UTD   <u>**Electrical Engineering Colloquium**</u>
<u>**Dallas Chapter of IEEE Signal Processing Society Presents**</u>

Smart Camera Systems Technology Roadmap

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Consider a 'smart' camera to be a software-programmable camera in which video data digitized from the image sensor is fully exposed to software for processing. This seminar outlines the spectrum of application-specific requirements for real-time image, video and vision processing in camera systems, emphasizing consumer electronics, automotive vision and video surveillance equipment. Related technology trends as they affect the design and development of camera architectures and processors are explained. Examples of smart camera systems, including consumer cameras that have been developed using DSPs, are described. Finally, the requirements and trends are extrapolated to project future requirements for smart camera systems, as well as related challenges for vision research.

Dr. Bruce Flinchbaugh, TI Fellow, manages video and image processing projects in the DSP R&D Center at Texas Instruments. Current activities target standardization and adoption of H.264 / AVC, China AVS, MPEG SVC and OpenGL ES in digital cameras and cellular phones. Since 1982, Bruce and his teams have enabled TI products for diverse systems, including the development of algorithms and DSP-based prototypes for intelligent video surveillance, network video recording and digital cameras. He holds eighteen patents for TI methods and has published or presented in over 60 technical forums including journals, industry trade magazines and conferences.

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