JUSTINE LO

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EDUCATION

Boston University College of Engineering, Class of 2014 – *Boston, MA*
Bachelor of Science in Biomedical Engineering/Minor in Biology

SKILLS

MATLAB, SAS, SPSS, HTML, CSS, JavaScript, SolidWorks, 3D-Printing, C++, Microsoft Office

WORK & RESEARCH EXPERIENCE

Biomedical Engineer & Research Associate | Hebrew SeniorLife – *Roslindale, MA* *May 2014 - Present*

- Researcher at *Institute for Aging Research* in *Mobility and Falls Translational Research*
- Independently plan and execute research projects involving gait, balance, signal processing, EMG, multi-scale entropy, wearable sensors, mobile applications
- Interpret and analyze data using MATLAB and SAS to communicate data into actionable recommendations for doctors and researchers
- **CURRENT PROJECTS:** writing manuscript on analysis of muscle co-contraction; analysis of health and fitness interventions using wearable sensors; testing and assisting in developing mobile application to assess balance and gait

Senior Design Project | Boston University Roblyer Laboratory – *Boston, MA* *Sept. 2013 – May 2014*

3D-Printing Tumor and Vascular Phantoms for Optical Imaging and Spectroscopy

- Engineered and 3D-printed customizable material to create tissue-simulating optical phantoms
- Designed and 3D-printed optical phantoms mimicking vasculature and tumor inclusions to advance the use of optical imaging and spectroscopy systems in clinical predictions and cancer treatments

Hematology Oncology Student Researcher | Boston Univ. School of Medicine – *Boston, MA* *Jan. 2014 – May 2014*

- Studied effects of obesity on the immune system by analyzing lymphocyte profile in mice adipose tissues
- Assisted experiments using pH-sensitive nano-beads to confirm B1-B cells perform phagocytosis
- Cell counting with Flow Cytometer; tissue cell culture; mice dissection

Pulmonary Division Research Trainee | Brigham and Women's Hospital – *Boston, MA* *Summer 2013*

- Successfully developed software algorithms using MATLAB to enable the identification and quantification of clinically relevant biomarkers in CT scans of multiple COPD cohorts
- Directly supported team of 5 in exploratory clinical research for the association of CT phenotypes with clinical symptoms and outcomes

Research Assistant | Boston University Klapperich Laboratory – *Boston, MA* *Jan. 2013 – Aug. 2013*

- Fabricated microfluidic chips to improve efficiency in concentrating virus samples in resource limited areas
- Performed polymerase chain reaction to detect and analyze presence of virus

Phys. Med. & Rehab. Services Intern | U.S. Dept. of VA Healthcare – *West Roxbury, MA* *2011 – 2012*

- Streamlined patient care and proficiency by evaluating patient and department data; delivered and executed action plan to management which improved staff communication, resource allocation, and quality of care
- Developed and implemented pre-/post-surgical best practices by analyzing production costs and patient statistical data

PUBLICATIONS

Phuong Diep, Sanjana Pannem, Jordan Sweer, **Justine Lo**, Michael Snyder, Gabriella Stueber, Yanyu Zhao, Syeda Tabassum, Raeef Istfan, Junjie Wu, Shyamsunder Erramilli, and Darren Roblyer, "Three-dimensional printed optical phantoms with customized absorption and scattering properties," Biomed. Opt. Express 6, 4212-4220 (2015).

AWARDS & INTERESTS

- **Honorable Mention | NIH Biomedical Imaging & Bioengineering DEBUT Challenge** – *Spring 2013*
  An Integrated Microfluidic System for Sample Concentration and Extraction **–** Worked with a small team to advance HIV testing method, resulting in exponentially faster HIV detection than existing methods, allowing patients in resource-limited areas to receive more expedient care
- Proficient in Cantonese, studying Mandarin
- 3D-printing, photography, sketching, piano, guitar, Chinese folk dance