

Senior Staff Bios

Mark Modera, Director

Mark Modera is Director of the UC Davis Western Cooling Efficiency Center (WCEC). Dr. Modera joined the WCEC from Carrier Corp., where he was a Vice-President, and from Lawrence Berkeley National Laboratory (LBNL). Dr. Modera was a Principal Investigator at LBNL on many research projects, and developed a new research program focused on thermal energy distribution in buildings. His publications cover a large range of research interests, including: diagnostic tools for heat and mass transfer properties (e.g. dynamic thermal performance of buildings and components, air tightness, soil permeability), air flow modeling and measurement, energy efficiency policy, simulation tools and simplified models for buildings, wood combustion (efficiency, pollution production, third-world cookstoves), aerosol production and transport, and indoor air quality. While at LBNL, Mark developed an aerosol-based duct sealing process, and he subsequently established AeroSeal, Inc. to commercialize the technology. AeroSeal's technical success and market promise became recognized by Carrier, who bought the business in 2001 and retained Mark to help manage it. Mark's broad experience in research, business, entrepreneurship, education, and regulatory environments ideally qualifies him for his current position, leading the WCEC in its mission of partnering to advance energy-efficient cooling systems.

Richard Bourne, Associate Director

Dick Bourne is Associate Director of the UC WCEC. Dick was formerly a principal at Davis Energy Group (DEG), where he served as founding president from 1981 through 1997. A former associate professor at the University of Nebraska, Dick has presented more than 150 special lectures, workshops, and technical papers on energy subjects since 1974. He served as Chairman of ASHRAE's radiant heating/cooling technical committee, and holds 19 U.S. patents.

At DEG Dick managed a team developing emerging energy-efficiency technologies. Projects included the DualCool system for packaged rooftop cooling units; the IDEC advanced two-stage evaporative cooler; the HyPak hydronic rooftop cooling unit; the NightSky night-radiative cooling system; and the SunCache low-cost solar water heating system. He has been a registered professional engineer in California since 1977. His educational background includes a BA degree from Amherst College (1965), a BSME from West Virginia University (1967), and an MSME from Stanford (1968).

Marshall Hunt, Program Director

Marshall Hunt, program director of the Western Cooling Efficiency Center, has been involved in energy efficiency since 1972. Over the 35 years he has been active in the development of energy efficiency codes and standards, innovative HVAC design and construction, and program management. He recently completed the scoping phase of the Super Efficient Gas Water Heating Appliance Initiative (SEGWHAI), with funding from the California Energy Commission Public Interest Energy Research Natural Gas Program. Since graduating from the University of California at Davis, Marshall has worked for Pacific Gas & Electric Company, Pacific Management Dynamics Corp., Davis Energy Group Inc. and the California Energy Commission.

Kristin Heinemeier, Senior Engineer

Kristin Heinemeier is a Senior Engineer with the WCEC. Dr. Heinemeier has over 20 years of experience in building operation-phase efficiency issues. Previously, she worked with Portland Energy Conservation, Inc, a non-profit firm that is an established leader in the area of building commissioning, was the technical director of the Brooks Energy and Sustainability Laboratory at Texas A&M University, and developed products for Honeywell Home and Building Controls. Prior to that, she was a researcher at Lawrence Berkeley National Laboratory. She was formerly the administrator of the California Commissioning Collaborative, and the chair of ASHRAE's technical committee on Building Commissioning. Kristin has a Ph.D. in Building Science, and is a Licensed Mechanical Engineer.