

Statement of Purpose

To whom it may concern,

“To live effectively is to live with adequate information.” *Norbert Wiener (1894-1964)*

I have always believed that the more essential knowledge one acquires, the easier he can lead a full and enhanced life. To have a better understanding of the world's complex system, and also human beings' life, a genuine comprehension of Mathematics is crucial since it is a direct reflection of life and it includes indeed the most complicated, yet real patterns inspired by the nature and the world we live in. Nowadays, one's expertise to a better world would require as much adherence as possible in a variety of topics and the capacity to relate them. Mathematics is a multi-purpose tool which realizes this goal by giving an intellectual, vivid astuteness and innovation to every mind. And this basic science is what constitutes the foundation of every engineering course, and most of all Electrical Engineering.

In our modern, technical world no one could possibly deny the important role that Automation plays in industrial societies. All activities are run well if they are aided by the impressive progresses of Automation and Control systems. Control is not only a science, but also an art which creates an optimal solution among interwoven concepts and unravels the most delicate connections between them.

My interest in the boundless science of mathematics and technology dates back to my childhood. At such a tender age, the beauty of numbers fascinated me and it would leave me walking around for hours calculating in my mind. I was always very bright in understanding mathematics, and my school years saw me being honored in several mathematics contests in my own level. This impressive background in mathematics introduced me as an exceptional talent in this field.

To enter public universities in Iran, which are highly regarded in and out of the country, participation and further success in a nationwide entrance exam is required at the end of 12 years of study. In the year 2006, having achieved an extraordinary rank of 320th among 300000 participants, I was admitted to enter universities. I chose Faculty of engineering in **University of Tehran**, since it is the most prestigious university in Iran, and has been ranked the best Iranian university in all rankings conducted around the world for many years. The high rate of mathematical concepts brightening the field of Electrical Engineering motivated me to pursue my undergraduate studies in that field. During my education, I followed all courses with much enthusiasm and passion, and I dedicated my endeavors to general comprehension of electrical concepts, including *Electrical Circuits*, *Electronics*, *Power systems* and *Telecommunications*, for all of which advanced perception of mathematics comes first in understanding the whole idea. The ensemble of these courses helped me gain more insight towards various disciplines.

As I started my third academic year, the diversity of ideas and applications covered by control engineering reassured me of my chosen path and guided me to the multidimensional realms of systems of Control and Automation as an interfaculty field based on mathematical methods and concerning the manipulation and optimization of industrial processes. What's more, as my current academic thesis I focus on Optimal Portfolio selection, which is composed of implementing and comparing two different approaches to reach a certain goal in the field of finance. In addition to my fierce appreciation for mathematical control and optimization, during this project I have attained a rich awareness towards its efficient applications.

Considering Italy's appetite for science, and the esteemed status of **Politecnico di Milano** all over the world, I chose Italy as my destination. On the other hand, Italy's enriched cultural society affirmed my initial fascination with this country, and the tremendous opportunities that Italian universities offer students with different backgrounds captivated my mind and ambitions. These unique circumstances motivated me to apply for a Master's Degree in **Politecnico di Milano**, which holds a highly-regarded position among academic institutes worldwide. Besides, my lifelong passion for Italy grew more immense in time and it led me to study its diverse aspects. Consequently, I studied Italian in **Scuola Italiana di Pietro Della Valle** in **Tehran**, and therefore my proficiency in Italian can also facilitate my life as a committed scholar in Italy. Should the courses be in English, I shall face no problem as my English will also act as a powerful asset. In addition, by studying at the **Polimi**, I would obtain the opportunity to expand my knowledge in a variety of directions which would all be ultimately governed by the profound powers of Control Engineering.

The everyday growth of science and technology inspires me to complete my significant former efforts in search of a better and more diverse future. As a consequence, I would appreciate a move to Milan and a chance to study Automation and Control Engineering in Politecnico di Milano in order to deepen my academic aptitude as a researcher and fulfill my intellectual, cultural and empirical potentialities as a human being. In a word, this program would lead me to a future in which I have a wider range of possibilities either to continue my education for a PhD degree, or achieve a more unique and functional method to use mathematics in quest of a specific target in numerous domains.

In conclusion, what I most certainly would obtain by studying Control Engineering in **Politecnico di Milano**, is not only formal education in a field that has interested me for a long time, but also an effective way to develop my knowledge and abilities so that I could be more well-informed and competent, both in research and practical areas.