Accurate Clocks and Their Applications
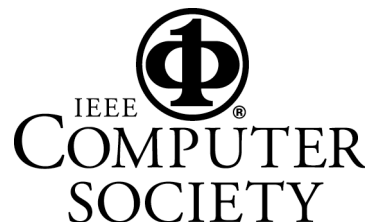
Clocks are "everywhere"; not only in visible places, such as wrist watches and alarm clocks, but in everything electronic: radios, TVs, computers, radar systems, GPS…

This talk will review the applications and fundamentals of quartz and atomic clocks. Emphasis will be on aspects that are of greatest interest to users (as opposed to designers). The discussion will include some interesting applications of clocks, resonator and oscillator basics, atomic clock basics, the characteristics and limitations of clocks, and recent developments.

John Vig received the B.S. degree from the City College of New York and the Ph.D. from Rutgers in 1964 and 1969, respectively. He spent his professional career performing and leading R&D in government research laboratories (at Ft. Monmouth, NJ) – developing high stability quartz crystal resonators, oscillators, and sensors. He has been awarded 55 patents and is the author of more than 100 publications, including nine book chapters.

Since 1997, he has been a consultant, mainly to program managers at the US Defense Advanced Research Projects Agency (DARPA) for programs ranging from micro- and nanoresonators to chip-scale atomic clocks. He is an IEEE Fellow, and the winner of the IEEE Cady and IEEE Sawyer awards.

He is the founding president of the IEEE Sensors Council - which now has a successful journal, the IEEE Sensors Journal, and a successful conference, IEEE SENSORS. He has served on the IEEE Board of Directors for six years. In 2005, he was IEEE Vice President for Technical Activities, and in 2009, he was President and CEO of the IEEE.

Date: Thursday, November 17, 2011, 8:00 pm.
            (Refreshments and networking at 7:30 pm.)
Place: Small Auditorium, Room CS 105
            Computer Science Building, Princeton University
Information: Dennis Mancl (908) 582-7086, Jan Buzydlowski (610) 902-8343
On-line info: **www.acm.org/chapters/princetonacm**

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner is held at 6:00 p.m. at Ruby Tuesday's Restaurant on Route 1. Please send email to **princetonacm@acm.org** in advance if you plan to attend the dinner.