

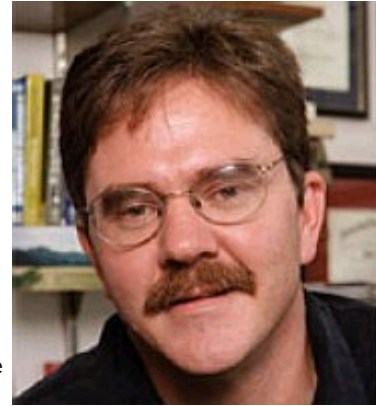


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ROBERT L CLARK, THOMAS LORD PROFESSOR OF MECHANICAL ENGINEERING AND MATERIALS SCIENCE AND ADJUNCT PROFESSOR OF BIOMEDICAL ENGINEERING

Work within my research group is devoted to the continued advancement of adaptive structures and a number of new directions in nanoscience/nanoengineering. Our work addresses applications such as the control of optical jitter, suppression of interior noise in aircraft and rocket fairings, modification of structural dynamics to minimize structural acoustic coupling, and suppression of flutter in aeroelastic systems. A significant new focus is bionanoscience and nanoengineering. In particular, our research efforts focus on instrumentation for the nanoscience community that allows for the characterization of single molecules as well as the deposition and manipulation of single molecules for nanomanufacturing processes. Our most recent research activity has been devoted to biodefense and the development of a nano-electromechanical transducer capable of identifying the presence of class-A agents. We have made significant progress in the development of instruments to manipulate materials at the nanoscale, and current collaborative research efforts focus on the use of enzymes for creating surface features at this scale.



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Specialties:

- Acoustics
- Biological Materials

Curriculum Vitae

Recent Publications (More Publications)

K. D. Wulff and D. G. Cole and R. L. Clark, *An adaptive system identification approach to optical trap calibration*, Optics Express, vol. 16 no. 7 (March, 2008), pp. 4420 -- 4425 .

Y. Q. Wu and M. S. Johannes and R. L. Clark, *AFM-based voltage assisted nanoelectro spinning*, Materials Letters, vol. 62 no. 4-5 (February, 2008), pp. 699 -- 702 .

Cox, D.E., G. P. Gibs, R.L. Clark, and J.S. Vipperman, *Experimental Robust Control of Structural Acoustic Control*, ASME Journal of Vibration and Acoustics, vol. 121 no. 4 (1999), pp. 433-440 .

Ma, H., M. Textor, R.L. Clark and A. Chilkoti, *Real time monitoring of surface initiated atom transfer radical polymerization by quartz crystal microbalance with dissipation*, Biointerphases, vol. 1 no. 35-39 (2006) .

Chow, D.C., M.S. Johannes, W. Lee, R.L. Clark, S. Zauscher and A. Chilkoti, *Nanofabrication with biomolecules*, Materials Today, vol. 8 no. Suppl 1 (2005), pp. 30-39 .