

Thermal-Fluidic Performance of Piezoelectric Fans

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OBJECTIVE

Develop physics-based models to describe and predict performance of piezoelectric fans in single and array configurations.

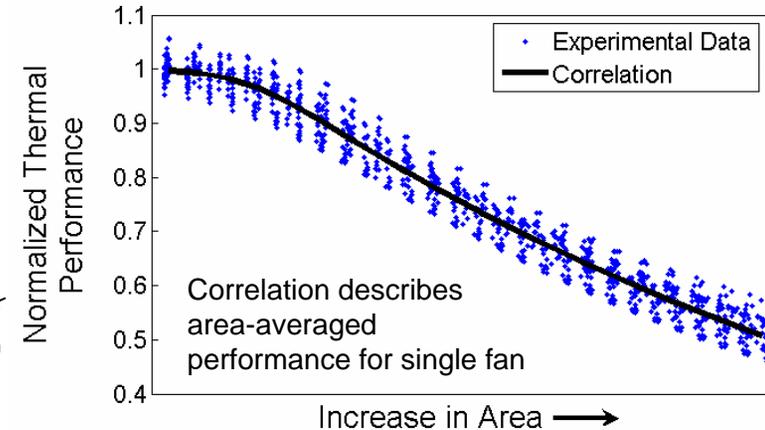
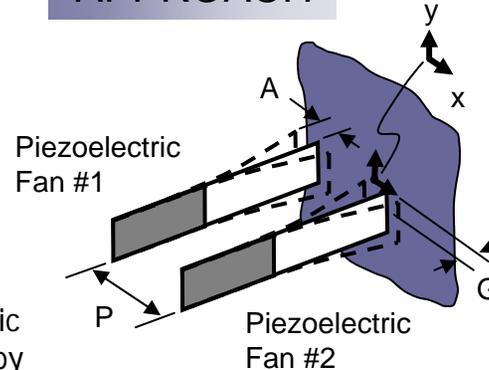
IMPACT

This research is helping place piezoelectric fans in the thermal management toolkit by providing insight into underlying physics of vibrating cantilevers, and offering predictive tools for design and optimization.

SELECTED PUBLICATIONS

- M. Kimber, S.V. Garimella and A. Raman, *J. Heat Transfer* (in press).
- T. Açıkalın, S.V. Garimella, A. Raman and J. Petroski, *Int. J. Heat and Fluid Flow* (in press).
- M. Kimber, S.V. Garimella and A. Raman, IMECE2006-13922, Chicago, IL, 2006.
- T. Açıkalın, S.M. Wait, S.V. Garimella and A. Raman, *Heat Trans. Eng.* **25**(1): 4-14, 2004.

APPROACH



Contours of local convection coefficients with $A = 10$ mm.

