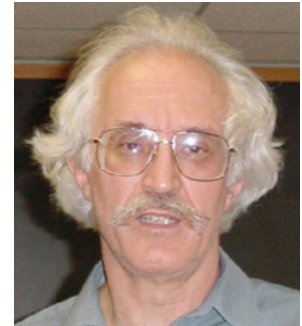**When:**   **Friday 15:00 – 16:00**
Where: **ETB 1003**

Speaker: **Prof. Edward R. Dougherty**

Robert M. Kennedy '26 Chair Professor
Distinguished Professor
Department of Electrical & Computer Engineering
Dwight Look College of Engineering
Texas A&M University

Title: **Modern Engineering as Translational Science**

Date: **01-27-2017**

Abstract: During the 1930s, mainly in the work of Norbert Wiener, engineering moved from a primitive trial-and-error search through possible solutions to a scientifically grounded mathematical analysis to arrive at an optimal solution in the context of a system model. The object is to find an operation (filter, controller, classifier, etc.) that performs optimally on a mathematically modeled physical system relative to some performance measure. The problem reduces to system modeling and mathematical optimization. The gain is the attainment of operators that are optimal relative to human knowledge.

Reading:

1. Dougherty, E. R., "Translational Science: Epistemology and the Investigative Process," Current Genomics, Vol. 10, No. 2, 102-109, 2009.

Biography: Dougherty holds a Ph.D. in mathematics from Rutgers University and an M.S. in Computer Science from Stevens Institute of Technology, and has been awarded the Doctor Honoris Causa by the Tampere University of Technology. He is Distinguished Professor at Texas A&M, a fellow of both IEEE and SPIE, has received the SPIE President's Award, and served as the editor of the SPIE/IS&T Journal of Electronic Imaging. At Texas A&M, he has received the Association of Former Students Distinguished Achievement Award in Research, been named Fellow of the Texas Engineering Experiment Station and Halliburton Professor of the Dwight Look College of Engineering. He is author of 16 books and author of more than 300 journal papers.