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IEEE Microwave Theory and Techniques Society Washington DC/Northern VA Chapter

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Millimeter Wave Imaging

David Wikner

U.S. Army Research Laboratory
Adelphi, MD

The eSCANNER

MTT-S

2007 IMS - Hawaii

ARFTG

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since 09-07-04

Date: Tuesday, March 13, 2007 (Rescheduled from February)

Time: Lecture 7:00 pm

Place: Mitre Corporation Building 2, 7515 Colshire Drive, McLean VA [directions](#)

Cost: The lecture is free.

Optional Dinner:

Please join the speaker and the membership for dinner at Clydes of Tysons Corner
8332 Leesburg Pike
Vienna VA 22182
703 743 1901

Dinner begins at 5:30 PM. The cost will be \$15, excluding alcoholic beverages. Following dinner, it will be a short drive to the lecture site at Mitre Corporation.

RSVP for dinner only by Friday March 9 2007 to Roger Kaul, 301-394-4775, r.kaul@ieee.org.

Abstract: This presentation will review progress that has been made over the last fifteen years in the design and use of millimeter-wave (MMW) imagers. This technology has been pursued because of its capability for imaging through clothing, fog, smoke, and dust with high enough spatial resolution to be useful. This makes it appropriate for such applications as concealed weapons detection, helicopter situational awareness in low-visibility, and surveillance. This type of imaging is distinct from radar in that the receivers do not usually perform coherent detection and ranging. Rather, imagery is collected in a manner similar to an infrared or visible camera and data is presented in an easy to interpret two-dimensional image. In this talk the device technologies, system architectures, and phenomenology associated with MMW imaging will be discussed. Also presented will be the outlook for future imaging systems that promise affordability in kilo-pixel camera systems..

Bio: David Wikner has been actively involved in MMW radar and imaging research for the past 18 years at the Army Research Laboratory. His work has focused on advanced imaging system architectures, device technology and phenomenology. He developed a Stokes-vector passive MMW imaging system that is used for studying the polarimetric signatures of materials and objects for Army applications. His current work pursues the development of affordable device technology for next generation MMW imagers.

Next Talk:

[H. Bruce Wallace](#) April 17 2007 at the American Center for Physics
— "Millimeter Waves --Myths and Reality"

Previous Talks:

[Dr. Peter Siegel](#) Nov 14 2006.

"Terahertz Technology in Inner and Outer Space"

[Dr. James Komiak - Sep 12 2006](#)

["Design and Performance of Microwave and Millimeter Wave High Efficiency Power Amplifiers"](#)

New Local Chapter Administrative Committee members are needed.

Join us in planning the next lecture. Please volunteer... everyone has something to offer. Please contact 2007 Chapter Chair Bruce Levine at bruce.levine@ieee.org.

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