

**BIOGRAPHY FOR
MEMBERSHIP AT LARGE CONSTITUENCY DIRECTOR**

Name: Howard S. Matis

Present Position: Affiliate Staff Scientist

Organization: Lawrence Berkeley National Laboratory

Chapter Affiliation: Membership-at-Large

Biographical Information: Howard Matis earned his B. S. in Physics from Rensselaer Polytechnic Institute and his S. M. and Ph. D from the University of Chicago where the topic of his thesis was deep inelastic muon scattering at Fermilab. As a post-doc at The University of Chicago and later at Los Alamos National Laboratory he studied the quark and gluon structure of the proton and neutron and searched for forbidden decays of the muon. He then moved to Lawrence Berkeley National Laboratory, where he was the Bevalac Scientific Officer of the ultra-relativistic collider, the Bevalac. There he studied the compression of nuclear matter with the Dilepton Spectrometer and EOS detector. He then joined the team to build the STAR experiment, which is still actively taken data at the RHIC accelerator at Brookhaven National Laboratory. The purpose of STAR is to study the formation and characteristics of the quark-gluon plasma (QGP) – a state of matter created when nuclei are compressed to extreme temperatures and pressures. He then helped design the Heavy Flavor Tracker for STAR to study the production of charmed particles at STAR. In that research, he was one of the principle contributors to the first Active Pixel Sensor to be used to measure x-ray distributions. He also contributed to the construction and design of the Ice Cube Neutrino Observatory at the South Pole and the LUMI detector that measures the luminosity of the collisions at the LHC. He is currently an Affiliate Staff Scientist at both Lawrence Berkeley National Laboratory and UC Berkeley. He has more than 800 published papers. He is a fellow of both the American Physical Society and the American Association for the Advancement of Science.

In addition to his scientific career, he has been active in many educational projects to publicize the contributions of physics to the general public. He was the project leader for Nuclear Science Wall Chart which summaries modern Nuclear Physics as part of the Contemporary Physics Education Project (CPEP) – <http://www.CPEPphysics.org>. He is now leading that organization as president. In addition, he has created a popular cosmic ray detector at <http://cosmic.lbl.gov> and nuclear physics education web site <http://abc.lbl.gov>. He has been on the fellowship selection committee member for both the National Science Foundation's Graduate Research Fellowship Program and Department of Defense's National Science and Engineering Graduate Fellowship Program.