

PUBLICATIONS:

Journal Publications (Submitted and Accepted)

- O. Balogun**, G.D. Cole, R. Huber, D. Chinn, T.W. Murray, and J.B. Spicer “High Spatial Resolution Sub-Surface Acoustic Microscopy at Mesoscopic Length Scales Using a Laser Based Ultrasonic Technique”, (Accepted and awaiting production in the *IEEE Transactions on UFFC*, 2010)
- O. Balogun**, B. Regez, H.F. Zhang, and S. Krishnaswamy, “Real-time full-field photoacoustic imaging using an ultrasonic camera“, *Journal of Biomedical Optics*, 15(2), pp. 021318-1 – 021318-5, (2010)
- J. H. Kim, **O. Balogun**, and S.P. Shah, “Atomic force acoustic microscopy to measure nano-mechanical properties of cement pastes”, *Transportation Research Record, Journal of The transportation research board*, 2141, pp. 102 -108, (2010)
- G.R. Kirikera, **O. Balogun**, and S. Krishnaswamy, “adaptive Fiber Bragg Grating Sensor Network for Structural Health Monitoring: Applications to Impact Monitoring”, *Structural Health Monitoring*, Vol. 0(0), pp. 1-12, (2010)
- J.D. Achenbach and **O. Balogun**, “Anti-plane Surface Waves on a Halfspace with Depth Dependent Elastic Properties”, *Wave Motion*, 47(1), pp. 59-65, (2009)
- S. S. Chou, Y. Y. Kim, A. Srivastava, B. Murphy, **O. Balogun**, S.H. Tarik, G.S. Shekawat, and D. Vinayak, “Microcantilever array with embedded metal oxide semiconductor field effect transistor actuators for deflection control, deflection sensing, and high frequency oscillation”, *Applied Physics Letters*, 94, 224103, (2009)
- O. Balogun**, R. Huber, D. Chinn, and J.B. Spicer “Laser Ultrasonic Inspection of the Microstructural State of Thin Metal Foils”, *Journal of the Acoustical Society of America*, 125(3), pp. 1437-1443, (2009)
- O. Balogun**, Claire Prada, and T.W. Murray, “Simulation and Measurement of Optically Excited S_1 Zero Group Velocity Lamb Wave Resonance in Plates”, *J. Appl. Phys.* 102, 064914-1 - 064914-10, (2007)
- O. Balogun**, and T.W. Murray, “A Frequency Domain Laser Based Ultrasonic System for Time Resolved Measurement of Broadband Acoustic Transients”, *J. Appl. Phys.* 100, 034902-1 - 034902-6, (2006)
- Hui. Yu, **O. Balogun**, Biao. Li, T.W. Murray, and Xin Zhang, “Fabrication of Three Dimensional Microstructures Based on Singled-layered SU-8 For Lab-on-chip Applications”, *Sensors and Actuators A: Physical*, 127(2), pp. 228 – 234, (2006)
- C. Prada, **O. Balogun** and T.W. Murray, “Laser Based Ultrasonic Generation and Detection of Zero Group Velocity Lamb Waves in Thin Plates”, *Appl. Phys. Lett.* 87, pp. 194109-1 - 194109-3, (2005)
- T.W. Murray, **O. Balogun**, T.L. Steen, S. N. Basu and V. K. Sarin, “Inspection of Compositionally Graded Mullite Coatings Using Laser Based Ultrasonics”, *International Journal of Refractory Metals and Hard Materials*, 23, pp. 322-329, (2005)

H. Yu, **O. Balogun**, B. Li, T.W. Murray and X. Zhang, "Building Embedded Microchannels Using a Single Layer Su-8, and Determining Young's modulus using Laser Acoustic Technique", *Journal of Micromechanics and Microengineering*, 14(11), pp. 1574-1584, (2004)

T.W. Murray and **O. Balogun**, "High Sensitivity Laser Based Acoustic Microscopy using a Modulated CW Excitation Source", *Appl. Phys. Lett.*, 85(14), pp. 2974-2976, (2004)

T.W. Murray and **O. Balogun**, "Laser Ultrasonic Inspection of Environmental Barrier Coatings," *Journal of the Korean Society of Nondestructive Testing*, 22(6), pp. 599-608, 2002. (Invited paper).

Manuscripts in Preparation

O. Balogun, Yamach Dikmelik, Nadav Dikmelik, Nadav Goldberg, and J.B. Spicer "Acoustic Wave Interactions with Nonlinear layers",

P. Ahn and **O. Balogun**, "Photoacoustic characterization of the elastic properties of nanoporous gold"

Conference Proceedings and Abstracts

P. Ahn and **O. Balogun**, "Photoacoustic Characterization of Nanoporous Metals With Controlled Pore Size Distributions", 2nd International Symposium on Laser Ultrasonics, Talence, France, 2010

O. Balogun and S. Krishnaswamy, "A fiber Bragg grating based tunable laser source for quasi-static and dynamic strain monitoring", Proc. SPIE 7295, pp. 729501, 2009

O. Balogun, B. Regez, H.F. Zhang, S. Krishnaswamy, "Real-time full field imaging of photoacoustic generated signals for biomedical applications", International Conference on Photoacoustic and Photothermal Phenomena, July 2009

N. Yang, J.H. Kim, J.J. Thomas, **O. Balogun**, S. Krishnaswamy, "Characterization of water-saturated porous cement paste by an ultrasonic NDE Technique" Review of Progress in Quantitative Nondestructive Evaluation (QNDE), 2009

O. Balogun, G.R. Kirikera, and S. Krishnaswamy, "Optimal Demodulation of Wavelength Shifts in a Fiber Bragg Grating Sensor Using an Adaptive Two Wave Mixing Photorefractive Interferometer", Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2008, Proc. SPIE, Vol. 6932, pp. 69322K, 2008

T.W. Murray, **O. Balogun**, C. Prada, D. Clorennec, and D. Royer, "Theory and Applications of Laser Generated Zero Group Velocity Lamb Mode Resonance", Review of Progress in Quantitative Nondestructive Evaluation (QNDE). AIP Conference Proceeding, 975, pp. 255, 2008

G.R. Kirikera, **O. Balogun**, and S. Krishnaswamy, "Identifying Impacts Using Adaptive Fiber Bragg Grating Demodulator for Structural Health Monitoring Applications", 2007 Review of Progress in Quantitative Nondestructive Evaluation (QNDE). AIP Conference Proceeding, 975, pp. 1413, 2008

Claire Prada, Dominique Clorennec, Daniel Royer, **O. Balogun** and Todd Murray, "Laser Generation and Detection of Zero Group Velocity Lamb Mode Resonance in Thin Plates", Acoustical Society of America (ASA) June meeting. J. Acoust. Soc. Am., 119(5), pp. 3285, 2006. (abstract)

O. Balogun, R. Huber, D. Chinn, and J.B. Spicer, "Materials Defect Characterization using Mesoscopic Laser Ultrasonic Methods", 18th AeroMat Conference and Exposition, Baltimore, Maryland, June, 2007

C. Prada, **O. Balogun** and T. W. Murray, "Experimental Evidence of S1 Mode Quasi-Resonance in Thin Plates using a Laser Based Acoustic Microscope", 2005 IEEE Ultrasonics Symposium Volume 2, 18 – 21, pp. 1011 – 1014, September 2005.

R. Huber, D. Chinn, **O. Balogun** and T.W. Murray "High Frequency Laser-Based Ultrasound", 2005 Review of Progress in Quantitative Nondestructive Evaluation (QNDE), American Institute of Physics (AIP) Conference Proceedings, 820, pp. 218-224, 2006.

H. Yu, **O. Balogun**, B. Li, T.W. Murray and X. Zhang, "Rapid Manufacturing of Embedded Microchannels from a Single Layered SU-8 and Determining the Dependence of SU-8 Young's Modulus on Exposure Dose with a Laser Acoustic Technique," 18th IEEE International Conference on Micro Electro Mechanical Systems, pp. 654-657, 2005.

H. Yu, **O. Balogun**, B. Li, T.W. Murray and X. Zhang, "Building Embedded Microchannels Using a Single Layer Su-8, and Determining Young's modulus using Laser Acoustic Technique", Proceeding of the 8th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2004), Volume II, pp. 73-75, 2004. (abstract)

T.W. Murray, **O. Balogun** and N. Pratt, "High Frequency Laser Based Acoustic Microscopy using a CW Generation Source," Proc. 16th World conference on Nondestructive testing, August 2004, Montreal, Canada 2004. (abstract)

O. Balogun, N. Pratt and T. W. Murray, "A Novel Technique for Improving the Signal to Noise Ratio of Laser based Ultrasonic Systems", 2004 IEEE International Ultrasonics, Ferroelectrics and Frequency Control (UFFC) Joint 50th Anniversary Conference, Volume 1, 23 – 27, pp. 48-51, August, 2004.

O. Balogun and Todd W. Murray, "Graded Coating inspection Using Laser Generated Surface Acoustic Waves", in Review of Progress in Quantitative Nondestructive Evaluation, American Institute of Physics (AIP) Conference Proceedings, 700, pp. 294-298, 2004.

T.W. Murray and **O. Balogun**, "A Novel Approach to High-Frequency Laser-based Acoustic Microscopy", Acoustical Society of America (ASA) November meeting. J. Acoust. Soc. Am., 116, pp. 2617, 2004. (abstract)

T.W. Murray, **O. Balogun**, V. K. Sarin, and S. N. Basu, "Laser Ultrasonic Inspection of Compositionally Graded Mullite Coatings", Review of Progress in Quantitative Nondestructive Evaluation, American Institute of Physics (AIP) Conference Proceedings. 657, pp. 1471-1474, 2003.

O. Balogun, T. W. Murray and Soumendra Basu, "Characterization of Graded Coatings using Laser Generated Acoustic Waves", Acoustical Society of America (ASA) November meeting, J. Acoust. Soc. Am., 112, pp. 2350, 2002. (abstract)