

Dr. Aaron T. Ohta, Associate Professor

Department of Electrical Engineering, University of Hawaii at Manoa (UHM)

Education

Ph.D. (2008) Electrical Engineering. University of California, Berkeley
M.S. (2004) Electrical Engineering. University of California, Los Angeles
B.S. (2003) Electrical Engineering. University of Hawaii at Manoa

Academic Experience

2013 – present: Associate Prof., Dept. of Electrical Engineering, UHM, full-time
2009 – 2013: Assistant Prof., Dept. of Electrical Engineering, UHM, full-time

Professional Organizations

IEEE, IEEE Robotics & Automation Society, HKN, UHPA

Honors and Awards

Second place, Student Paper Award, IEEE International Microwave Symposium (IMS), 2014
Third place, International Mobile Microrobotics Challenge Mobility event, 2014
Second place, Pacific Asian Center for Entrepreneurship Breakthrough Innovation Challenge, 2013
Finalist, Best Conference Paper Award, IEEE International Conference on Robotics and Automation (ICRA), 2012
Second place, National Institute of Standards and Technology Mobile Microrobotics Challenge Microassembly event, 2012
Regent's Medal for Excellence in Research, University of Hawaii, 2012
Hi Chang Chai Excellence in Teaching Award, University of Hawaii College of Engineering, 2012
Second place, National Institute of Standards and Technology Mobile Microrobotics Challenge, 2011
First place, American Urological Association / Olympus Prize Essay Contest, 2010

Service Activities

Organizing Chair, 9th IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE NEMS), Waikiki, Honolulu, HI, April 13-16, 2014
Guest Editor, Special Issue on Optofluidics, *Advances in Optoelectronics* journal, 2012
Reviewer, *Nature Communications*, *Applied Physics Letters*, *Lab on a Chip*, *Microfluidics and Nanofluidics*, *Biomicrofluidics*, *Langmuir*, *Optics Express*, *Journal of Microelectromechanical Systems*, *Materials Today*, *ACS Applied Materials & Interfaces*, *Sensors*, *International Journal of Optomechatronics*, *Micromachines*, *Advances in Optoelectronics*, *PLOS ONE*
Panelist, National Science Foundation, 2011
Ad hoc Reviewer, National Science Foundation, 2014
Judge, National Collegiate Inventors Competition, 2014
UHM Undergraduate Research Opportunities Council Member, 2014 to 2015

Panelist, Setting Performance Expectations for Written Communication and Information (at UHM), June 2014

University of Hawaii at Manoa New Faculty Orientation, Spring 2014

Panelist speaking to new faculty hires

UHM University Research Council Excellence in Research Student Award Committee, 2013

College of Engineering Diversity Committee member, Fall 2013 to present

College of Engineering Personnel Committee Chair, 2013

EE Dept. Professional Fees Committee Chair, Spring 2014 to present

EE Dept. Undergraduate Curriculum Committee member, Spring 2010, Spring 2013 to present

EE Dept. Student Awards Committee, Fall 2012 to present

EE Dept. Graduate Committee, Fall 2010 to present

Selected Publications and Presentations from Past Five Years

R. C. Gough, A. M. Morishita, J. H. Dang, W. Hu, W. A. Shiroma, and **A. T. Ohta**, "Continuous electrowetting of non-toxic liquid metal for RF applications," *IEEE Access*, vol. 2, pp. 874-882, 2014.

R. C. Gough, J. H. Dang, Andy M. Morishita, A. T. Ohta, and W. A. Shiroma, "Frequency-tunable slot antenna using continuous electrowetting of liquid metal," *2014 IEEE MTT-S International Microwave Symposium*, Tampa, FL, Jun. 2014. (**Second place in Student Paper Competition**)

Q. Fan, W. Hu, and **A. T. Ohta**, "Laser-induced microbubble poration of localized single cells," *Lab on a Chip*, vol. 14, no. 9, pp. 1572-1578, 2014. PubMed: 24632785, NIHMSID: 573933.

A. M. Morishita, C. K. Y. Kitamura, **A. T. Ohta**, and W. A. Shiroma, "A liquid-metal monopole array with tunable frequency, gain, and beam steering," *IEEE Antennas and Wireless Propagation Letters*, vol. 12, pp. 1388-1391, 2013.

W. Hu, Q. Fan, and **A. T. Ohta**, "An opto-thermocapillary cell micromanipulator," *Lab on a Chip*, vol. 13, no. 12, pp. 2285-2291, 2013. PubMed: 23666050, PMC: 3681525, NIHMSID: 479065. (**Lab on a Chip Top 10% article**)

W. Hu, K. S. Ishii, Q. Fan, and **A. T. Ohta**, "Hydrogel microrobots actuated by optically generated vapour bubbles," *Lab on a Chip*, vol. 12, no. 19, pp. 3821-3826, 2012. (**Hot article**: one of the most downloaded articles in this issue)

W. Hu, K. S. Ishii, and **A. T. Ohta**, "Micro-assembly using optically controlled bubble microrobots," *Applied Physics Letters*, vol. 99, no. 9, 094103, 2011.

B. J. Lei, A. Zamora, T. F. Chun, **A. T. Ohta**, and W. A. Shiroma, "A wideband, pressure-driven, liquid-tunable frequency selective surface," *IEEE Microwave and Wireless Components Letters*, vol. 21, no. 9, pp. 465-467, 2011.

W. Hu and **A. T. Ohta**, "Aqueous droplet manipulation by optically induced Marangoni circulation," *Microfluidics and Nanofluidics*, vol. 11, no. 3, pp. 307-316, 2011.

Recent Professional Development Activities

American Society for Engineering Education (ASEE) Electric Circuits Virtual Community of Practice (VCP), Spring 2013 to Fall 2013.

National Effective Teaching Institute (NETI), June 23 to 25, 2011.