

Vivian Loftness, FAIA
Paul Mellon Chair & University Professor of Architecture

Educational Background

1975 Massachusetts Institute of Technology, Masters in Architecture
Thesis: "Site Reconnaissance - Natural Forces and the Craft of Building"
1974 Massachusetts Institute of Technology, Bachelor of Science

Honors and Awards

2019 Awarded Senior Fellow, New Buildings Institute (NBI)
2018 Awarded 2018 Professional Leadership Award, Northeast Sustainable Energy Assoc (NESEA)
2018 Awarded Senior Fellow, Scott Institute for Energy Innovation
2017 *Connected World* magazine 2017 Pioneers Award
2015 AIA Pennsylvania Medal of Distinction
2015 Awarded Paul Mellon Chair, Carnegie Mellon University
2014 Pittsburgh Business Times 2014 Energy Leadership Award
2013 Elected Building Research Establishment 2013 Stars of Building Science
2013 Awarded LEED Fellow, United States Green Building Council (USGBC)
2013 Awarded Senior Fellow, Design Futures Council (DFC)
2013 Team receiving the 2013 Alexander Schwarzkopf Prize for Technological Innovation
2011 'Fifteen Women in Green', Women and Girls Foundation
2009 'Spirit of Amelia' Award for 2009, Zonta International
2009 'Shades of Green Award' for 2009, Green Building Alliance
2007 Elected to the Cosmos Club, Washington DC
2006 one of 4 educators profiled nationally in book *Women in Green*
2004 AIA Honor Award Jury Member
2003 Elevated to University Professor, Carnegie Mellon University
2003 FAIA, elected to American Institute of Architecture College of Fellows
2003 USGBC "Sacred Tree" Award, one of 5 nationally
2001 AIAS (AIA Students) Educator of the Year Award
2000 AIA Research Honor Award
1999 Business Week/Architectural Record Award, with BCJ and Zoelly Architects
1999 one of 88 nationally featured in book *Journeys of Women in Science and Engineering*
1999 AIA Honor Award for Architecture and Design, with BCJ and Zoelly Architects

Academic Positions

2014 – current Paul Mellon Chair in Architecture
2003 – current University Professor, Carnegie Mellon
2007 – 2008 Chair, Carnegie Mellon Faculty Senate and Ex-Officio CMU Board of Trustees
1994 – 2004 Head, Carnegie Mellon University School of Architecture
1992 – current Professor of Architecture, Carnegie Mellon University
1987 – current Senior Researcher, Center for Building Performance
1976 – 1977 Visiting Faculty for Environmental Design/ Energy in Buildings, SUNY Buffalo
1975 – 1976 Visiting Faculty for Environmental Design/ Energy in Buildings, MIT

Board Member

2020 – International Living Futures Institute Board of Directors
2020 American Institute of Architects (AIA) Board of Directors
2019 NordForsk Sustainable Urban Development and Smart Cities Research Board of Reviewers
2016 – Biophilic Design Initiative (BDI) Leadership Council
2016 – Delos WELL Living Lab Scientific Advisory Board
2016 – 2019 Singapore University of Technology and Design (SUTD) Scientific Advisory Board
2016 – 2018 National Academy of Science /Institute of Medicine 'Microbiomes of the Built Environment'
2014 – 2019 Phipps Conservatory Board of Directors
2015 – 2017 Centre for Interactive Research on Sustainability (CIRS) University of British Columbia
2014 – 2017 AtSite, Inc – Powering Building Performance Board of Directors
2013 – 2018 Formas Swedish Building Research Board of Reviewers
2010 – 2017 Green Building Alliance Board of Directors
2009 – 2017 Ellis School Board of Directors
2009 – 2014 USGBC Governance Committee and Board Leadership Working Group
2010 – 2013 EPA National Advisory Council on Environment and Technology (Adm. Jackson appointment)
2008 – 2013 Harvard Graduate School of Design Visiting Committee
2007 – 2010 World Business Council for Sustainable Development EEB Project Assurance Group
2007 – 2010 MIT Corporation Visiting Committee for School of Architecture & Planning
2008 – 2010 Pennsylvania Climate Change Action Planning Council (Governor Rendell appointment)
2006 – 2010 World Business Council for Sustainable Development, Global Assurance Team

2003 – 2010	US Green Building Council Board of Directors (elected, two terms, 7 years)
2006 – 2010	AIA Communities by Design (CxD) National Executive Committee
2005 – 2009	Turner Construction Green Building Advisory Board
2005 – 2010	USGBC TSAC Technical Scientific Advisory Council, National Research Committee
2001 – 2006	AIA Committee on the Environment (COTE) National Executive Committee, Chair 2005
2000 – 2006	DOE Federal Energy Management Advisory Council (Sec. Abraham appointment)
2000 – 2002	USGBC National Green Building Conference Educational Chair
2000 – 2001	LEED-CI (Commercial Interiors) Development Board
1999 – 2001	ARTI Air Conditioning Research and Technology Institute Integrated Systems Board
1997 – 1999	National Academy of Sciences, Board on Infrastructure & the Constructed Environment (BICE)
1998 – 1999	BOMI Building Owners and Managers Institute: Strategic Planning Board
1992 – 1996	Johnson Controls JCI Strategic Planning Board, 1992-1996
1983 – 1985	OCF Owens-Corning Fiberglas, Construction Advisory Board 1983-1985.
1983 – 1985	Building Thermal Envelope Coordinating Council BTECC, National Institute of Building Sciences

High Performance Buildings Design Consulting

Design team member: Phipps Center for Sustainable Landscapes; Adaptable Workplace Lab at the U.S.

General Services Administration Headquarters; Laboratory for Cognition at Electricity de France EDF; Intelligent Workplace at Carnegie Mellon University; Owens Corning Fiberglas Headquarters.

Technical Consultant: Electricite de France new Saclay campus, Odum School of Ecology/ BNIM, Phipps Center for Sustainable Landscapes/ Design Alliance, August Wilson African American Cultural Center/Perkins & Will, Point Park College Dance Complex/ Design Alliance, GSA 20.20 innovative workplace projects in 8 cities, Smith College Science Building/ BCJ, Pittsburgh Science Center, US Department of State Embassy Projects, Pittsburgh Convention Center/Vinoly, PNC Bank/Astorino.

Juror (selected): Canada Evolve Sustainable Competition July 2013, Kent State CAED Architect Selection 2013, EEBHub Building 661 Architect Selection 2012, Brickstainable Design Awards 2011 and 2010, Leading Edge Design Competition 2010 and 2007, National Tall Buildings Awards 2006 and 2007, Life Cycle Building Challenge 2007, AIA Ohio Design Awards 2007; multiple CMU campus buildings 1994- present.

Research Principal Investigator (recent / selected)

Over 50 independent research grants in the past 25 years.

- *Department of Energy/LBNL CBERD India*, Cost Optimization of Energy Efficient Facades, & Passive Design & Mixed Mode Conditioning, 2013-2017.
- *GSA Qualification and Quantification of measured energy savings in relation to energy upgrade investments in 1500 GSA buildings*, 2015-2019.
- *GSA: Deploying Post Occupancy Evaluation + Measurements (POE+M+P) to capture impacts of GSA Headquarters & major office renovations*, 2016-2017.
- *Department of Energy CBEI research leader on High Performance Integrated Systems for Energy Efficiency in Existing Buildings: Facades, Roofs, Lighting, Controls and Triple Bottom Line Justifications*, 2010-present.
- *Advanced Building Systems Integration Consortium (ABSIC) "The Office of the Future" A National Science Foundation, IUCRC*, a twelve-year research consortium of building industries and federal agencies, 1988-to present, with multiple research publications.
- *Department of Defense ESTCP Research on Intelligent Data Bases and Dashboards for Energy Savings by Corporate and City leaders, facility managers and building occupants.*, 2014-present.
- *Siemens-CBPD ARRA 2010-2012 – Innovative Controls for 40% Energy Efficiency in Existing Buildings*
- *Bank of America Post Occupancy Evaluation Studies of High Performance Work Environments 2009-12.*
- *Electricite de France - Programming, Technical Review, POE for Saclay Sustainable Campus*
- *Architect of the Capitol/ Entec –Sustainability Priorities, Performance Specifications, life cycle cost-benefits for ongoing maintenance and upgrades to the Capitol Complex*, 2005-2008.
- *BIDS, Building Investment Decision Support Tool: Cost-Benefit Tool to Promote High Performance Components, Flexible Infrastructures and Systems Integration for Sustainable Commercial Buildings and Productive Organizations*, 2003-present.
- *GSA20.20 and NEAT – National Environmental Assessment Tool for field evaluation of high performance buildings*, 2004 to present.
- *Heinz Foundation, Technical and Professional Assistance for the Advancement of Environmental Building Projects in the Pittsburgh region*, 2000 - 2008.

Scholarship / Publications

Over 100 refereed journal articles, research publications, and conference papers

12 National Academy of Sciences committee reports, 1982 to present: 2006 Vice Chair, 'Green Schools: Attributes for Health and Learning' National Academies Press; 2011 Institute of Medicine, National Academy of Sciences Committee on *Climate Change and Indoor Environments*.

Selected Book Chapters:

- Loftness, V., Hartkopf, Aziz, Choi and Park "Critical Frameworks for Building Evaluation: User Satisfaction, Environmental Measurements and the Technical Attributes of Building Systems (POE+M)", in *Building Performance Evaluation: From Delivery Process to Life Cycle Phases* by Springer Publishing, 2017.
- Hartkopf, V. Loftness, Aziz, Lam, Lee, Cochran, Lasternas, "The Robert L Preger Intelligent Workplace: The Living and Lived-in Laboratory" in *Creating the Productive Workplace—Third Edition*, Derek Clements-Croome, editor, Routledge, an imprint of Taylor and Francis. 2017
- Loftness, V., Aziz, Lasternas, Peters, "Energy Accounts: Ducks, Dollars or kWh?" in *Architectural Representations of Energy, Climate, and the Future*, Edited by [Dan Willis](#), [William W. Braham](#), [Katsuhiko Muramoto](#), [Daniel A. Barber](#), Routledge, an imprint of Taylor and Francis, January 2017.
- Loftness, V. and M. Snyder "Sustainable and Healthy Built Environments" in the *Encyclopedia of Sustainable Science and Technology*, Springer Verlag, ISBN 978-1-4614-5827-2, January 2013.
- Loftness, Hartkopf, Aziz "Building Investment Decision Support for Green Building Technologies" in *Systems Innovation for Sustainability*, editor Sahdi Lahlou, Greenleaf Publishing, 2009.
- Loftness, V and A. Aziz "Towards a Global Concept of Collaborative Space" in *Designing User Friendly Augmented Work Environments*, Lahlou, Saadi (Ed.), Hardcover ISBN: 978-1-84800-097-1, 2009.
- Loftness, V "Innovation in Office Design" in *Architecture: Celebrating the Past, Designing the Future*, Solomon, N (Ed.), Hardcover, John Wiley 2008.
- Loftness, V and M. Snyder "Where Windows Become Doors" in *Biophilic Design Theory, Science and Practice*, Kellert et al (Ed.), John Wiley 2007.
- Loftness, V. "The Field of Building Climatology," 60 page encyclopedic entry in *The Handbook of Climatology*, 2nd edition by Dr. John Oliver, Van Nostrand Reinhold 2004 (only entry on architecture)..
- Loftness V., et al, "'Smart Buildings', Facility, Supporting Sustainable Organizational and Technological Change through Appropriate Spatial, Environmental and Technical Infrastructures". *Facility Design and Management Handbook: Theory, Practice and Technology Design and Management Handbook*. Teicholz, E. (Ed.) McGraw-Hill Inc. Publisher, 2001.

Books:

- Editor, Loftness, V. *Sustainable Built Environments*, Encyclopedia of Sustainable Science and Technology, Springer, ISBN 978-1-4614-5827-2, Leipzig, Germany, 2nd Edition January 2019.
- Editor, Loftness, V., D. Haase, *Sustainable Built Environments*, Encyclopedia of Sustainable Science and Technology, Springer, ISBN 978-1-4614-5827-2, Leipzig, Germany, January 2013.
- Hartkopf, V. Loftness, Drake, Dubin, Mill, Ziga, *The Office of the Future: the Japanese Approach to Tomorrow's Workplace*, John Wiley Publishing, New York, NY. May 1992.

Journal Editorial Boards

- Building and Environment Journal (BAE)
High Performance Buildings Journal (HPB)
Journal of Corporate Real Estate (JCRE)
Indoor and Built Environment (IBE)