



Taylor Engineering

1080 Marina Village Parkway, Suite 501 ■ Alameda, CA 94501-6427 ■ (510) 749-9135 ■ Fax (510) 749-9136

GWELLEN PALIAGA

Gwelen Paliaga received an MS in Architecture (Building Science) from UC Berkeley and a BS in Physics from the University of California, Santa Cruz. He is a specialist in low energy design, human factors, and focuses on design solutions that optimize energy performance and consider the needs of building occupants. At Taylor Engineering he has designed numerous low energy and zero energy buildings, classrooms buildings, laboratories, office buildings, and places of worship. He is also involved in various grant funded energy efficiency and human thermal comfort research projects.

Gwelen is an active member of ASHRAE and is currently chair of ASHRAE Standard 55 (Thermal Comfort) and voting member of ASHRAE TC 2.1 (Physiology and Human Environment). In 2010 Gwelen received the ASHRAE Ralph G. Nevins award for significant accomplishment in the general area of man's response to the environment.

Mr. Paliaga is an experienced teacher and presenter, having taught and presented in physics, architecture, and building science fields over the last 15 years. He also has experience in real estate development, contracting, and the construction trades that bring a practicality to his designs that complement his building science knowledge.



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GWELLEN PALIAGA

Education

2004 University of California, Berkeley, M.S., Architecture
1996 University of California, Santa Cruz, B.S., Physics, Highest honors

Certifications

2004 LEED[®] Accredited Professional

Experience

2004 – Present Taylor Engineering, Alameda, CA
Senior Mechanical Designer. Specialized in green building design including energy modeling, thermal comfort modeling, system design, and life cycle analysis.

2001 – 2004 University of California, Berkeley, Berkeley, CA
Project manager for ASHRAE RP 1161 field study. Investigated peoples shifting thermal expectations and increased satisfaction when given control over operable windows.

1998 – 2001 Santa Cruz Institute for Particle Physics, UC Santa Cruz, Santa Cruz, CA
Design Engineer and Construction Manager of \$1 million prototype detector for the NASA satellite mission, GLAST (Gamma Ray Large Area Space Telescope).

1994 – 1996 Santa Cruz Institute for Particle Physics/Los Alamos National Lab
Student laboratory assistant and technician. Designed and prototyped fast analog electronics, A-D conversion, and data acquisition systems.

1994 – 1998 Carpenter
Seasonal work on residential and small commercial projects.

Professional Associations

American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE)

Associate Member 2004 – present

ASHRAE Standard Committee, SSPC 55, “Thermal Environmental Conditions for Human Occupancy,” Acting Chair. Voting member 2005 – present

ASHRAE Technical Committee, TC 2.1, “Physiology and Human Environment,” voting member 2005 – 2010

United States Green Building Council

Member of the Northern California Chapter, 2004 – present

Founding Member, Emerging Green Builders committee of the Northern California Chapter

Honors and Awards

Student Travel Grant for Outstanding Student Involvement in HVAC & R, ASHRAE, Golden Gate Chapter, 2001 and 2004

Golden Gate Chapter scholarship, ASHRAE, 2001



National Graduate Student Grant-in-Aid, ASHRAE, research grant for research into the use of wireless sensors for building monitoring and post occupancy evaluation, 2002

ASHRAE Ralph G. Nevins award for significant accomplishment in the general area of man's response to the environment, 2010.

Teaching Experience

Guest lecturer, UC Berkeley and Stanford University, 2003 – present

“Building Energy and Environmental Management,” graduate student instructor, Department of Architecture, University of California, Berkeley, CA, 2002 – 2003. Prepared course materials and taught a discussion section.

Laboratory instructor for analog electronics and introductory physics courses, Physics Department, Humboldt State University, Arcata CA, 1997 – 1998

Lab instructor and tutor, Physics Department, University of California, Santa Cruz, CA, 1994 – 1996

Publications

Arens E., Turner S., Zhang H., Paliaga G., “Moving Air For Comfort”, ASHRAE Journal, May 2009.

Zhang, H., E. Arens, S. Abbaszadeh, C. Huizenga, G. Brager, G. Paliaga, L. Zagreus, 2007. “Air Movement Preferences Observed in Office Buildings.” *Int J Biometeorol* 51, 349–360. Earlier version published in *Proceedings, NCEUB Windsor 2006 Conference*, Windsor, UK, April 2006.

Inkarojrit, V., Paliaga, G., “Indoor climatic influences on the operation of windows in a naturally ventilated building”, Plea 2004, the 21st Conference on Passive and Low Energy Architecture, Eindhoven, The Netherlands, September 2004.

Brager, G., Paliaga, G., De Dear, R., “The Effect of Personal Control and Thermal Variability on Comfort and Acceptability, Final Report ASHRAE RP-1161”, ASHRAE, 2004

Brager, G., Paliaga, G., De Dear, R., “Operable Windows, Personal Control & Occupant Comfort”, ASHRAE Transactions, Vol. 110 (2), June 2004.

Thompson, D.J., et al, “Gamma-Ray Large-Area Space Telescope (GLAST) Balloon Flight Engineering Model: Overview”, *IEEE Transactions of Nuclear Science*, Vol.49, No. 4, 2002.

E. do Cuoto e Silva, et al (Paliaga, contributing author), “Results from the Beam Test of the Engineering Model of the GLAST Large Area Telescope”, *Nuclear Instruments and Methods in Physics Research A474*, 19-37, 2001.

Atwood, E., et al, (Paliaga, contributing author), “The Silicon Tracker of the Beam Test Engineering Model of the GLAST Large-Area Telescope”, *Nuclear Instruments and Methods in Physics Research A457*, 126-136, 2001

Atkins R., et al, (Paliaga, contributing author), “Milagrito a TeV Air-Shower Array”, *Nuclear Instruments and Methods in Physics Research A499*, 478-499, 2000.

Paliaga, “Operable Windows, Personal Control and Occupant Comfort”, Masters thesis, University of California Berkeley, 2004.

Seminars and Presentations

Operable Windows Personal Control and Occupant Comfort, symposium paper presenter, ASHRAE Annual Meeting, Nashville, 2004

Mixed Mode: The Best of Both Worlds, conference presentation, ASHRAE Net Zero Energy Buildings Conference, San Francisco, 2009

Energy Efficient Retrofits for Laboratories, educational program, PG&E Pacific Energy Center, San Francisco, Dec. 2009



Representative Projects

Alameda Free Library	Alameda, CA, LEED NC Gold
Cathedral of Christ the Light	Oakland, CA, 220,000 ft ²
Chartwell School	Seaside, CA, 20,000 ft ² , LEED NC Platinum
City College San Francisco Chinatown	San Francisco, CA, 167,000 ft ²
Energy Plus and Title 24 2008	Evaluation of EnergyPlus Software for California
Green Building Studio Evaluation	Evaluation of Green Building Studios for PG&E
Helios Project	Berkeley, CA, Energy optimization
Orinda New City Offices	Orinda, CA, 12,000 ft ² , LEED NC Gold
Pixar 53 rd Street	Emeryville, CA, 40,000 ft ²
San Francisco Furniture Mart	San Francisco, CA, 1,200,000 ft ²
Stanford Green Dorm Study	Stanford, CA, Feasibility study
Stanford Jasper Ridge Field Station	Stanford, CA, Energy Modeling
Stanford Montag Hall	Stanford, CA, HVAC evaluation
UC Berkeley Bancroft Library	Berkeley, CA, 110,000 ft ²
UC San Francisco 654 Minnesota	San Francisco, CA, 66,000 ft ²
Stanford University Gilbert Hall	Palo Alto, CA, 104,000 ft ² , Laboratory retrofit
Alameda Federal Center, USDA	Alameda, CA, Laboratory energy efficiency retrofit
Alameda FDA	Alameda, CA, Laboratory energy efficiency retrofit