



SUNY POLYTECHNIC  
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## PhD Fellowship Grant Application SUNY Polytechnic, USA

NanoScale Engineering draws me for its complexities and colossal ramifications it has to better the world. I have constantly sought knowledge, with vehemence, in the realms that for most academics, don't even exist. Being the daughter of a Dean of XXXX in India, I've delivered to the high expectations from me whilst shattering ample stereotypes. I chose to complete my majors in Electricals and Electronic Engineering from the USA and graduated amongst the top three percentile. I have toiled to equip an esoteric knowledge bank in Nano Technologies with concerted efforts at work in the last five years, including two years of progressive research work and a valid internship with a reputable American company. My teenage girl aspirations are well sufficed with profound research in the substratum of Nano Engineering and an edified skill quiver abrim with technical proficiency in MATLAB, SimuLink, UniSim/Hysys and AutoCAD; even teaching VERILOG Coding, MEMs, and VLSI Principals as an assistant teacher at prestigious American universities.

Hitherto, I have consummated research experience in the area of Nano Measurement Tools, Electron Microscopy and Nano Fabrication and opine that the onus of steering science in the right direction is on a select few, who dare to shape their life around the most complex areas of science, unfettered on their learning promenade. It is to this rationale, of conducting abounding original research, particularly in semiconductor fabrication and Nanoscale Engineering that I aspire to pursue the coveted PhD Program at the SUNY Polytechnic University, USA. I am thus soliciting my scholarship application for the fellowship PhD program.

Reminiscing today, my learning began with my undergraduate program at JNTU campus. Four years of rigorous undergraduate studies introduced me to the science and working of MicroProcessors and Microcontrollers, Linear IC Application, Digital Signal Processing, Chip Architecture, Semiconductors and VLSI Design. As a scholar here, I was privileged to intern at the (BSNL) Bharat Sanchar Nigam Ltd, Hyderabad (2013-2015), A Govt. of India enterprise. My training areas included Digital Transmission Technology, SDH technology, and DWDM Technology which led to expansive exposure of scalable telecommunication networks and my efforts at BSNL were recognized with a Platinum Certified Engineer award.

I concluded my undergraduate education in 2015 with the highest academic achievement award and the best outgoing student award. The same year, I readily joined the XXXXX University, California, USA and started my Masters in Science with concentration in Electrical and Electronic Engineering. My coursework answered a bulk of my anticipation through advanced study modules covering Microelectronics Circuit Design, ASIC, Advance FPGA, Advance Analog IC Design, VLSI design and VERILOG.



I am indebted to my alma mater in facilitating a brilliant educational ecosystem and sparking my interest in Nano Engineering while working on data simulation projects. Through my major project, titled, 'Determination of Key Factors Contributing to Yield Excursions Downstream in the Semiconductor manufacturing process' I used BORUTA Algorithm and achieved 95% accuracy of neural network to predict the pass and fail cases of yield based on the most relevant features. I served my scholarly tenure here while gathering substantial experience as an on-campus Assistant Teacher and later worked with WiFi Alliance, California as WiFi Test Engineer from May 2017 - October 2017. The professional outing led to robust understanding of Supported Test Readiness Reviews (TRR) and System Verification Reviews (SVR) through gathering verification artefacts, managing Test and Evaluation Master Plans (TEMPs) and of effective certification of Wi-Fi enabled products.

To venture beyond the scope of my syllabus, I completed multiple certifications from Duke University, North Carolina State University gaining deeper insights into NanoCleanroom, Research Triangle Nano-Technology Network facilities and Energy Dispersive X-Ray Spectroscopy. For the ease of learning during PhD I have completed IBM certification in Python Development and partook in comprehensive training program in Nanotechnology and Nanosensors by Israel Institute of Technology conducted by Professor XXXXX, Head of the Laboratory for Nanomaterial-Based Devices (LNBD).

Since May 2018, I am working as Research Assistant Intern with XXXXX carrying out research activities as per lead request timelines and ensuring to cascade the research finding through graphs, spreadsheets and infographics. In the last two years at the firm, I have researched extensively in area akin to Nano Measurement and Characterization Tools: Scanning Electron Microscopy and Energy-Dispersion X-ray Spectroscopy, · Transmission Electron Microscopy, X-ray and Optical Characterization, Nano-fabrication: Vacuum Pumps and Thin Film Vacuum Deposition.

Throughout the last decade of my existence, I have been conscious to give my learning goals the utmost priority, making sacrifices not expected from me but mandatory to achieve superlative success in academia. Every step and decision, I have taken was in the direction to upgrade my academia and eventually to prepare myself for this very moment. It is now my singular goal to brainstorm in a research conducive educational environment and infrastructure under the tutelage of subject matter experts of Nano Engineering; attributes that are critical to my future success and visibly present at the much acclaimed SUNY Polytechnic University.

I therefore, request for a PhD fellowship grant at your campus to focus sans all distractions on my research endeavors and deliver impeccable results through exemplary scholarly conduct.

Sincerely  
Sree Vidya