

UNIVERSITY OF TEXAS AT DALLAS - DEPARTMENT OF PHYSICS
PHYSICS COLLOQUIUM

<http://www.utdallas.edu/physics/lectures/info/>

Wednesday, September 26, 2007; 4:00-5:00 PM
Kusch Auditorium, FN 2.102

**Physics and Micro-Mirror Arrays for Light
Processing**

or

It's amazing. It's the mirrors.™

Dr. Walter Duncan

Texas Instruments

The DLP® Products Digital Mirror Device (DMD) is a binary spatial light modulator operated typically at visible and near IR wavelengths. We have studied the optical properties of DMDs with coherent and incoherent light sources using a myriad of methods including scatterometry (diffractometry) and Doppler vibrometry to develop models for the DMDs optical performance. This talk will review these studies and applications of the DMD to light processing. A history of the invention and refinement of the DMD will also be described. It's amazing. It's the mirrors.™

About the speaker: Dr. Walter Duncan is a senior member of the technical staff and system development manager for Optical Signal Processing Products in Texas Instruments' DLP Products Division. Since joining TI in 1979, Dr. Duncan has been a technical contributor to the development of monolithic microwave integrated circuits, advanced silicon processing, photonic devices, and advanced characterization. He is also an Adjunct Professor at the Department of Physics of UTD.