

## Santa Clara Valley Chapter, Education Society

### Evening Talk: **Are we Ready for the “Nano World”, Education-wise?**

#### **Prof. Cary Y. Yang, Santa Clara University**

Date: Wednesday, 9/29/04

Time: 6:30PM Social, 7-8PM Presentation

Location: Silicon Valley Technical Institute,

1762 Technology Drive, Suite #227, San Jose

Reservations: Not Required

As Silicon Valley and the rest of the world brace themselves for the dawning of the nano era, one cannot help wondering, aside from the obvious question of hype versus reality, the extent to which this emerging industry will impact our entire education system. On one hand, one can view this excitement as an opportunity to harness the necessary energy and resource to improve and perhaps even overhaul our K-20 education. Even modest success in this direction would result in improved workforce preparation, not only for one industry, but for society in general. On the other hand, one must not lose sight of the impact and potential impact, both intended and unintended, of such a surge on the human condition. A natural question to raise is, will the benefits far outweigh the potential harm, if any? This consideration would create yet another opportunity for further study among social scientists and technologists. These two contrasting but complementary scenarios will be discussed.

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CARY Y. YANG received the B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Pennsylvania in 1970, 1971, and 1975, respectively. After working in various research positions at M.I.T., Stanford, and NASA, he founded Surface Analytic Research, Inc. in Mountain View, California and directed sponsored research in surface and nanostructure science. In 1983 he joined Santa Clara University and is currently Professor of Electrical Engineering, Associate Dean of Engineering, and Director of Center for Nanostructures.



Over the past two decades, Professor Yang has initiated innovative programs to educate and train technical professionals in various stages of their careers. In the eighties, he developed and organized short courses on timely topics in silicon technology to Silicon Valley professionals. In the mid-nineties, he offered short courses on semiconductor technology for SEMI as part of a retraining program for professionals in other fields. Since the mid eighties, he has provided opportunities for his students to spend extended periods in companies in Japan, where they collaborated with their hosts on their thesis research. More recently, he founded the Center for Nanostructures at Santa Clara, which offers interdisciplinary research and education opportunities for university students and faculty, high school students and teachers, as well as Silicon Valley technical professionals.

Dr. Yang has been a consultant to industry and government, and a visiting professor at Tokyo Institute of Technology, University of Tsukuba, National University of Singapore, the University of Pennsylvania, and the University of California, Berkeley. He is a Fellow of IEEE and served as Santa Clara Valley Chapter Chair, Regions/Chapters Chair, Vice President, and President of the IEEE Electron Devices Society. From 2002 to 2003, he served as an elected member of the IEEE Board of Directors, representing Division I. He was an editor of the IEEE Transactions on Electron Devices, in the area of MOS devices.