



BRUCE NORDMAN

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Education

University of California at Berkeley. M.A. in Energy and Resources, 1990.
B.A. in Architecture, 1984.

Professional Experience

Lawrence Berkeley National Laboratory (LBNL)

2011-present; Building Technologies Department; Research Scientist, Principal Investigator
1986-2011; Energy Analysis Department; Research Associate

Consultant (1980-present)

Embodied energy in paper (U.S. EPA), carbon emissions (govt. of Netherlands), network protocols (NSF), computer aided architectural design, and computer software development (various), global low-power mode policy (International Energy Agency; govt. of Australia).

Hewlett Packard, Inc. (1976-1980)

Member of technical staff, doing computer programming for a programming language compiler (APL\3000) as well as graphical user interface software, and software development tools.

Research Topics

- Energy efficiency in digital networks (including physical layer interfaces, protocols, network equipment, and equipment connected to networks)
- Local power distribution (a “network model of power”)
- Research support to EPA Energy Star program (test procedures; requirements)
- Energy use of electronics
- Building networks (system architecture, protocols, infrastructure)
- User interfaces (power control, lighting)
- Low power mode energy use (network connectivity, user interaction, public policy)

Past research topics include whole building energy use, energy end-use analysis, paper use, and materials use efficiency.

Select Publications

Gershenfeld, Neil, Stephen Samouhos, and Bruce Nordman 2010. “Intelligent Infrastructure for Energy Efficiency”. *Science*. Vol. 327, p. 1086. February 26.

IEEE Microprocessor Standards Committee of the IEEE Computer Society. “P1621, Standard for User Interface Elements in Power Control of Electronic Devices Employed in Office/Consumer Environments.” (approved December, 2004; reaffirmed December, 2009).

Nordman, Bruce, Hans-Paul Siderius, Lloyd Harrington, Mark Ellis, Alan Meier 2009. “Network connectivity and low-power mode energy consumption.” *Proceedings: Energy Efficient Domestic Appliances and Lighting*, 2009.

Nordman, Bruce, Ken Christensen, and Alan Meier, “Think Globally, Distribute Power Locally”, IEEE Computer (Green IT Column), September, 2012.

Steven Lanzisera, Bruce Nordman and Richard E. Brown, “Data network equipment energy use and savings potential in buildings”, *Energy Efficiency*, Volume 5, Number 2 (2012), 149-162.

Nordman, Bruce, Jessica Granderson, and Kelly Cunningham, “Standardization of user interfaces for lighting controls”, *Computer Standards and Interfaces*, October 10, 2011, Vol. 34, pp. 273-279.

Nordman, Bruce and Ken Christensen, “DC Local Power Distribution: Technology, deployment, and pathways to success”, IEEE Electrification Magazine, June 2016.