

Written Bio:

PAUL LATIOLAIS is the Center Director for Innovation and Commercialization at Lamar University, which serves as an incubator for emerging technology under development at the university. The center's purpose is to bring emerging technologies out of research and prepare them for the marketplace leveraging expertise from Lamar's colleges of engineering, science, and the college of business.

Paul has extensive industry experience in engineering technology, business development, and product launch to Fortune 500 companies. He has initiated numerous technology products in the semiconductor/hi-tech industries and managed the lifecycle process from product development, incubation, launch, marketing, and next-generation introduction. Mr. Latiolais worked with technology global leaders such as Synopsys, Inc. (NASDAQ:SNPS), Mentor Graphics Corp. (NASDAQ:MENT), Schlumberger, and Northrop-Grumman across the US including San Jose, CA and Portland, OR. Mr. Latiolais holds a B.S. in Mechanical Engineering from Texas A&M University and an MBA from George Fox University (Newberg, OR) as well as general management certificates from the Oregon Graduate Institute.

Verbal Intro:

PAUL LATIOLAIS is the director of Lamar's new innovation & commercialization center. The center's purpose is to evaluate emerging technologies developed at the university, determine their commercial viability, and then bring these technologies to the marketplace.

Paul comes to us from San Jose, CA and Portland, OR where he has spent his career developing & implementing next-generation technologies for the semiconductor & electronics industry. His client list includes Intel, Motorola, Cisco, Nokia, Apple, Dell, and many other hi-tech companies.

Paul earned his degree in mechanical engineering from Texas A&M, and an MBA from George Fox University in Newberg, OR.

What is next in High resolution Electron Microscopy in Nanotechnology?

By Miguel Jose Yacaman
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Modern electron microscopy has achieved an old dream to break the 1Å resolution barrier. Indeed Microscopes such as the ARM in UTSA have a resolution of 0.8 Å (80 pm) that can be achieved in a routine basis. Our microscope was the number one in the world until recently the DOE center at Berkeley achieved 0.5 Å. In real terms since the size of the atom is in that range (He atom is 40 pm) it means that the resolution that we have achieved is the limit of can be achieved. Below the nuclear interactions will dominate and other phenomena will dominate.

So what is the Future of Electron Microscopy? It can be said that from now on all the improvements will be not in resolution but in other areas. In this talk we will review the most significant areas of nanotechnology that demand significant improvements in Electron microscope techniques. Some examples are the need of more accurate in situ experimentation and measurements, Single electron detection, need of low voltage and many others.

Miguel José Yacaman, PhD

Dr. Miguel Jose Yacaman is Professor and Chair of the Department of Physics and Astronomy at The University of Texas at San Antonio. He is a distinguished scientist of international reputation who has made fundamental contributions to nanoscale physics. He has done research in many areas of physics and nanotechnology, particularly the synthesis and characterization of new materials, most of them nanoparticles, surfaces and interfaces, defects in solids, electron diffraction and imaging theory, quasicrystals, archaeological materials, and catalysis. Dr. Yacaman has more than 400 publications and his work has been cited extensively. He has received, among many other honors, the National Prize in Exact Sciences of the Mexican Academy of Sciences, the National Prize of Sciences in Mexico, the Melh Award and Distinguished Lecture of the U.S. Metals and Materials Society, and a Guggenheim Fellowship. He is also a Fellow of the American Physical Society. Dr. Yacaman received his Ph.D. in Materials Science from the National Autonomous University of Mexico, and did postdoctoral work at the University of Oxford and at NASA-AMES Research Center. Over the years he has served in many academic and professional positions.