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The Information Science and Technology Center



*Knowledge to Go Places*

...at **Colorado State University**

Colorado State University's Information Science and Technology Center (ISTeC)

*presents two lectures by*



**Dr. Rochit Rajsuman**

Chief Scientist, Advantest America Corporation

## **ISTeC Distinguished Lecture**

**“State of Semiconductor Industry:  
Business and Technical Perspective”**

**Tuesday, August 29, 2006  
Lecture: 11:00 a.m. to 12:00  
Clark A204**



**Joint Electrical and Computer Engineering Department and  
Computer Science Department Seminar**

sponsored by ISTE C

**“Industrial Research in Semiconductor Test”**

**Tuesday, August 29, 2006  
Lecture: 9:30 a.m. to 10:30  
Wagar 132**

# ABSTRACTS

## **“State of Semiconductor Industry: Business and Technical Perspective”**

According to analysts such as World Semiconductor Trade Statistics (WSTS), Semico and others, the worldwide semiconductor market in 2005 was about \$227B, an increase of about 6% from 2004. The same analysts project \$237B in 2006. While this indicates an increasing market, the growth rate is that of a mature market, compared to the 18-20% compound annual growth rate in the 1990s. What this revenue does not show is what is happening in the United States and other parts of the world because the media is only reporting increasing activities in Asia. Similarly, the media only reports on research on exotic materials, fancy transistor structures, and molecular devices. Have silicon based electronics really hit a brick wall in shrinking the transistor below 50 nanometers? This talk will address both business and technical issues, and will project future directions.

## **“Industrial Research in Semiconductor Test”**

There are four primary segments in the semiconductor test industry: (i) automatic test equipment; (ii) material handling equipment; (iii) hi-fix and probe equipment for wafer test; (iv) software including design-for-test and built-in-self-test tools. This seminar will provide an overview of the state of equipment and tools in each area.

[Dr. Rochit Rajsuman](#) received his Ph.D. in Electrical Engineering from CSU in 1988. He served on the faculty in the Department of Computer Engineering and Science at Case Western Reserve University for seven years. During that time, he also held a secondary appointment in the Department of Electrical Engineering. He left academia to join LSI Logic as Product Manager for Test Methodologies. Dr. Rajsuman then joined a media processor start-up, Equator Technologies. In 1998 he joined Advantest America R&D Center as Manager of Test Research. In 2001 he became Chief Scientist at Advantest America R&D Center and since 2004 is the Chief Scientist at Advantest America Corporation (the parent corporation). He has authored/co-authored over 50 patents and numerous papers, and authored three books “System-on-a-Chip: Design and Test” in 2000, “Iddq Testing for CMOS VLSI” in 1995, and “Digital Hardware Testing” in 1992. He is an IEEE Fellow and recipient of the Computer Society’s Golden Core Award.

**To arrange a meeting with the speaker**, please contact Anura Jayasumana at (970) 491- 7855 or [Anura.Jayasumana@Colostate.edu](mailto:Anura.Jayasumana@Colostate.edu)

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