**“Raymond” Yan-Lok Chan**

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**WORK EXPERIENCES**

**University of California, Los Angeles (UCLA)**

*Junior Development Engineer, The Ozcan Research Group (September 2014 - present)*

*Lab Assistant, The Ozcan Research Group (April 2013 - September 2014)*

Developing Java Android applications, Windows desktop applications in WPF C#, Windows Phone 8 applications, and Python servers. Developing image processing algorithms and tools in Matlab for academic research purposes.

Key Contributions:

**Multi-platform Tablet-based Hologram Reconstruction Apps**: Developing Java app for Android tablets and C# WPF app for Windows tablets as a user interface for portable lensfree microscopes, enabling on-the-go near-real-time hologram reconstruction using the Fourier domain. Developed tools to analyze reconstruction images using the OpenCV C++ image processing library.

**Giardia detection application (published in ‘Lab on a Chip’)**: Developed a C# application on Windows Phone 8 for a mobile application allowing for point-of-care Giardia parasite detection from water samples. Implemented a custom camera capture system (for the Nokia Lumia 1020) and a Python server for remote high-throughput Matlab-based image processing.

**Fast Automated System for Nanobead Labeling from Fluorescent Microscopy Images**: Developed algorithms to automatically find and label micron-scale particles from fluorescent microscopy images. Developed a general algorithm for stitching adjacent microscopy images in Matlab. Further optimized algorithms said to produce an output within 60 seconds for 9 fields of view, resulting 98% accuracy.

**EDUCATION**

**B.S. Electrical Engineering -** *University of California, Los Angeles* (GPA: 3.34)

**Academic Projects:**

*Face Detection – C code for DSK C6416* *– Spring 2013*

Built a multiple face detection algorithm based on specific human characteristics (skin color, face ratios). Our system demonstrated detection of up to 80% of faces/image.

*“Wireless” Communication System through Sound – Matlab – Winter 2012*

Prototyped a communication software to transmit binary data through sound. Data were encoded/decoded using the Hamming algorithm. After receiving the data, FFT and Maximum a posteriori estimation algorithms are applied to remove the noise.

**JOURNAL PUBLICATIONS**

H. Ceylan Koydemir, Z. Gorocs, D. Tseng, B. Cortazar, S. Feng, **R. YL. Chan**, J. Burbano, E. McLeod, and A. Ozcan. Rapid imaging, detection and quantification of Giardia lamblia cysts using mobile-phone based fluorescent microscopy and machine learning. Lab on a Chip, December 16, 2014.

Q. Wei, W. Luo, S. Chiang, T. Kappel, C. Mejia, D. Tseng, **R. YL. Chan**, E. Yan, H. Qi, F. Shabbir, H. Ozkan, S. Feng, and A. Ozcan. Imaging and Sizing and Single DNA Molecules on a Mobile Phone. ASC Nano, December 10, 2014.

**SKILLS**

**IDEs:** Matlab, Maple, Eclipse, Microsoft Visual Studio

**Programming Languages:** Java, C/C++, C#, .NET, MATLAB, Python

**Languages:** Chinese (Cantonese) : Native, Chinese (Mandarin) : Fluent, English : Fluent