TAIMOOR TARIQ | Curriculum Vitae

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Summary

I am a third-year PhD Student aiming to make real-time Virtual Reality (VR) realistic through a deeper understanding of human vision.

Education

UNIVERSITÀ DELLA SVIZZERA ITALIANA
2020 - current
PhD in Informatics
Lugano, Switzerland
Concentration: Computer Graphics and Human Visual Perception

KOREA ADVANCED INSTITUTE FOR SCIENCE AND TECHNOLOGY (KAIST)
2017 - 2019
MS in Electrical Engineering
Daejeon, South Korea
Concentration: Visual Computing and Machine Learning
CGPA: 4.0/4.3
KAIST Graduate Fellowship Awardee

NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY (NUST)
2013 - 2017
BS in Electrical Engineering
Islamabad, Pakistan
Concentration: Digital Systems and Signal Processing
CGPA: 3.83/4.0
Merit Scholarship Awardee (Top 3% of class)

Experience

DOCTORAL RESEARCH ASSISTANT
2020 - current
Perception, Display and Fabrication Group - USI
Lugano, Switzerland
Mentor: Dr. Piotr Didyk
Working on understanding human visual perception in immersive environments to improve real-time rendering for VR-headsets

GRADUATE RESEARCH ASSISTANT
2017 - 2019
Video and Image Computing Lab - KAIST
Daejeon, South Korea
Mentor: Dr. Munchurl Kim
Worked on integrating applied perception with the Deep Learning pipeline for Perception-Oriented Image Super-Resolution

UNDERGRADUATE RESEARCH ASSISTANT
2016 - 2017
Neuroinformatics Research Group - NUST SEECS
Islamabad, Pakistan
Mentor: Dr. Awais Kamboh
Designed a real-time signal processing algorithm for neural spike detection and sorting. The algorithm was designed for future implantable neural chips for neuro-prosthetics and rehabilitation

DIGITAL DESIGN INTERN
7/2015 - 8/2015
Center for Advanced Research in Engineering (CARE)
Islamabad, Pakistan
Worked on the the design for a digital architecture for an automatic gain control (AGC) for software-defined radio's

Knowledge Areas

Visual Computing, Machine Learning, Applied Perception, Signal Processing

Teaching

Teaching Assistant: Computer Graphics (Fall 2020), USI-Lugano

Teaching Assistant: Computer Vision & Pattern Recognition (Spring 2021), USI-Lugano

Teaching Assistant: Computer Graphics (Fall 2021), USI-Lugano

Teaching Assistant: Computer Vision & Pattern Recognition (Spring 2022), USI-Lugano

Publications

Noise-based Enhancement for Foveated Rendering
ACM Transactions on Graphics (SIGGRAPH 2022)
Taimoor Tariq, Cara Tarhan Tursun and Piotr Didyk

Why are Deep Representations Good Perceptual Quality Features?
European Conference on Computer Vision (ECCV 2020)
Taimoor Tariq, Okan Tarhan Tursun, Munchurl Kim and Piotr Didyk

A HVS inspired Attention to Improve Loss Metrics for Perception-Oriented Super-Resolution
International Conference on Computer Vision Workshops (ICCVW 2019)
Taimoor Tariq, Juan Luis Gonzalez Bello and Munchurl Kim

Computationally efficient fully-automatic online neural spike detection and sorting in presence of multi-unit activity for implantable circuits
Computer Methods and Programs in Biomedicine, 2019
Taimoor Tariq, Muhammad Hashim Satti, Hamid Mehmood Kamboh, Maryam Saeed and Awais Mehmood Kamboh

Low SNR Neural Spike Detection using Scaled Energy Operators for Implantable Brain Circuits
IEEE Engineering in Medicine and Biology Conference (EMBC 2017)
Taimoor Tariq, Muhammad Hashim Satti, Maryam Saeed and Awais Mehmood Kamboh