

# Thamidul Islam Tonmoy

## Contact Info

📍 211 Barret Road  
Riverside, CA 92507

📞 (951) 907 8287

✉️ titonmoy@outlook.com

## Website

Personal  
LinkedIn  
Scholar

## Research Interest

Image processing  
Signal processing  
Deep Learning

## Programming

MATLAB  
Python  
C/C++

## Deep Learning

Keras  
TensorFlow

## Hardware

Optical alignment  
Electrical interfacing

## Education

**Ph.D.** in Bioengineering 2019 - Present  
University of California, Riverside (UCR)

**B.Sc.** in Electrical and Electronic Engineering 2013 - 17  
Bangladesh University of Engineering & Technology (BUET)

## Research Experience

### Optical Neural Imaging Lab, UCR

Graduate Student Researcher 2020 - Present

- Implementing PS-OCT data processing pipeline using Intel IPP for the lab data acquisition software
- Updating PS-OCT sample arm by replacing galvo-based scanner with MEMS scanner
- PS-OCT analysis of engineered muscle (collaboration)
- Tracing nerve regeneration using PS-OCT (collaboration)
- Hardware-based speckle reduction in PS-OCT (Ph.D. project)

### Digital Signal Processing Research Lab, BUET

Research Assistant 2017 - 19

- Traffic sign detection and recognition using CNN
- Camera model identification using CNN

### Undergraduate Student Researcher

2016 - 17

- Breast cancer classification using CNN

## Publication

3. M M Sanchez, **T I Tonmoy**, B H Park, and J T Morgan. "Development of a Vascularized Human Skin Equivalent with Hypodermis for Photoaging Studies." *Biomolecules* 12, no. 12 (2022): 1828.
2. A M Rafi, **T I Tonmoy**, U Kamal, QM J Wu, and M K Hasan. "RemNet: remnant convolutional neural network for camera model identification." *Neural Computing and Applications* 33 (2021): 3655-3670.
1. U Kamal, **T I Tonmoy**, S Das, and M K Hasan. "Automatic traffic sign detection and recognition using SegU-Net and a modified Tversky loss function with L1-constraint." *IEEE Transactions on Intelligent Transportation Systems* 21, no. 4 (2019): 1467-1479.

## Leadership

### UCR Photonics Society

Secretary 2022 - Present

### UCR Bioengineering Graduate Student Association

Secretary 2020 - 21