



**TENNESSEE VALLEY CHAPTER
AMERICAN
VACUUM SOCIETY**

P. O. Box 5734

Oak Ridge, Tennessee 37831-5734

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Announcement of Dinner Meeting

Everyone is welcome to attend. To reserve a place, please contact Dave Beach by March 10 either by email at beachdb@ornl.gov or by phone at 423-574-5024.

Date: Tuesday, March 11, 1997

Location: Italian Market and Grill
9648 Kingston Pike (in Franklin Square, between Cedar Bluff and the Pellissippi Parkway)
Knoxville

Time: 6:30 No-host bar
7:00 Dinner
8:15 Program

Menu: House of Caesar Salad
Choice of Veal Picatta, Chicken Marsala or Lasagna
Coffee and Desert

Cost: \$5 for students
\$10 for AVS members and guests
\$10 for the general public

Program: The Silicon Age

Speaker: Prof. Len Feldman, Dept. of Physics and Astronomy, Vanderbilt University

Abstract:

The passage of human history is denoted by the dominant materials of the time -- The Stone Age, The Bronze Age, etc. The current era may be marked as The Silicon Age. Manipulation of this material into the microchip has played a dominant role in all aspects of industrialized society. The silicon revolution is one of the premier successes of physics and technology.

Silicon persists as the dominant semiconductor material of the present and foreseeable future. The advances in silicon technology will persist well beyond the end of the century and reach a feature size level below one tenth of a micrometer. At this size, fundamental physics limits are reached and new device structures will be required. Research and development is actively involved in maintaining this timeline of feature size reduction, and, at the same time, seeking new silicon-based structures which will permit the extension of the "silicon revolution".

This talk will describe the global trends and physics limitation of silicon technology, and outline areas of breakthrough research.

TVC-AVS Symposium

Mark your calendars. This year's symposium is set for May 22 at the Cedar Bluff Holiday Inn in Knoxville (same place as last year). Details in the next newsletter or keep an eye on our homepage (<http://luf.ssd.ornl.gov/TVC-AVS.html>).

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