

The 2014 McCormick Dean's Seminar Series



Dr. Dan Shechtman – Nobel Laureate
Israel Institute of Technology

Monday, October 20, 2014

4:00pm, McCormick Auditorium (Allen Center)

Reception to follow north of McCormick Auditorium in the Allen Center

“Technological Entrepreneurship – a Key to World Peace and Prosperity”

Most of the countries in the world lack significant natural resources and are characterized by low standard of living with little hope for improvement due to population growth and mismanagement. This is true also for countries that are rich in natural resources, but do not use them wisely. People that live in countries that enjoy high standard of living are industrious and their countries industrial. The basic reason of this division is technological entrepreneurship nourished by free market economy. Technologically entrepreneurial people make the difference. So, is there hope for everybody on the globe to improve their lives? Can technological entrepreneurship be motivated and taught so that generations of determined entrepreneurs will build up thriving economies? The clear answer to both questions is yes, but the process will take time and dedication. It all starts with education in general and scientific- technical education in particular. There is also a way to expedite the process – start with the already educated engineers and scientists. These are the first candidates for entrepreneurial endeavors. They can do it, but need motivation, continuous instruction and encouraging economic environment until they create successful start-ups and serve as role models for others. The name of the game is motivation. If this nucleus of capable people are motivated toward entrepreneurship, a process can start that will make a huge difference in a life of a country. Living examples to countries that underwent this process are China, Israel, South Korea and Turkey whose societies have shifted from agrarian to industrial within several decades thanks to the spirit of entrepreneurship and the motivation to create high-tech industries led and guided by individual engineers and scientists.

Biography: Dan Shechtman was born 1941 in Tel Aviv (Israel). After receiving his Ph.D. in Materials Engineering from the Technion in 1972, where he also obtained his B.Sc. in Mechanical Engineering in 1966 and M.Sc. in Materials Engineering in 1968, Prof. Shechtman was an NRC fellow at the Aerospace Research Laboratories at Wright Patterson AFB, Ohio, where he studied for three years the microstructure and physical metallurgy of titanium aluminides. In 1975 he joined the department of materials engineering at Technion. In 1981–1983 he was on Sabbatical at Johns Hopkins University, where he studied rapidly solidified aluminum transition metal alloys, in a joint program with NBS. On April 8, 1982, Shechtman discovered the icosahedral phase, which opened the new field of quasicrystals. In 1992-1994 he was on sabbatical at National Institute of Standards and Technology – NIST (formerly NBS), where he studied the effect of the structural defect of CVD diamond on its growth and properties. Shechtman's Technion research is conducted in the Louis Edelman Center, and in the Wolfson Centre which is headed by him. He is the Philip Tobias Distinguished Professor of Materials Science at the Technion, Israel Institute of Technology, an Associate of the US Department of Energy's Ames Laboratory, and Professor of Materials Science at Iowa State University. He was awarded twelve international and Israeli prizes including the Wolf Prize and the Aminoff Prize. In 2011 he received the Nobel Prize in Chemistry for "the discovery of quasicrystals". Shechtman is the fourth Israeli to win the Nobel Prize in Chemistry in under a decade. He is married to Prof. Zipora Shechtman, and has a son and three daughters. In his many lectures around the world Shechtman advocates education and in particular science education from early age as well as Technological Entrepreneurship as key to world peace and prosperity.