

ALEXANDER A. GRILLO

Research Physicist and Adjunct Professor
Santa Cruz Institute for Particle Physics

Appointments

2013 – Present	Research Physicist & Adjunct Professor, SCIPP University of California Santa Cruz
1992 – Present	Research Physicist, SCIPP, University of California Santa Cruz
2006 – Present	Lecturer in Physics
1990 – 1992	Engineering Physicist, Stanford Linear Accelerator Center
1982 – 1992	Part-time Instructor, DeAnza College
1989 – 1990	Acting Director of Operations, Magnesys, Inc.
1988 – 1989	Director of Engineering, Magnesys
1985 – 1988	Device Engineering Manager, Magnesys
1984 – 1985	Manager of Statistical Modeling Group, Intel Corporation
1982 – 1984	Staff Test Engineer and Test Engineering Manager, Intel Magnetics, Inc.
1979 – 1982	Senior Product Engineer, Intel Magnetics, Inc.
1971 – 1979	Research Assistant and Teaching Assistant, University of California, Santa Cruz
1969 – 1971	Laboratory Assistant, High Energy Physics Laboratory, Stanford University

EDUCATION

1980	Ph.D. in Physics, University of California, Santa Cruz Dissertation experiment performed at the Fermi National Accelerator Laboratory in Batavia, Illinois.
1972	M.S. in Physics, State University of New York at Stony Brook
1971	B.S. in Physics, Stanford University

Honors, Awards and Present Membership in Honorary and Professional Societies

Phi Beta Kappa	Current President of the UCSC Upsilon Chapter of California
American Physical Society	Member since 1980
1972	National Defense Education Act Fellow at Stony Brook
1971	Graduated with distinction, Stanford University Elected to Phi Beta Kappa

Recent Publications

1. Corrosion-based Failure of Oxide-Aperture VCSELs, R.W. Herrick, A. Daffinca, P. Farthouat, A.A. Grillo, S.J.McMahan, A.R. Weidberg, IEEE Journal of Quantum Electronics **49**, 1045 (2013).
2. Radiation Hardness Evaluation of a 130 nm SiGe BiCMOS technology for High Energy Physics Applications, S. Díez, T. Clark, A.A. Grillo, W. Kononenko, F. Martinez-McKinney, F.M. Newcomer, M. Norgren, S. Rescia, E. Spencer, H. Spieler, M. Wilder, 2013 JINST 8 P10009.
3. Enhanced Low Dose Rate Sensitivity (ELDRS) Tests on Advanced SiGe Bipolar Transistors for Very High Total Dose Applications, M. Ullán, M. Wilder, H. Spieler, E. Spencer, S. Rescia, F.M. Newcomer, F. Martinez-McKinney, W. Konoenko, A.A. Grillo, S. Díez, *Nucl. Instrum. Methods* **A724**, 41 (2013).
4. A.A. Grillo “Electronics Requirements for Collider Physics Experiments”, in *Extreme Environment Electronics*, J.D. Cressler & H.A. Mantooth, Ed., Boca Raton, FL, CRC Press pp 887-894 (2012).
5. A particle consistent with the Higgs Boson observed with the ATLAS Detector at the Large Hadron Collider, The ATLAS Collaboration (G. Aad *et al.*), *Science* **338**, 1576 (2012).
6. The ATLAS SCT grounding and shielding concept and implementation, R. Bates *et al.*, 2012 JINST 7 P03005.

Patents

Combined Nucleate-Replicate Single Wall Domain Generate Structure, G. Galli, A.A. Grillo and B.R. Lieberman (1987).

UNIVERSITY SERVICE

2012-Present President of the UCSC Upsilon Chapter of Phi Beta Kappa
Represented UCSC at the 2012 Phi Beta Kappa Triennial Council

Natural Sciences Division

2009-Present Volunteer undergraduate academic advisor for Physics Department
2011 Gave tour of SCIPP Labs to participants in Society for the
Advancement of Chicano/as and Native Americans in Science
(SACNAS) annual conference
2000-2001 Member of Dean's Development Steering Committee

OTHER PROFESSIONAL SERVICE

2005-Present Level 2 Manager of US-ATLAS Project, responsible for managing
the US budget and operations work of the silicon subsystem covering
10 institutions.
2007-2008 Member of the International Advisory Committee of the 8th
International Conference on Position Sensitive Detectors (PSD8),
University of Glasgow, Scotland.
1995-2008 Coordinator of SCT Electronics Development
for the ATLAS Collaboration,
centered at the CERN Laboratory, Geneva, Switzerland.
2006-2007 Member of the International Advisory Committee of the XIth Vienna
Conference on Instrumentation.
2006 Member of the Local Organizing Committee of the 6th International
Hiroshima Symposium on the Development and Application of
Semiconductor Tracking Detectors.

TEACHING

1991 - Present	Mentoring	Typically employ two to eight undergraduates for R&D projects in the SCIPP lab
Winter 2007	Physics 1	Conceptual Physics Substitute lecturer for two lectures
Fall 2006	Physics 297	Independent Study Supervised one graduate student
Fall 2006	Physics 10	Overview of Physics Lecture on Neurobiology Research by Physicists
Fall 2005	Physics 10	Overview of Physics Lecture on Neurobiology Research by Physicists
Winter 2005	Physics 205	Introduction to Research in Physics Lecture on ATLAS Research
Winter 2004	Physics 205	Introduction to Research in Physics Lecture on ATLAS Research
Winter 2004	Physics 129	Nuclear and Particle Physics Substitute lecturer for two lectures
Winter 2003	Physics 205	Introduction to Research in Physics Lecture on ATLAS Research
Winter 2003	Physics 1	Conceptual Physics Substitute lecturer for two lectures
Winter 2001	Physics 205	Introduction to Research in Physics Lecture on ATLAS Research & Lecture on Research in Probing Neural Systems
Winter 2000	Physics 205	Introduction to Research in Physics Lecture on ATLAS Research

Undergraduate Thesis Advisees

Daniel Soper	2013
Caleb J. Caldon	2011-2013
Gabriel Saffier-Ewing	2007
Mark Kendrick	2003
Zach Hall	2003
Dustin Keller	2001
Daniel Cosgrove	2000-2001
Alex Ilnicki	2000-2001

Graduate Student Advisees for Technical Training and R&D Projects

Omar Moreno	2011-2013 (Including thesis project - <i>HPS Heavy Photon Search</i>)
Laura Daniel	2009
Daniel Damiani	2008
Jessica Metcalfe	2005-2006

Post Doctoral Scholars Supervised

Sofia Chouridou	2004-2011
Felix Rosenbaum	2001-2003
Miguel Ullan	1999-2001
Tim Dubbs	1996-2000