

Alan Michael Litke

SCIPP
Natural Sciences 2
University of California
Santa Cruz, CA 95064

SCIPP Phone: 831-459-1713; SCIPP Fax: 831-459-5777
CERN Phone: 41-22-767-7376; CERN Fax: 41-22-766-9588
e-mail: alan.litke@cern.ch

EDUCATION and TRAINING

Johns Hopkins University	Physics	B.A., 1964
Harvard University	Physics	M.A., 1966
Harvard University	Physics	Ph. D., 1970
Harvard University	Physics	Postdoctoral Fellow, 1970–73
Lawrence Berkeley Lab	Physics	Research Fellow, 1973–75

RESEARCH and PROFESSIONAL EXPERIENCE

1985–present Adjunct Professor, University of California, Santa Cruz
1984–85 Associate Research Physicist and Adjunct Professor, University of California, Santa Cruz
1981–82 Scientific Associate, CERN
1975–83 Assistant Professor of Physics, Stanford University

SELECTED PUBLICATIONS (related to proposed project)

1. “Search for Diphoton Events with Large Missing Transverse Energy in 1 fb⁻¹ of 7 TeV Proton-Proton Collision Data with the ATLAS Detector”, ATLAS Collaboration, *Physics Letters B* **710** (2012) 519.
2. “Search for Diphoton Events with Large Missing Transverse Energy in 7 TeV Proton-Proton Collisions with the ATLAS Detector”, ATLAS Collaboration, *Phys.Rev.Lett.* **106** (2011) 121803.
3. “Search for Diphoton Events with Large Missing Transverse Energy with 36 pb⁻¹ of 7 TeV Proton-Proton Collision Data with the ATLAS Detector”, ATLAS Collaboration, *Eur. Phys. J.* **C71** (2011) 1744.
4. “Single photon and multiphoton production in e+e- collisions at \sqrt{s} up to 209-GeV”, ALEPH Collaboration, *Eur. Phys. J.* **C28**, 1-13 (2003).
5. “Search for gauge mediated SUSY breaking topologies in e+e- collisions at center-of-mass energies up to 209-GeV”, ALEPH Collaboration, *Eur. Phys. J.* **C25**, 339-351 (2002).

OTHER SELECTED PUBLICATIONS (related to synergistic activities)

1. “A wireless multi-channel neural amplifier for freely moving animals”, Szuts TA, Fadeyev V, Kachiguine S, Sher A, Grivich MV, Agrochão M, Hottowy P, Dabrowski W, Lubenov EV, Siapas AG, Uchida N, Litke AM, Meister M., *Nature Neurosci.* **14**, 263-9 (2011).
2. “Functional connectivity in the retina at the resolution of photoreceptors”, Field GD, Gauthier JL, Sher A, Greschner M, Machado TA, Jepson LH, Shlens J, Gunning DE, Mathieson K, Dabrowski W, Paninski L, Litke AM, Chichilnisky EJ, *Nature* **467**, 673-7 (2010).
3. “Spatio-temporal correlations and visual signaling in a complete neuronal population”, J. W. Pillow, J. Shlens, L. Paninski, A. Sher, A. M. Litke, E. J. Chichilnisky, E. P. Simoncelli, *Nature* **454**, 995- (2008).
4. “Identification and characterization of a Y-like primate retinal ganglion cell type”, D. Petrusca, M.I. Grivich, A. Sher, G.D. Field, J.L. Gauthier, M. Greschner, J. Shlens, E.J. Chichilnisky, A.M. Litke, *J. Neuroscience* **27**, 11019-11027 (2007).

5. “What Does the Eye Tell the Brain?: Development of a System for the Large-Scale Recording of Retinal Output Activity”, A. M. Litke, N. Bezayiff, E. J. Chichilnisky, W. Cunningham, W. Dabrowski, A. A. Grillo, M. Grivich, P. Grybos, P. Hottowy, S. Kachiguine, R. S. Kalmar, K. Mathieson, D. Petrusca, M. Rahman and A. Sher, IEEE Transactions on Nuclear Science **51**, 1434-1440 (2004).

SYNERGISTIC ACTIVITIES

- April, 2010 “Deciphering the Signal Output of the Eye”, invited talk, special session on “Spin-Offs & Applications from Nuclear & Particle Physics Research”, IEEE MELECON Conference
- Sept., 2008 “A Biological Position Sensitive Detector”, invited keynote address, 8th International Conference on Position Sensitive Detectors (Glasgow University)
- March, 2008 “What Does the Eye Tell the Brain?: A Journey from High Energy Physics to Neural Systems”, colloquium, Fermi National Accelerator Laboratory
- April, 2006 “Large Scale Imaging of the Retina”, invited closing talk, International Symposium on the Development of Detectors for Particle, Astro-Particle and Synchrotron Radiation Experiments, (SLAC)
- 1996-2006 Member, International Advisory Committee, International Workshops on Vertex Detectors, VERTEX 1996-2006

COLLABORATORS: ALEPH Collaboration (400 physicists), M. Agrochao (Harvard), A. Anishchenko (UCSD), ATLAS Collaboration (3000 physicists), J. Beggs (Indiana U.), W. Chen (Indiana U.), E. J. Chichilnisky (Salk Institute), W. Cunningham (U. of Glasgow), W. Dabrowski (AGH U. of Science and Technology, Krakow), J. Elstrott (UCSD), V. Fadeyev (UCSC), D. Feldheim (UCSC), M. Feller (UCSD), G. D. Field (Salk Institute), E. S. Frechette (Salk Institute), J. L. Gauthier (Salk Institute), M. Greschner (Salk Institute), A. A. Grillo (UCSC), M. V. Grivich (UCSD), P. Grybos (AGH U. of Science and Technology, Krakow), D. Gunning (U. Strathclyde), J. Hobbs (Indiana U.), P. Hottowy (AGH U. of Science and Technology, Krakow), D. Jackson (Brown U.), LH Jepsen (UCSD), S. Kachiguine (UCSC), R. S. Kalmar (Stanford U.), EV Lubenov (Cal Tech), A. Lumsdaine (U. Indiana), TA Machado (UCSD), K. Mathieson (U. Strathclyde), M. Meister (Harvard U.), L. Paninski (Columbia U.), H. Patel (Indiana U.), J. Pillow (UCL), A. Prieto (Indiana U.), M. Rahman (U. of Glasgow), C. Sekirnjak (Salk Institute), A. Sher (UCSC), J. Shlens (Google), T. Siapas (Cal Tech), E. Simioncelli (NYU), J. Smith (Indiana U.), B. Stafford (UCSC), T. A. Szuts (Harvard), A. Tang (Indiana U.), N. Uchida (Harvard).

GRADUATE ADVISOR: Richard Wilson (Harvard)

POSTDOCTORAL ADVISOR: Lynn Stevenson (UC Berkeley)

GRADUATE STUDENTS (8 total)

Matthew Grivich (UC San Diego)

POSTGRADUATE-SCHOLAR ADVISEES (14 total)

Gary Taylor (industry), Hwi Kim (industry), Nikos Konstantinidis (University College London), Charles Loomis (LAL, Orsay), Alexander Sher (UC Santa Cruz), Dumitru Petrusca (industry), Pawel Hottowy (AGH U. of Science and Technology, Krakow), Deborah Gunning (U. of Strathclyde, Glasgow)