# **ZARIN DARI**

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### **SUMMARY**

- 4 years combined research and engineering experience in cardiovascular modeling, huge animal (pigs) open chest surgery, human endovascular imaging catheter, tissue histology plus advance cell culturing.
- Strong focus on cardiovascular biomechanics, analysis of strain and stress, compare optical coherence tomography (OCT) catheter imaging with ultrasound and histology during hypertrophy.
- Experienced in advance cell culture, cancer cells, endothelial cells transected with florescent markers, plus histology techniques.
- Highly proficient in image processing by utilizing MATLAB and C++.

#### **Computer skills, Tolls and Programming Languages**

C/C++.net, Labview, MATLAB, solid works, Microsoft projects, Excel.

#### Education

University of California, Irvine

MS, Biomedical Engineering BS, Biomedical Engineering

September, 20XX September, 20XX

20XX- present

#### **Research Experience**

Endothelial cell signaling, at Beckman laser Institute and Medical Clinic

Implemented method to investigate recovery time of endothelial cells after applying laser tweezers force on cell membrane.

Application of OCT endovascular catheter, at Beckman laser Institute and Medical Clinic

- September. 20XX- present Designed, fabricated, and tested BIOMEMS (OCT) endovascular imaging catheter.
  - "OCT" imaging catheter was used minimally invasive as a diagnostic tool for the first time in live patients' brain to observe aneurism in brain and heart.
  - Research results under publication review at American Journal of Neurology.

3 dimentional image processing Beckman laser Institute and Medical Clinic

20XX-20XXObtained 3dimentional-images from 2dimentional OCT images and reconstruct the actual shape of human and animal blood vessels, teeth, and joints.

Preliminary phantom tests, Beckman laser Institute and Medical Clinic
20XX- 20XX
Designed, fabricated, and tested human cardiovascular phantom to monitor the endovascular catheter path, its durability and functionality.

Engineering consultant, at Irvine Biomedical Company

- Radiofrequency ablation of the Pigs' heart tissue, imaged by OCT catheter and correlated with
- histology, reconstructed of 3dimentiinal images.

Molecular spectroscopy, Lasers, Flames, and Aerosols Laboratory at mechanical aerospace engineering 20XX-20XX department

Compute the ideal wavelength of the red beam for nitrogen vibrational coherent anti-stokes Raman spectroscopy (CARS) and compare it to the spectrum of the red beam that enables us to measure the amount of nitrogen present in the gas mixture.

## **Honors and Awards**

- 2007 UROP fellow, Undergraduate Research Opportunities Program
- Dean's Honor list 3 quarters
- Permanent member, Honor Society (AGS)
- Scholarship from California National Bank.

20XX-20XX