Van P. Carey, Ph.D.
A. Richard Newton Chair in Engineering at UC Berkeley
Professor, Mechanical Engineering Department
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Education and Training:

Institution	Major	Degree	Year
Cornell University, Ithaca, NY	Mechanical Engineering	BS	1974
State University of New York at Buffalo	Mechanical Engineering	MS	1976
State University of New York at Buffalo	Mechanical Engineering	PhD	1981

Research and Professional Experience:

7/2010 to present	**A. Richard Newton Chair in Engineering**, UC Berkeley
9/07 to present	**Director** of the Energy and Information Technology Laboratory at UC Berkeley
9/07 to present	**Chair** of the Designated Emphasis in Energy Science and Technology program at UC Berkeley
7/90 to present	**Professor**, University of California at Berkeley,.
1/92 to 6/95	**Vice Chair - Instruction**, Mechanical Engineering Department, University of California at Berkeley
6/95 – 8/95	**Summer Faculty Fellow**, Distributed Computing Group Sandia National Laboratories, Livermore, CA
6/96 – 8/96	**Summer Faculty Fellow**, Distributed Computing Group Sandia National Laboratories, Livermore, CA
7/85 to 6/90	Associate Professor, University of California at Berkeley,.
8/84 to present	Associate Faculty, Applied Science Division of Lawrence Berkeley Laboratory
4/82 to 6/85	Assistant Professor, University of California at Berkeley,.
9/80 to 4/82	Senior Project Engineer, A/C Systems Development, Harrison Division of General Motors
9/76 to 7/78	Project Engineer, Solar Energy Systems Development, Harrison Radiator Division of General Motors

Publications:

(Author or co-author of over 220 technical publications.)

1. Wemhoff, A.P. and **Carey, V.P.**, "Molecular Dynamics Exploration of Thin Liquid Films on Solid Surfaces. 2. Polyatomic Nonpolar Fluid and Water Films," Microscale Thermophysical Engineering, 9, pp. 351-363, 2005.
2. **Carey, V.P.**, Liquid-Vapor Phase-Change Phenomena, Second Edition, ISBN 978-1-59169-035-1, Taylor & Francis, New York, NY, 2008.
3. **Carey, V.P.**, "Molecular Level Modeling of Interfacial Phenomena in Boiling Processes," Experimental Heat Transfer, 26, 296-327, 2013 (DOI: 10.1080/08916152.2012.736838).
4. Padilla, J. and **Carey, V.P.**, "An Experimental Study of The Leidenfrost Transition for Water on Nanostructured Superhydrophilic Surfaces," paper IHTC15-9581, Proceedings of the 15th International Heat Transfer Conference, IHTC-15, August 10-15, 2014, Kyoto, Japan.

5. Padilla, J. and **Carey, V.P.**, "Water Droplet Vaporization on Superhydrophilic Nanostructured Surfaces at High and Low Superheat," paper IMECE2014-39957, Proceedings of the ASME 2014 International Mechanical Engineering Congress & Exposition IMECE2014, November 14-20, 2014, Montreal, Quebec, Canada.
6. **Carey, V.P.** and Hawks, N.E., "Stochastic Modeling of Molecular Transport to an Evaporating Microdroplet," ASME J. Heat Transfer, 117, pp. 432-439, 1995.
7. **Carey, V.P.** "On the Role of Wetting in Phase-Change Heat Transfer," Thermal Science and Engineering, 10, pp. 3-9, 2002.
8. **Carey, V.P.**, "Thermodynamic Properties and Structure of the Liquid-Vapor Interface: A Neoclassical Redlich-Kwong Model," J. Chem. Physics, 118, pp. 5053-5064, 2003.
9. Gan, Y. and **Carey, V.P.**, "Hybrid Modeling of Interfacial Region Thermophysics and Intrinsic Stability of Thin Free Liquid Films," Int. J. Heat and Mass Transfer, 53, pp. 2169-2182, 2010.
10. Mendoza, H., Beaini, S. and **Carey, V.P.**, "An Exploration of Transport within Micro and Nano Droplet Clusters During Dropwise Condensation of Water on Nanostructured Surfaces," Journal of Heat Transfer, 129, doi: 10.1115/1.4026167, 2014.

Recent Honors and Awards

2004 – Recipient of the James Potter Gold Medal from ASME for eminent achievement in thermodynamics.

2007 - Recipient of the Heat Transfer Memorial Award in the Science category from ASME

2008, 2009, 2010 - Three time recipient of a Hewlett Packard Research Innovation Award

2010 – Appointed to the A. Richard Newton Chair in Engineering at UC Berkeley, July 1, 2010.

2014 - Recipient of the 2014 Thermophysics Award from the American Institute of Aeronautics and Astronautics in recognition of contributions to the field of liquid-vapor phase change thermophysics.

Related Synergistic Activities

1. Member of the NASA Scientific Working Group on Rankine Cycle Power Systems for Space Applications, January - April, 2004.
2. Chair of Heat Transfer Division of ASME, 2009-2010; Chair of the ASME K-8 Committee on Heat Transfer Fundamentals 2009-2012; Chaired the 2014 NASA FluidsLab Workshop on Boiling and Condensation in Reduced Gravity (this generated a report assessing research needs in this area).
3. Editor in Chief of the *International Journal of Transport Phenomena*, 1996-present.
4. Member, NSF Review Panel for proposals in the area of phase change, April 2013.
5. Recent Honors and Awards

   2004 – Recipient of the James Potter Gold Medal from ASME for eminent achievement in thermodynamics.

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