

Education

Massachusetts Institute of Technology, Cambridge, MA
MS in Building Technology, 1999

University of Delaware, Newark, DE
MS in Mechanical Engineering (Computational Fluid Dynamics - CFD), 1997

Beijing University of Aeronautics and Astronautics, Beijing, China
B.E. in Aircraft Design and Applied Mechanics, 1993

Professional Experience Highlight

Over 15 years of experience in the field of HVAC Engineering and Energy Consulting.
Direct project experience includes:

Geothermal Heating & Cooling Systems such as for a 15,000 sq-ft private residence in Rye, NH, a 62-borehole Geothermal Snow-melting System for the private driveway retrofit, as well as a Centralized Geothermal Heating & Cooling System for a 9-house community in Cape Cod, MA.

New construction and renovation of institutional / academic buildings such as the 160,000 sq-ft Harvard Business School Baker Library / Academic Center and the 49,000 sq-ft UMass School of Nursing building.

Research laboratories, including 3000 sq-ft or smaller dry or wet lab renovation projects, as well as new construction of large research building complexes such as the 412,000 sq-ft MIT Brain and Cognitive Science Center, the world's largest life science research facility.

Healthcare facilities such as the Dartmouth-Hitchcock Medical Center which involved renovation and new construction of multiple ambulatory care, in-patient, treatment, surgical, and medical research buildings.

Government-assisted low-income apartment buildings such as the 3-story 18-unit apartment building and the 10-unit townhouse building in the campus of Georgetowne Homes in Hyde Park, MA, and state-owned facilities, such as the Campus Center of Bridgewater Sate University in Bridgewater, MA.

Residential / retail / office mixed-use buildings such as the 115,000 sq-ft Chapel View building A3 in Cranston, RI. New construction of private residences such as the 10,000 sq-ft house in Austin, TX.

Energy Modeling / LEED Consulting for large and small buildings such as the 265,000 sq-ft clinical cancer center at Duke University, and the 5,000 sq-ft private residence in NY.

Pharmaceutical facilities such as the 52,000 sq-ft lab (including vivarium) & office space for Avant Immunotherapeutics in Needham, MA, and the 26,000 sq-ft lab (including clean rooms) & office fit-out for Histogenics in Waltham, MA.

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Professional Engineer Licenses:

Licensed in all New England states, plus New York & Pennsylvania.

Memberships

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE): Member (# 05167579)
Association of Energy Engineers (AEE): Member (# 65618)
U.S. Green Building Council (USGBC): LEED Accredited Professional
International Ground Source Heat Pump Association (IGSHPA):
Certified GeoExchange Designer (#242); Certified Geothermal Installer (#18872-0209)

Publications / Presentations

Geothermal HVAC Systems: The Basics, Applications, Benefits & Issues

Seminar made to the Boston Society of Architects (BSA), 2/2011
Seminar made to Hutker Architects, 4/2011

HVAC Design & Energy Modeling — 2 sides of the coin

Presentation to The S/L/A/M Collaborative and Wilson Architects, 1/2009

HVAC and Energy in Research Buildings – Retro-Commissioning

Presentation to Brown University Department of Facilities, 1/2008.

HVAC and Energy in Research Buildings

Presentation to MIT Department of Facilities, 12/2007.

Design of HVAC Systems for Research Buildings and Hospitals,

Presentation to an Audience from Beijing University of Aeronautics and Astronautics and Beijing Institute of Architectural Design and Research, 09/2006.

Comparison of Energy Consumption between Displacement and Mixing Ventilation Systems for Different U.S. Buildings and Climates

ASHRAE Transactions 105 (2), 1999.

Selected Letters / Articles

The Confidence of Germany, 6/2011

- Commenting on Germany's effort for a renewable and clean energy future by giving up nuclear power.

The Cost of Geothermal Heating & Cooling, 3/2011

- Commenting on the necessity of moving to a renewable energy future after Japan's nuclear catastrophe.

Geothermal: Key Factors for Government Incentives, 6/2010

- Letter to Massachusetts DEP concerning Regulations per Massachusetts Global Warming Solution Act.