**Personal Statement**

**Name: Jiajun Hu**

**MSc program: Communication and Signal Processing with Extended research**

**Affiliated Institution: University of Nottingham, Ningbo, China**

I am currently a final year undergraduate in the University of Nottingham, China Ningbo Campus, majoring in Electrical and Electronic Engineering. Our campus of the University of Nottingham carries a complete British education, where English is the official working language.

During my undergraduate education, the professional and research-oriented engineering program inspired me to investigate further and deeper in the field of EEE, including contemporary signal processing System, interdisciplinary Robotics, and modern computing modules such as embedded system and computer engineering. At the same time, my passion for communication and signal processing area has developed gradually.

In my year2 fundamental program project, I was enlightened to investigate the image processing field by constructing an auto-navigate electrical vehicle using Raspberry Pi and Arduino. Later, I joined the University Robotics Team as a member of visual computing group for auto-aiming function. Furthermore, I then accomplished an ultrasonic radar module-based speed detection project using STM32L with a certain FPGA board. At the meantime, I was conducting a power electronic system mainly focusing on the closed-loop feedback control part. Both in electrical power system and electronic embedded system, I was mainly focusing on manipulating the system signals in the forms of digital arrays in a computer or electrical voltage in PCBs.

From the last summer vacation, I joint a research group focusing on audio signal processing using Python. I have achieved preliminary signal activity detection and basic noise removal. For higher completeness and my own interests, I choose a graduate project which combines hardware (FPGA) and software together (C/C++ and VHDL) to drive hardware acceleration on signal processing and machine learning area.

I found it is truly magic that a signal can be manipulated and transformed using various method including Fourier Transform, Laplace Transform and Z-transform or simple numerical processing to interpret various information. The processing skills and algorithms act as an interpreter translating electrical signal into practical information. On the other hand, signal processing is now a combined with artificial intelligence to produce more emerging and impact outcomings in various domain such as the image processing for machine vision and intelligent sensor system. Also, the more advanced future communication and transmission technology will demand more experts with higher level knowledges. Participating in such an emerging area provides me countless employment chances ranging from Auto-drive vehicle and sensing system to traditional communication industry.

My goal is to become an expert in EEE filed such as an experienced engineer or an insightful researcher. Therefore, a master’s degree will benefit me both in industry and academic development.

University of Manchester is one of the leading research universities in the world, has been existing more than 190 years and produced more than 25 Nobel Laureates. Studying in such an outstanding elite university will be my great honor. Choosing an extended research program can enhance and practice my obtained learning skills and prepare my academic research career in my later time. Therefore, I am now proposing this Signal processing MSc program.