

ISE FACULTY PROFILE



Associate Professor Yunan Liu crossing the finish line of the Bronx Half Marathon

YUNAN LIU

What do a marathoner and an industrial engineering professor have in common? Answer: More than you think. Many of the reasons Yunan Liu chose to run long distances - achieving a goal, building confidence, testing yourself, and overcoming obstacles - are the same characteristics that make a good industrial engineer.

Runners consider the middle point of a marathon to be 20 miles, not 13.1. This is because the effort to finish the last 6.2 miles is the same as the first 20. In engineering terms, a marathon is far from linear. So each time ISE associate professor Yunan Liu “hits the wall” at the 20-mile marker, he asked himself, “Why?” “The answer I can come up with is that, from time to time, I want to push myself to my physical limit, to feel the pains, and to remind myself of what it takes to hold on to something so I can meet a challenge,” explains Liu. “But most importantly, the joy and satisfaction when I cross the finish line will be tremendous!” This mindset helps him face and solve challenging problems in his academic career. “If I am able to push myself to break my limits -

physical and mental - I should be able to do anything.

Since middle school, math and science have fascinated Liu. “When my fellow classmates were reading Chinese swordsman/knight-errand fictions or listening to pop music, I spent all my spare time reading popularized science books,” shared Liu. “In high school, I self-studied several advanced topics which were beyond the high-school curriculum, such as calculus and the theory of relativity.

After graduating from Tsinghua University with a degree in electrical engineering, Liu started working as an electrical and software engineer in the R&D department of a pharmaceutical company. Although he enjoyed solving real problems, he did not think the job provided the intellectual challenges he needed. “My craving for new knowledge created a void that my job was unable to fill,” said Liu.

Liu’s wife - his high school sweetheart - was getting her Ph.D. at Columbia University and encouraged him to enroll in the industrial engineering master’s program. Their initial plan was for Liu to get a master’s degree and then

find some lucrative job on Wall Street. However, he became so interested in his industrial engineering classes that he not only decided to pursue his Ph.D. but later join the faculty as well.

During his Ph.D. studies, Liu taught an undergraduate course, *Intro to Probability and Statistics*. It was such a wonderful experience that when he graduated from Columbia, pursuing an academic career was a simple and quick decision. “I enjoyed both teaching and educating students as well as solving challenging research problems,” said Liu.

It was the quality of the researchers and the healthy collaborative environment to attract Liu to NC State ISE. “Since I joined NC State in 2011, I have collaborated with faculty members in the ergonomics, health systems engineering, and production areas,” explained Liu. “I love being surrounded by high-quality researchers here at NC State. They have introduced me to many new research directions.”

Although his “career finish line” is still quite a ways off, there is little doubt in his mind that the joy and satisfaction will be tremendous! ■