

Personal Statement

Muhammad Zaigham Abbas Shah, Syed

It is an honor for me to present my candidacy for the Fulbright Scholarship Program. My name is Abbas Shah from Hyderabad, Pakistan. I work as an Assistant Professor in the Department of Electronic Engineering at Mehran University of Engineering and Technology (MUET), Pakistan.

Inspired by a childhood in the 90's where technological advances were changing lives globally, I pursued a Bachelor's degree in Electronic Engineering from MUET and graduated top of my class. My focus during undergraduate education was primarily on practical applications, with the aim of 'taking technology out of the lab', as I would interact with like-minded people on online platforms such as electro-tech-online.com etc. Devastated by the massive loss and destruction from catastrophic earthquakes in Northern Pakistan, I developed a Structural Health Monitoring System as my Final Year Project, designed to gauge the structural integrity of civil structures.

After graduation, I was offered a job as Lecturer in the Department of Electronic Engineering, following which I started working at MUET (my alma mater) in 2010. As part of the faculty, I have helped organized several conferences and seminars with the intent of raising awareness among students at MUET regarding the latest developments in the fields of Engineering and Information Technologies in general, and Electronics in particular.

In 2012, I successfully applied for the Commonwealth Shared Scholarship for an MSc. in Electronic and Electrical Engineering at the University of Strathclyde, Glasgow, United Kingdom. My time in the UK was a truly humbling experience. Coming from a small Pakistani city, the experience of studying in a developed country was life-changing. It was certainly a steep learning curve for me but I was determined to beat the odds, finally graduating with a Distinction. Studying in the UK also provided me with the opportunity to meet people from around the globe, and to travel solo, which was certainly one of the best aspects of my time there.

Since my return to Pakistan in 2013, I have been actively involved in helping to upgrade the courses in my department and collaborating in research activities. In light of my academic experience, publication record and other contributions, I was promoted to the post of Assistant Professor in 2015. Moreover, I initiated the applications that led to our department becoming a member of the Microchip Academic Partner Program and the ARM University Program, thereby giving our students access to invaluable resources and component donations.

Having worked on Image and Signal processing during my Masters, I have focused on machine learning along with signal processing since 2013 – primarily since I have realized the pervasiveness of Artificial Intelligence. My research includes using Microsoft Kinect for Rehabilitation, using inertial sensors for Activity Recognition, Detection Of Driver Drowsiness, and performing cardiac disease analysis. Currently, I am working on using machine learning for health applications usable by healthcare professionals to aid in clinical diagnosis and decision-making, and provision of telemedicine services.

Whilst I have only provided an overview of my proposed research, I would love to discuss my research proposal before the selection committee of the Fulbright scholarship. I believe that this research can have a massive impact in improving healthcare standards for Pakistan and other developing countries.

On a personal level, I try to remain physically active. I go to the gym regularly and enjoy outdoor sports in my free time, particularly since I used to play for my college's cricket and soccer teams. In an attempt to give back to society that has supported me, I am currently involved in setting up a computer laboratory for children at SOS Village, Jamshoro and occasionally volunteer at a charity medical camp at Matiari village.

As a career academic, I intend to pursue a Doctorate degree to help me develop professionally and personally, thus allowing me to help bridge the knowledge gap between my country and the rest of the world. I firmly believe that higher education taught by experts of the field will produce a ripple effect that is unmatched – I myself am a product of this. I therefore intend to bring back my skillset and experience to help inspire the students of my country to start thinking out of the box, improve their knowledge capacity, and encourage the concept of active learning at the student level by imparting the motto of 'bringing technology out of the lab' as I followed in my studies. It is my hope that in the long term, this will go a long way towards helping my country develop socially and economically.