**OBJECTIVE**

**Aparna Singh**

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To offer solid laboratory skills in clinical and research setting by coalescing laboratory and academic training obtained thus far in addition to a background in office administration to ensure effective organization and communication.

 **EDUCATION**

2017 – present **VANDERBILT UNIVERSITY** Nashville, TN

 *Doctor of Philosophy, Biomedical Engineering*

2011-2015 **ILLINOIS INSTITUTE OF TECHNOLOGY** Chicago, IL

 *Graduate of Bachelor of Science in Biomedical Engineering (cum laude); Master of Chemical Engineering (co-terminal)*

**SKILLS**

* Expert in MATLAB, Python, AutoCAD, LabChart
* Certification in C++ (Microsoft/edX and Udemy)
* Expert in MS Office: Word, Excel, and PowerPoint
* Languages: English, Hindi(Fluent). German (Intermediate)

**EXPERIENCE**

 2016 **VANDERBILT UNIVERSITY INSTITUTE OF IMAGING SCIENCE, VANDERBILT UNIVERSITY** Nashville,TN

 ***Graduate Student, Department of Biomedical Engineering (June 2017-present)***

I am a PhD student in Dr. Caskey's lab and I assist him with therapeutic and diagnostic applications of ultrasound.

 2016 **FEINBERG SCHOOL OF MEDICINE, NORTHWESTERN UNIVERSITY** Chicago,IL

 ***Research Technologist 2, Department of Neurology (July 2016-June 2017)***

Worked under mentorship of Dr. Marc Slutzky wherein I assisted with patient studies that measure muscle co-activation in patients who have suffered from chronic or acute brain stroke using Brain-Machine Interface and Myoelectric Computer Interface.

 2016 **MAYO CLINIC**  Rochester, MN

 ***Research Trainee, Department of Physiology and Biomedical Engineering (January 2016-July 2016)***

Worked under mentorship of Dr. Mostafa Fatemi wherein I assisted with measuring bladder stiffness using Ultrasound Bladder Vibrometry (UBV). Additionally, I assisted in clinical trial that measure breast cancer lesion stiffness and thyroid nodule stiffness.

 2015 **DARTMOUTH COLLEGE** Hanover, NH

***Research Intern, Optics in Medicine Laboratory (May 2015-August 2015)***

Worked under mentorship of Dr. Brian Pogue wherein I Mapped Hyperspectral Images of brain-tumor surgeries into XYZ color space and accounted for any information missing when surgeons observe the brain tumors under surgical microscope in operation room.

 2014 **ILLINOIS INSTITUTE OF TECHNOLOGY** Chicago,IL

 ***Armour R&D, Medical Imaging Research Center (May 2014-August 2014)***

Worked under mentorship of Dr. Kenneth Tichauer wherein I tested ability of receptor imaging approach to monitor growth behavior of the EGFR expressing cells in 3D tumor cultures in order to find sensitivity of “dual-tracer” receptor imaging approach.

**PROJECTS**

2014 **DESIGNING DRUG EMBEDDED CONTACT LENSES**  **(*August 2014-May 2015)*** Chicago,IL

Worked in collaboration with University of Illinois at Chicago ophthalmic surgeons to make contact lenses embedded with moxifloxacin for patients who undergo eye surgery and need moxifloxacin for period of 2 week.

2014 **INTER-PROFESSIONAL PROJECT - STEM CLUSTER LASER EDUCATION (*January 2014-May 2014)*** Chicago,IL

Conducted primary and secondary research in order to know the relevance of STEM education and laser education in high school and college

 **AWARDS/ACTIVITIES**

* Women in VISE, Women of VUIIS August 2017
* Graduate Women in Science (Chicago Chapter) October 2016
* Women in Science and Engineering Research(WiSER), Mayo Clinic May 2016
* Dean’s List Fall 2011,Fall 2012, Fall 2013,Spring 2015,Fall 2015
* First prize Design Competition Spring 2015
* First Prize in PURE –ACE poster competition Summer 2014
* Armour R&D Fellowship Summer 2014
* President’s Award for Educational Excellence May2011
* President’s Award for Educational Achievement May 2010

**PUBLICATIONS/PRESENTATIONS**

Paper

* Nenadic I , Mynderse L, Husmann D, Mehrmohammadi M, Bayat M, **Singh A**, Denis M, Urban M, Alizad A, Fatemi M. Noninvasive Evaluation of Bladder Wall Mechanical Properties as a Function of Filling Volume: Potential Application in Bladder Compliance Assessment. *PLoS ONE.* DOI:10.1371/journal.pone.0157818

Conference Proceedings

* M. Bayat, **A. Singh**(Aprana), J. Webb, V. Kumar, A. Gregory, A. Alizad, M.Fatemi.*, "Acoustoelasticity modeling of bladder tissue nonlinearity: Ex vivo study,"*2017 IEEE International Ultrasonics Symposium (IUS)*, Washington, DC, USA, 2017, pp.* 1-4.
doi: 10.1109/ULTSYM.2017.8091856
* Huber M T, **Singh(**Signh**) A**, Cheong M , Urban M, and Bayat M and Fatemi M. Multi-parameter analysis of bladder mechanical properties using ultrasound bladder vibrometry. *The Journal of the Acoustical Society of America*, 140, 3186-3186 (2016), DOI:http://dx.doi.org/10.1121/1.4970018
* X Xu, L Sinha, **A Singh**, C Yang, J Xiang, KM Tichauer. Quantification of cell surface receptor expression in live tissue culture media using a dual-tracer stain and rinse approach. *Proc. SPIE 9328, Imaging, Manipulation, and Analysis of Biomolecules, Cells, and Tissues XIII, 932814 (March 2, 2015)*; doi:10.1117/12.2078472

Poster presentation

* M.W.Slutzky, **A. Singh**, S. Hameed, E. M. Mugler; Myoelectric computer interface training improves arm movement after stroke. *Society for Neuroscience*, 2017. Washington, DC.
* **Singh A**, Xu X, Sinha L, Yang, C , Xiang J, Tichauer K. ‘Quantifying Cell Surface Receptor Expression in Live Tissue Culture Media using Dual Tracer Approach’. *BMES Annual Conference, 2014*. San Antonio, TX. *Poster Presentation.*
* Deans C, **Singh A**, Madurapantula Rama, Gerald K, Hammes M, Dhar P. “Relation of Hemorheologic Parameters and ADMA in Ethnic groups of African Descent. *National Biomedical Engineering Society Conference 2013*, Seattle WA. Poster Presentation.