



Taylor Engineering

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

C. HWAKONG CHENG

Hwakong Cheng has a M.S. in Civil Engineering from the University of Colorado at Boulder and a Sc.B. in Chemical Engineering from Brown University. After completing his undergraduate degree he spent several years as an environmental consultant, primarily focusing on groundwater and soil remediation. After reflecting on his larger life goals, he shifted his interests to energy efficiency and sustainability in the built environment. He returned to graduate school at CU Boulder, where he studied building systems and renewable energy with a focus on efficient and passive design and building energy simulation. His graduate research involved determining the impacts on the cost effective use of passive thermal storage for cooling control.

At Taylor Engineering, Mr. Cheng provides complete HVAC design services including load calculations, system design, energy modeling, and life cycle cost analysis. He also provides commissioning services with experience in energy auditing, functional performance testing, measurement and verification, and extensive trend analysis. He been involved in numerous retro- and monitoring-based commissioning projects and has prepared calculations and submittals for energy efficiency applications through utility incentive programs.



C. HWAKONG CHENG

Education

2006 University of Colorado at Boulder, M.S. Civil Engineering
1999 Brown University, Sc.B. Chemical Engineering

Experience

2006 – Present Taylor Engineering, Alameda, CA
Mechanical Designer. Specializes in sustainable building design including load calculations, energy analyses, HVAC system design, and commissioning.

2004 – 2006 University of Colorado, Boulder, CO
Research Assistant. Studied the cost effectiveness and optimal control of using passive thermal storage for cooling control. Evaluated the impacts of various building and system factors on cost savings and control through parametric simulations.

2000 – 2006 Tetra Tech EM Inc., San Francisco, CA
Chemical Engineer. Conducted remedial investigations and feasibility studies at contaminated soil, groundwater, and landfill sites. Managed multidisciplinary teams and extensive field efforts and led a pilot study for an innovative technology to remediate groundwater sources.

1999 – 2000 ICF Consulting, San Francisco, CA
Analyst. Performed urban and regional scale air quality modeling of ozone and other criteria pollutants. Developed emissions inventory tools and data processing software.

Professional Associations

American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE)
Associate Member 2006 – Present
Student Member 2004 – 2006
American Institute of Chemical Engineers
Member 2000 – 2005
Student Member 1999 – 2000

Honors and Awards

Grant Awardee, Engineering Excellence Fund, University of Colorado, 2006
University Fellowship, University of Colorado, 2006
Honorable Mention, Graduate Research Fellowship Program, National Science Foundation, 2005

Publications

Evaluation of the Primary Factors Impacting the Optimal Control of Passive Thermal Storage (1313-RP) co-author with M.J. Brandemuehl, G.P. Henze, A.R. Florita, and C. Felsmann, ASHRAE Transactions, 114 (2), 2008
Evaluation of the 17 Primary Factors Impacting the Optimal Control of Passive Thermal Storage (1313-RP), contributing author, ASHRAE Transactions, 114 (2), 2008



RP-1313 -- Evaluation of Building Thermal Mass Savings, contributing author, ASHRAE Research Report, September 2007

Demonstration of Zero Valent Iron Injection for In Situ Remediation of Chlorinated Solvents at Hunters Point Shipyard, contributing author, Fourth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 2004

Zero Valent Iron (ZVI) Powder Injection for In-situ Dechlorination of Chlorinated Organic Compounds at Hunters Point Shipyard, SF, CA. Abstract, contributing author, 5th Environmental Technology Symposium & Workshop. Interstate Technology Regulatory Council, Charlotte, N.C., March 2003

Representative Projects

Alameda County Juvenile Facility
EDR Guidelines

Alameda, CA, 380,000 ft², LEED NC Gold
Production of design guides for PG&E Energy Design Resources Non-Residential New Construction Program

Fort Gordon Corps of Engineers

Fort Gordon, GA, energy analysis, chiller plant design/optimization, control systems

KLA Tencor

Milpitas, CA, 680,000 ft²

Lawrence Berkeley Nat'l Lab Building 2

Berkeley, CA, HVAC investigative study

Letterman Digital Arts Center

San Francisco, CA, 900,000 ft², LEED Gold

Magnes Museum

Berkeley, CA, 35,000 ft²

Oracle Pleasanton Bldg./Garage

Pleasanton, CA, 510,000 ft²

Ratcliff Offices

Emeryville, CA, energy modeling and green design assistance

San Francisco General Hospital

San Francisco, CA, 415,000 ft², LEED NC

San Quentin Central Health Services Center

San Quentin, CA, 115,000 ft², LEED NC

Symantec Springfield

Springfield, OR, 200,000 ft², LEED EB O&M

The Towers on Capitol Mall

Sacramento, CA, 1,700,000 ft²

UC Berkeley Boalt Hall

Berkeley, CA, 30,000 ft², LEED NC

UC Berkeley Richmond Field Station

Berkeley, CA, HVAC energy efficiency study

UC Davis Orchard Park Greenhouses

Davis, CA, monitoring based commissioning project

UC Davis Physics-Geology

Davis, CA, monitoring based commissioning project

UC Merced Central Plant

Merced, CA, 400,000 ft², LEED NC Silver

UCM Library and Information Tech. Center

Merced, CA, 180,000 ft², LEED NC Gold

Ygnacio Center 2

Walnut Creek, CA, 180,000 ft²