

**University of Rochester  
Department of Electrical and Computer Engineering  
Distinguished Speaker Series**

**CMOS Image Sensors and Quanta Image Sensors**

Professor Eric R. Fossum,  
Dartmouth College

Wednesday, November 5<sup>th</sup>

11:50AM – 12:50PM  
Computer Studies Building, Room 209



**Abstract:** This talk will discuss the invention and development of CMOS image sensors now used in most cameras – from cell phones to digital cinema. Some of the basic principles of imaging and the operation of CMOS image sensors will be presented. A possible next generation image sensor, the Quanta Image Sensor, will also be presented.

**Biography:** Eric R. Fossum is a Professor at the Thayer School of Engineering at Dartmouth and coordinates the School's Ph.D. Innovation Program. While at JPL/Caltech, he invented the CMOS image sensor used in billions of camera phones, webcams, DSLRs, swallowable pill cameras, dental x-ray sensors, and many other applications. He co-founded and led Photobit to further develop and commercialize the technology (acquired by Micron.) He then led a second startup, Siimpel, to develop MEMS devices for autofocus in cell phone cameras (acquired by Tessera.) He has published over 260 technical papers and holds over 150 U.S. patents. Honors include induction into the National Inventors Hall of Fame and the Space Technology Hall of Fame, election to the National Academy of Engineering and the new National Academy of Inventors. He is an IEEE Fellow and has received the IEEE Andrew Grove Medal and the NASA Exceptional Achievement Medal. He co-founded the International Image Sensor Society and served as its first President. He will receive SMPTE's Camera Origination and Imaging Medal in October 2014. He and his wife have a small hobby farm and he enjoys his time on his tractor.