

## **Speech to the SJTU freshmen, September 11, 2016**

I would like to welcome you as new students at one of the leading institutions of learning and higher education in China, Shanghai Jiao Tong University. To study here is a privilege but also a challenge. This is a creative environment where young minds like yours have the opportunity to develop into the leaders of tomorrow. But it is your task and your responsibility to make this happen.

Before I give you some advice on how to best use your time at SJTU, let me tell you about my own experience. I have had the pleasure and privilege of having been a professor in three continents: Europe, the United States and China. These are very different cultural contexts, but the goals and quest for excellence are the same. We live in a global world.

My education from elementary school to the PhD degree took place in Sweden. After that I had a full academic career from Assistant to Full Professor at various universities in the United States. After 11 years in USA I returned to Sweden to be a Chair Professor at the Royal Institute of Technology in Stockholm. For ten years I was also the Head of the Mathematics Department there, and the Director the Center for Industrial and Applied Mathematics. The last five years, finally, I have been a Chair Professor here at SJTU.

From this experience of mine I will now give you three points of advice to keep in mind as you begin your studies:

**1. Learning is a life-long endeavor.** What does this mean? You are not here to learn just for the purpose of passing exams. You are here to acquire knowledge, and this knowledge in turn forms the basis for further learning. Learning is a habit that should continue throughout one's life. In fact, a good teacher must be a role model as a learner. The idea is to foster a lifelong quest for knowledge.

**2. Learning and discovery require good work habits.** A well-known engineer and inventor, Thomas Edison, famously said that *genius is one percent inspiration and ninety-nine percent perspiration*. What did he mean? He meant that it is not enough for you to be clever. Hard work and persistence are essential. Occasionally one is frustrated by working for a long time on a difficult problem without apparent success. A famous mathematician, Paul Erdos, once said that *a problem worthy to attack proves its worth by fighting back*.

**3. One needs to be broadminded to take in new information.** Real contribution to science and society often requires a level of wisdom that incorporates alternative perspectives. You should not limit your interests to a narrow field of study. You should also look for solutions outside your field. You should develop into independent thinkers and discoverers -- not merely epigones. The university and good academic teachers can only show the way. The rest is up to the student.

With these points of advice I wish you all success in your future studies. You live in a time of rapid advances in science and technology, so learn for the future.