Mechanical Engineering
Academy of Distinguished Alumni

Joseph J. Beaman, Jr., Sc.D., P.E.

Distinguished Mechanical Engineer, 2011

BSME, The University of Texas at Austin, 1972
MSME, The University of Texas at Austin, 1975
ScD, Massachusetts Institute of Technology, 1979

Chaired Professor of Mechanical Engineering
The University of Texas at Austin

Joseph (Joe) Jefferson Beaman, Jr.'s parents were both native Texans, but Joe grew up in Tennesee, Japan, Illinois, France, and, most importantly, Marshall, Texas. Joe's father was a career U.S. Army officer and was stationed throughout the world, but he came back to his beloved Texas for good in 1962, where he became manager of the Longhorn Army Ammunition Plant close to Marshall, Texas.

With this pedigree, it was clear that Joe was destined to be a University of Texas Longhorn. Joe applied to only one university, The University of Texas at Austin, and he was accepted and enrolled in the fall of 1964 to study mechanical engineering. He graduated with a BSME in 1972 and enrolled as a masters student at The University of Texas. While working on his Masters, he joined IBM Austin in 1974. He finished his Masters in 1975 and applied to one graduate school, the Massachusetts Institute of Technology. He was accepted and enrolled as a doctoral student in the Fall of 1975. While at MIT, he worked on the control of nonlinear stochastic systems.

After graduating from MIT, Joe became an assistant professor at The University of Texas at Austin in the Fall of 1979. He became a full professor in 1989. His career work at UT has been in both manufacturing and control. His specific manufacturing research interest is in Additive Manufacturing (AM), sometimes called 3D Printing. He was the first academic researcher in the field. One of the most successful AM approaches, selective laser sintering, was a process that was developed in his laboratory. He was one of the founders of DTM Corporation (now merged with 3D Systems), which markets selective laser sintering. Joe has also worked extensively with the special metals processing industry to develop next-generation process control for super alloys and titanium alloys. He is a Fellow of ASME and the technical editor of the Journal of Dynamic Systems Measurement and Control of ASME. He was chair of the Department of Mechanical Engineering at UT Austin from 2001 to 2012. He was elected to the National Academy of Engineers in 2013, received the FAME Award in additive manufacturing in 2014, was elected to the National Academy of Inventors in 2015, and received the SME Albert M. Sargent Award in 2016.