

# CURRICULUM VITAE

John Andrew Panitz

J. A. Panitz is Emeritus Professor of Physics at the University of New Mexico. He joined UNM in 1988 and during his tenure he was Professor of Physics, Professor of High Technology Materials and Professor of Cell Biology in the School of Medicine. At UNM he developed *Visual E&M* the first undergraduate laboratory courseware that encouraged critical thinking and role playing in the structured environment of cooperative learning groups.

From 1970 to 1988 Professor Panitz was a member of the technical staff at the Sandia National Laboratory in Albuquerque. At Sandia he invented the *LiFE Detector* a novel immunochemical sensor and the *10cm Atom Probe*, the first 3D atom probe (patented as the *Field Desorption Spectrometer* or *Imaging Atom Probe*) which became the progenitor of *Atom Probe Tomography* and the commercial atom probes in use today.

In 1993 Professor Panitz founded High-Field Consultants to provide expertise and training in high-field phenomena and chemical analysis at the atomic level.

## **Research Interests**

Molecular imaging in high electric fields. Binding of biological molecules at metal and semiconductor surfaces from aqueous solution using cryopreparation and cryofixation techniques. Field Ion Microscopy, Atom-Probe Tomography, field-ionization, field electron emission tunneling and field ionization of liquid metals.

## **Education and Professional Experience**

2004 - Emeritus Professor of Physics.  
Department of Physics and Astronomy.  
The University of New Mexico. Albuquerque, NM 87131.

2001 - 2004 Professor of Physics.  
Department of Physics and Astronomy.  
Professor of High-Technology Materials, Center for HTC.  
Professor of Cell Biology and Physiology, School of Medicine.  
The University of New Mexico. Albuquerque, NM 87131.

1988 - 2001 Associate Chair.  
Department of Physics and Astronomy.  
Professor of Physics, Department of Physics and Astronomy.  
Professor of High-Technology Materials, Center for HTC.  
Professor of Cell Biology, School of Medicine.  
The University of New Mexico. Albuquerque, NM 87131.

1987 - 1988 Member of the Technical Staff.  
Laser Projects Division 1275.  
Sandia National Laboratories. Albuquerque, NM 87185.

1985 - 1987 Visiting Research Professor of Cell Biology.  
The University of New Mexico School of Medicine.  
The University of New Mexico. Albuquerque, NM 87131.

1970 - 1985 Member of the Technical Staff.  
Surface Science Division 5114/1134.  
Sandia National Laboratories. Albuquerque, NM 87185

1969 - 1970 Postdoctoral Fellow.  
Ionosphere Research Laboratory.  
The Pennsylvania State University, University Park,  
Pennsylvania.

1966 - 1969 Ph.D. Physics.

The Pennsylvania State University, University Park,  
Pennsylvania.

1965 - 1966 M.S. Physics.

The Pennsylvania State University, University Park,  
Pennsylvania.

1962 - 1965 B.S. Physics.

The Pennsylvania State University, University Park,  
Pennsylvania.

### **Professional Associations**

2014 Board of Directors, University of New Mexico Retiree  
Association.

2011 Owner and Curator, Gallerie Imaginarium.

2008 President, University of New Mexico 21 Club.

1990 Editorial Board, Journal of Vacuum Science and  
Technology (B).

1986 Editorial Board, Review of Scientific Instruments.

1986 Steering Committee, International Field Emission  
Symposium.

1980 Member, New York Academy of Sciences.

1979 Member, American Chemical Society.

1978 Member, American Association for the Advancement of  
Science.

1973 Member, American Physical Society.

1972 Member, American Vacuum Society.

1969 Member, Field-Emission Symposium.

1968 Member, Phi Eta Sigma.

1968 Member, Sigma Pi Sigma.