



Taylor Engineering

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

GWELLEN PALIAGA

Gwelen Paliaga has a M.S. in Architecture from the University of California, Berkeley and a B.S. in Physics from the University of California, Santa Cruz. His graduate work in Building Science focused on energy efficient and environmentally responsible building systems with a particular focus on passive systems, controls, and architectural integration.

At Taylor Engineering Mr. Paliaga specializes in design of sustainable, “green” mechanical systems and building envelopes. He does complete HVAC designs, including load calculations, system design, energy modeling, and life cycle cost analysis. He has in depth knowledge of human factors (comfort, health, satisfaction) in buildings and their relationship with energy use. Mr. Paliaga was a key member of an ASHRAE funded field study investigating people’s shifting thermal expectations and increased satisfaction when given control over operable windows. Results of this study should affect future versions of the ASHRAE comfort standard.

Mr. Paliaga is an experienced teacher and presenter, having taught and presented in physics, architecture, and building science fields over the last 10 years. He also has experience in carpentry 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. Specialize 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,” voting member 2005 – present
ASHRAE Technical Committee, TC 2.1, “Physiology and Human Environment,” voting member 2005 – present

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

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), “Milagrino 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, TN, 2004



Representative Projects

Alameda Free Library
Cathedral of Christ the Light
Chartwell School
City College San Francisco Chinatown
Energy Plus and Title 24 2008
Green Building Studio Evaluation
Helios Project
Orinda New City Offices
Pixar 53rd Street Areas A and B, Phase 1
San Francisco Furniture Mart
Stanford Green Dorm Study
Stanford Jasper Ridge Field Station
Stanford Montag Hall
UC Berkeley Bancroft Library
UC San Francisco 654 Minnesota

Alameda, CA, LEED NC Gold
Oakland, CA, 220,000 ft²
Seaside, CA, 20,000 ft², LEED NC Platinum
San Francisco, CA, 167,000 ft²
Evaluation of EnergyPlus Software for California
Evaluation of Green Building Studios software
Berkeley, CA, Energy optimization
Orinda, CA, 12,000 ft², LEED NC Gold
Emeryville, CA, 40,000 ft²
San Francisco, CA, 1,200,000 ft²
Stanford, CA, Feasibility study
Stanford, CA, Energy Modeling
Stanford, CA, HVAC evaluation
Berkeley, CA, 110,000 ft²
San Francisco, CA, 66,000 ft²