

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

PhD in Informatics

Concentration: Computer Graphics and Human Visual Perception

2020 - current

Lugano, Switzerland

KOREA ADVANCED INSTITUTE FOR SCIENCE AND TECHNOLOGY (KAIST)

MS in Electrical Engineering

Concentration: Visual Computing and Machine Learning

CGPA: 4.0/4.3

KAIST Graduate Fellowship Awardee

2017 - 2019

Daejeon, South Korea

NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY (NUST)

BS in Electrical Engineering

Concentration: Digital Systems and Signal Processing

CGPA: 3.83/4.0

Merit Scholarship Awardee (Top 3% of class)

2013 - 2017

Islamabad, Pakistan

EXPERIENCE

DOCTORAL RESEARCH ASSISTANT

Perception, Display and Fabrication Group - USI

Mentor: Dr. Piotr Didyk

Working on understanding human visual perception in immersive environments to improve real-time rendering for VR-headsets

2020 - current

Lugano, Switzerland

GRADUATE RESEARCH ASSISTANT

Video and Image Computing Lab - KAIST

Mentor: Dr. Munchurl Kim

Worked on integrating applied perception with the Deep Learning pipeline for Perception-Oriented Image Super-Resolution

2017 - 2019

Daejeon, South Korea

UNDERGRADUATE RESEARCH ASSISTANT

Neuroinformatics Research Group - NUST SEECS

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

2016 - 2017

Islamabad, Pakistan

DIGITAL DESIGN INTERN

Center for Advanced Research in Engineering (CARE)

Worked on the design for a digital architecture for an automatic gain control (AGC) for software-defined radio's

7/2015 - 8/2015

Islamabad, Pakistan

KNOWLEDGE AREAS

Visual Computing, Machine Learning, Applied Perception, Signal Processing

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