

I remember as a child my first ever aim in life was to become a scientist. I have always been keen about understanding how things in this universe work and what makes them work that way. This curiosity eventually led me towards the path of research. Now, I want to expand my knowledge and take my research to the next level while pursuing a PhD. I have an abundance of passion about materials and their properties. I would like to continue research works on materials, which I started during my undergraduate studies. Thus, I am applying for this PhD position.

I completed my higher secondary school in science where I developed a keen interest towards the physics subject. I chose mechanical engineering as major for my undergraduate degree as it consists of courses predominantly related to physics. Among the subjects taught during the programme, I found materials science as the most fascinating one. Hence, I approached my professor and began my projects and research works on welding of materials under his guidance. It gave me confidence that I can contribute appreciably to this area. During my master's degree at the University of Manchester, I worked on microstructural evolution of Aluminium alloys during solution heat treatment.

I have successfully completed two online certification courses through NPTEL; one on Non-traditional machining processes where I learned about Ultrasonic, Abrasive Jet and Abrasive Water Jet Machining processes and another on Fundamentals of welding science and technology where I gained knowledge on physics and principles of various types of welding processes. I had worked on Laser and TIG welding of Hastelloy C-276 material for my major and minor projects and acquired reasonable experience in weld metal characterization, optimization techniques and measurement of mechanical properties. To extend my understanding in practical activities related to welding of materials I attended workshops such as 'Current trends in material joining processes' which were held at our institute.

I have participated in three different international conferences namely; 'International Conference on Recent Trends in Nano materials for Energy, Environmental and Engineering Applications', '2nd International Conference on Materials, Manufacturing and Modelling', 'International Conference on Mechanical and Building Sciences' and presented research articles on welding of materials which were later published in well-reputed peer-reviewed journals. I have seven publications under my name in which I am the first author for three articles. Currently, I am working on two more research articles. This research aptitude of mine aided me in securing a competitive scholarship of £5000 for my master's studies.

After completing my master's degree, I worked at my university as a Graduate Teaching Assistant where I assisted lecturers with their lectures, labs and tutorials as well as helped undergraduate students with their coursework, assignments and reports. Later, I worked at JD Sports Fashion Plc as a Warehouse Operative, where my role was to pick and pack items which also involved heavy-lifting. Currently, I am working as a Supply Teacher for Choice Teachers, where my role is to supervise school children with their everyday work at school and assist students with Special Educational Needs (SEN).

Even though I am aware that pursuing a PhD will be challenging, considering my experience and passion I believe that I have the potential to carry out individual research and produce some outstanding results. After completion of my PhD, I would like to find a job in a well-reputed university for continuing my research works, contribute towards the development of the field to my full potential and attain the ultimate goal of my life which is to win a Nobel Prize. Therefore, this PhD programme is ideal for me to obtain necessary skills to realize my dream.