

## **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**, 9<sup>th</sup> 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.**