

**Welcome**  
**Seminar Series of the Department of Computer Science Electrical Engineering**  
**Presents**

**Focal-plane Image Compression: Results and New Directions**

March 21, 2008. Time: 2:00-3:00PM. FH 557.



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**Abstract**

This seminar will talk about the integration of image compression solutions on the focal-plane. We will review the advantages and challenges of such an endeavor. The technological advances in CMOS circuit fabrication that have made the development of integrated image sensors possible will be reviewed; including the evolution of the active-pixel sensor (APS) technology and its advantages over CCD sensors. An on-sensor compression paradigm - based on the integration of an analog-to-digital converter (ADC) - and an entropy coder will be presented along with their relevance to the problem of on-sensor compression. Different ADC architectures suitable for this integration will also be discussed. The talk will finish with a revision of published work in the area of focal-plane compression and with a discussion of future directions.

**Bio:** Dr. Leon-Salas joined UMKC's Dept. of Computer Science Electrical Engineering as an Assistant Professor in August 2007 where he teaches analog and mixed-signal integrated circuit design courses. His research interests include on-sensor processing, data compression, analog-to-digital conversion, integrated circuits for biomedical applications, and ultra-wideband communication systems.