf. Proc..{Brunswick ME, July 29-Aug 3, 2001}.

[64] Y. Zhou, T. W. Murray, and Sridhar Krishnaswamy, "A Multiplexed Two-Wave Mixing Interferometer for Laser Ultrasonic Measurements of Material Anisotropy,"

in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 21, AIP Conf. Proc..
{Brunswick ME, July 29-Aug 3, 2001}.

[63] C.M. Hernandez, T.W. Murray, and S.Krishnaswamy, “Characterization of Thin Film MEMS Using Photoacoustic Microscopy,” SPIE Proceedings vol. 4400.
{Munich, Germany, June 18-21, 2001}

[62] P.A. Fomitchov, Y.K. Kim, A.K. Kromine, S.Krishnaswamy, J.D. Achenbach, and I.M.Daniel, (2001), “Distributed Photoacoustic System for Cure Monitoring of Composites,” SPIE Proceedings vol. 4335, pp323-329.
{Newport Beach, CA, March 6-8, 2001}

2000

[61] A. Kromine, P. Fomitchov, S. Krishnaswamy and J.D. Achenbach, (2000), “Detection of Sub-surface defects using a Laser Based Technique,” in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 20, AIP Conf. Proc., {Ames, July 16-21, 2000}.

[60] P. Fomitchov, A. Kromine, S. Krishnaswamy, J.D. Achenbach, U.K. Kim, and I.M. Daniel, (2000), “Laser Ultrasonic Enabled “Smart” Mold for Composite Parts Manufacturing,” in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 20, AIP Conf. Proc., {Ames, July 16-21, 2000}.

[59] T.W. Murray, Z. Yi, and S. Krishnaswamy (2000), “Adaptive Optical Phased Array Interferometer for Acoustic Wave Detection,” in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 20, AIP Conf. Proc., {Ames, July 16-21, 2000}.

[58] P. Fomitchov, A. Kromine, S. Krishnaswamy and J.D. Achenbach, (2000), “Laser Ultrasonic Catheter for Small-Pipe Inspection and Bio-medical applications,” in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 20, AIP Conf. Proc., {Ames, July 16-21, 2000}.

[57] P. Fomitchov, A. Kromine, S. Krishnaswamy and J.D. Achenbach, (2000), “Fiberized laser ultrasonic source for process monitoring and bio-medical applications, SPIE Proc. Vol. 4074, EOS/SPIE Symposium on Applied Photonics, May 22-24, 2000, Glasgow, Scotland.

[56] A. Kromine, P. Fomitchov, S. Krishnaswamy and J.D. Achenbach, (2000), “Applications of Scanning Laser Source Technique for Detection of Surface-Breaking Defects”, SPIE Proc. Vol. 4076, EOS/SPIE Symposium on Applied Photonics, May 22-24, 2000, Glasgow, Scotland.

[55] Ghandehari, M., Krishnaswamy, S., and Shah, S., "Influence of Cross Section Size and Geometry on Bond Splitting of Concrete", Structures Congress 2000 Proceedings, May 8-10, 2000, Philadelphia, PA.

[54] Ghandehari, M., Krishnaswamy, S., and Shah, S., "Dimensional Factors in Bond Failure of Reinforced Concrete", ACI 2000 Spring Convention Proceedings, San Diego, CA, March 2000.

1999

[53] T.W. Murray, Z. Guo, Sridhar Krishnaswamy, and J.D. Achenbach, (1999), "Ultrasonic Signals Generated by a Laser Source in Film/Substrate Systems," in AMD-vol.234, ed. T. Kundu and V.K. Kinra, 1999 ASME IMECE, {Nashville, Tennessee, Nov 14-19, 1999}. (*fully refereed*)

[52] Hemmo Tuovinen, T.W. Murray, and Sridhar Krishnaswamy, (1999), "Adaptive Array Receivers for Surface Acoustic Wave Detection," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 19, AIP Conf. Proc.5098 ; {Montreal, July 26-30, 1999}.

[51] T.W. Murray, Z. Guo, Sridhar Krishnaswamy, and J.D. Achenbach, (1999), "Laser Generation of Ultrasound in Films and Coatings," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 19, AIP Conf. Proc.5098; {Montreal, July 26-30, 1999}.

[50] A. Kromine, P. Fomitchov, Sridhar Krishnaswamy, and J.D. Achenbach, (1999), "Scanning Laser Source Technique for Detection of Surface Breaking and Sub-Surface Cracks," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 19, AIP Conf. Proc.5098; {Montreal, July 26-30, 1999}.

[49] Hemmo Tuovinen, T.W. Murray, and Sridhar Krishnaswamy, (1999), "An Adaptive Laser-Array Receiver for Surface Ultrasonic Waves," in AIP Conf. Proc. 497, Ninth International Symposium on Nondestructive Characterization of Materials, ed. Green{Sydney, June 28-July 2, 1999}.

[48] P.A. Fomitchov, Sridhar Krishnaswamy, and J.D. Achenbach, (1999), "Intrinsic Fiber-Optic Sagnac Ultrasound Sensor for Process Monitoring in Composite Structures," SPIE Proc. vol. 3589, pp 156-159.

1998

[47] B.F. Pouet, Hemmo Tuovinen and Sridhar Krishnaswamy, (1998) "Adaptive Holographic Interferometry Using Photorefractive Recording Media for Full-Field Optical Mapping of Stress and Deformation Fields," Proceedings of the IUTAM Symposium on Advanced Optical Methods and Applications in Solid Mechanics, Poitiers, France, Aug-Sep 1998.

[46] H. Lee and Sridhar Krishnaswamy, (1998), "Study of Sub-Interfacial Quasistatic Crack Propagation Using Shearing Interferometry," Proceedings of the IUTAM Symposium on Advanced Optical Methods and Applications in Solid Mechanics, Poitiers, France, Aug-Sep 1998.

[45] Ghandehari, M., Krishnaswamy, S., and Shah, S., "Non-Destructive Evaluation of the Interface in Reinforced Concrete Using Phase Measurement Interferometry", in Nondestructive Characterization of Materials in Aging Systems, Materials Research Society, Vol. 503, Boston, MA, 1997. ISBN:1-55899-408-4.

[44] A. Kromine, P. Fomitchov, Sridhar Krishnaswamy, and J.D. Achenbach, (1998), "Scanning Laser Source Technique and its Applications to Turbine Disk Inspection," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 18A, pp381-386, Plenum Press, New York; {Snowbird, Utah, July 20 - 24, 1998}.

[43] H. Tuovinen and Sridhar Krishnaswamy, (1998), "Adaptive Heterodyne Line-Probe Interferometer for Enhanced Directionally-Sensitive Detection of Ultrasound," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, to appear in vol. 18B, pp1971-1978, Plenum Press, New York; {Snowbird, Utah, July 20 - 24, 1998}.

1997

[42] I. Ros, B.F. Pouet, Sridhar Krishnaswamy and D. Royer, (1997), "Adaptive Heterodyne Photorefractive Interferometer for Ultrasound Detection: Optimization and Applications," Proceedings of the IEEE UFFC 1997 Symposium, Toronto, Oct. 5-8 1997.

[41] P. Fomitchov, Sridhar Krishnaswamy, and J.D. Achenbach, (1997), "Application of Sagnac Interferometer for Characterization of Scattered Ultrasonic Fields," Proceedings of the IEEE UFFC 1997 Symposium, Toronto, Oct. 5-8 1997.

[40] B.F. Pouet, I. Ros, Sridhar Krishnaswamy and D. Royer, (1997), "Adaptive Heterodyne Interferometer for Laser Ultrasonics," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, to appear in vol. 17, Plenum Press, New York; {San Diego, July 28 - Aug 2, 1997}.

[39] P. Fomitchov, A. Kromine, Sridhar Krishnaswamy and J.D. Achenbach, (1997), "Characterization of Laser Ultrasonic Sources using a Sagnac Interferometer," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 17, Plenum Press, New York; {San Diego, July 28 - Aug 2, 1997}.

[38] Z. Guo, J.D. Achenbach, and Sridhar Krishnaswamy, (1997), "EMAT Generation and Laser Detection of Single Lamb Wave Modes," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 17, Plenum Press, New York; {San Diego, July 28 - Aug 2, 1997}.

[37] P. Fomitchov, A. Kromine, Sridhar Krishnaswamy and J.D. Achenbach, (1997), Proceedings of the Eighth International Symposium on Nondestructive Characterization of Materials, Boulder, Colorado, June 15-20, 1997.

1996

[36] H. Lee, L.S. Wang and Sridhar Krishnaswamy, (1996), "Fourier Processing of Shearing Interferometric Fringe Patterns, " in SPIE vol. 2921, Proceedings of the First International Conference on Experimental Mechanics, Singapore, 1996.

[35] P. Fomitchov, L.S. Wang, J.S. Steckenrider, Sridhar Krishnaswamy and J.D. Achenbach, (1996), "Laser-based Ultrasonics for QNDE Applications," in SPIE vol. 2921, Proceedings of the First International Conference on Experimental Mechanics, Singapore, 1996.

[34] B.F. Pouet and Sridhar Krishnaswamy, (1996), "Phase Shifting Dynamic Holographic Interferometry using BSO Photorefractive Crystals," in SPIE vol. 2921, Proceedings of the First International Conference on Experimental Mechanics, Singapore, 1996.

[33] R.K. Ing, D. Royer, B.F. Pouet and S. Krishnaswamy, "Ultrasound detection on rough surfaces using heterodyne photorefractive interferometer: Applications to NDE," in the Proceedings of the IEEE 1996 Ultrasonics Symposium, ; {San Antonio, November 1996}.

[32] B.F. Pouet and Sridhar Krishnaswamy, (1996), "Real-time visualization of dynamic holographic interferometric images using photorefractive crystals," in SPIE vol. 2860, {Denver, Sep 1996}.

[31] L.S. Wang and Sridhar Krishnaswamy, (1996), "Surface Profile Determination Using Additive-Subtractive Phase Modulated ESPI with Fourier Analysis," in SPIE Proceedings vol. 2860, {Denver, August, 1996}.

[30] P. Fomitchov, J.S. Steckenrider, Sridhar Krishnaswamy and J.D. Achenbach, (1996), "Frequency Shifted Low-Noise Sagnac Sensor for Ultrasonic Measurements," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 16, Plenum Press, New York; {Seattle, Aug 1 -6, 1996}.

[29] J.F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1996), "Sensitivity of an Embedded Fiber-Optic Ultrasonic Sensor," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 16, Plenum Press, New York; {Seattle, Aug 1 -6, 1996}.

1995

[28] J.F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1995), "Frequency Response of Fiber Optic Ultrasound Sensors," in the Proceedings of the IEEE 1995 Ultrasonics Symposium;{Seattle, November 1995}.

[27] L. S. Wang, P. Fomitchov and Sridhar Krishnaswamy, (1995), "Vibration Measurement Using Additive Speckle Interferometry," Proceedings of the ASME Symposium on Optical Methods in Vibration and Noise; {Boston, Sept. 1995}. (*fully refereed*)

[26] J.F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1995), "A Fiber-Optic Ultrasound Sensor for Monitoring the Cure of Epoxy," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 15, Plenum Press, New York; {Seattle, Jul 31-Aug 4, 1995}.

[25] P. Fomitchov, Sridhar Krishnaswamy and J.D. Achenbach, (1995), "Fiberized Sagnac Interferometer for Ultrasound Measurement," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, to appear in vol. 15, Plenum Press, New York; {Seattle, Jul 31-Aug 4, 1995}.

[24] Y. Nagata, J. Huang, J.D. Achenbach and Sridhar Krishnaswamy, (1995), "Computed Tomography Using Laser-Based Ultrasonics," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 15, Plenum Press, New York; {Seattle, Jul 31-Aug 4, 1995}.

[23] L. Wang and Sridhar Krishnaswamy, (1995), "Additive-Subtractive Speckle Interferometry: Phase Measurements in Noisy Conditions," Interferometry VII: Applications, SPIE vol. 2545; {San Diego, July 1995}.

[22] H. Lee and Sridhar Krishnaswamy, (1995), "A Compact Photoelasticity cum Shearing Interferometer," Proceedings of SEM95; {Grand Rapids, Michigan, June 1995}.

[21] B.F. Pouet and Sridhar Krishnaswamy, (1995), "Application of Photorefractive Crystals for Holographic Interferometry of Vibrating Diffuse Specimens," Optical Engineering Midwest, SPIE vol. 2622; {Chicago, May 1995}.

[20] J. F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1995), "Embedded Fiber-Optic Ultrasonic Sensors and Generators", Proc. SPIE vol. 2574; Pacific Northwest Fiber Sensor Workshop; {Portland, Oregon, May 1995.}

[19] J.F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1995), "Laser Ultrasound System with Embedded Fiber-Optic Interferometric Sensor", Optical Engineering Midwest, SPIE vol. 2622; {Chicago, May 1995}.

1994

[18] Y. Nagata, J. Huang, Sridhar Krishnaswamy and J.D. Achenbach, (1994), "Laser-Based Ultrasonics for Flaw Detection," in the Proceedings of the IEEE 1994 Ultrasonics Symposium, p.1205-1209; {Cannes, France, November 1994}.

[17] T.C. Chatters, B.F. Pouet and Sridhar Krishnaswamy, (1994), "A Comparative Study of Speckle Interferometric Techniques," in Review of Progress in Quantitative

Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 14, Plenum Press, New York; {Snowmass, Colorado, Aug. 1994}.

[16] J. F. Dorigi, Sridhar Krishnaswamy and J.D. Achenbach, (1994), "Stabilized Fiber-Optic Sensor for Ultrasound Detection," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 14, Plenum Press, New York; {Snowmass, Colorado, Aug 1994.}

[15] Y. Nagata, J. Huang, J.D. Achenbach and Sridhar Krishnaswamy, (1994), "Lamb Wave Tomography Using Laser-Based Ultrasonics," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 14, Plenum Press, New York; {Snowmass, Colorado, Aug 1994}.

1993

[14] T. Chatters, B. Pouet and Sridhar Krishnaswamy, (1993), "Additive-Subtractive Phase-Modulated Shearography with Synchronized Pressure Stressing," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 13A, Plenum Press, New York; {Brunswick, Maine, Aug. 1993}.

[13] J. Huang, Sridhar Krishnaswamy and J.D. Achenbach, (1993), "A Fiber-Optic Heterodyne Dual-Probe Interferometer for Laser Ultrasonic Crack Detection," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 13A, Plenum Press, New York; {Brunswick, Aug 1993}.

[12] T.C. Chatters, B.F. Pouet and Sridhar Krishnaswamy, "Nondestructive Testing of Adhesively-Bonded Structures Using Synchronized Pressure Stressing," SPIE vol. 2001, Nondestructive Inspection of Aging Aircraft; {San Diego, June 1993}.

[11] B.F. Pouet and Sridhar Krishnaswamy, "Electronic Speckle Techniques in Noisy Environments," Interferometry VI: Techniques and Analysis, SPIE vol. 2003; {San Diego, June 1993}.

1992

[10] T.C. Chatters, B. Pouet and Sridhar Krishnaswamy, (1992), " ESPI with Synchronized Pressure Stressing," 'Industrial Applications of Optical Inspection and Metrology', SPIE vol. 1821; {Boston, November 1992}.

[9] T.C. Chatters, B.F. Pouet and Sridhar Krishnaswamy, (1992), " Shearography with Synchronized Pressure Stressing," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 12A, Plenum Press, New York; {La Jolla, July 1992}.

[8] B.F. Pouet and Sridhar Krishnaswamy, (1992), " Noise Reduction Techniques for Electronic Speckle Interferometry," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 12A, p435-442, Plenum Press, New York; {La Jolla, California, July 1992}.

[7] T.C. Chatters and Sridhar Krishnaswamy, (1992), "Nondestructive Evaluation Using Shearing Interferometry," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 11A, Plenum Press, New York; {Brunswick, Maine, July 28-Aug. 2, 1991}.

[6] J. Huang, Sridhar Krishnaswamy and J.D. Achenbach, (1992), "Crack Detection in Fuselage Panels by a Narrow-Band Laser-Based Ultrasonic System," in Review of Progress in Quantitative Nondestructive Evaluation, ed. D.O. Thompson and D.E. Chimenti, vol. 12A, Plenum Press, New York; {La Jolla, California, July 1992}.

1991

[5] J. Huang, Sridhar Krishnaswamy and J.D. Achenbach, (1991), "Laser Generation of Narrow Band Surface Waves," in the Proceedings of the IEEE 1991 Ultrasonics Symposium; {Orlando, December 1991}

[4] H.V. Tippur, Sridhar Krishnaswamy and A.J. Rosakis, (1991), "Crack Tip Deformation Field Measurements Using Coherent Gradient Sensing," in Speckle Techniques, Birefringence Methods, and Applications to Solid Mechanics, ed. F.P. Chiang, SPIE vol. 1554A; {San Diego, July 1991}.

[3] M.A. Ahmadshahi, Sridhar Krishnaswamy and S. Nemat-Nasser, (1991), "Dynamic Two-Beam Speckle Interferometry," in Speckle Techniques, Birefringence Methods, and Applications to Solid Mechanics, ed. F.P. Chiang, SPIE vol. 1554A; {San Diego, July 1991}.

1989

[2] Sridhar Krishnaswamy, A.J. Rosakis and G. Ravichandran, (1989), "A Bifocal Arrangement for Reflected Caustics for the Investigation of the Domain of Dominance of Asymptotic Elastic Fields in Dynamic Fracture," in the Proceedings of the Seventh International Congress on Fracture, edited by K. Salama et al, Pergamon Press; {ICF7, Houston, March 1989}.
(fully refereed)

[1] A.J. Rosakis, Sridhar Krishnaswamy, and G. Ravichandran, (1989), "On the Reliability of Experimental Measurements in Dynamic Fracture," in the Inst. Phys. Conf. Ser. No 102: Session 1, IOP Publishing Ltd., London; {the International Conference on Mechanical Properties of Materials at High Rates of Strain, Oxford, England, 1989}.