Per F. Peterson, Ph.D.

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Education and Training:

Institution	Major	Degree	Year
University of Nevada, Reno	Mechanical Engineering	B.S.	1982
University of California, Berkeley	Mechanical Engineering	M.S.	1986
University of California, Berkeley	Mechanical Engineering	Ph.D.	1988

Research and Professional Experience:

7/98-	Professor - Nuclear Engineering Department, U.C. Berkeley	
	Research and teaching in heat and mass transfer, multi-phase/multi-component	
	flows, thermal hydraulics, reactor safety, and nuclear materials management.	
12/99-	Mechanical Engineering Faculty Member, Lawrence Berkeley National Labora	
	Accelerator and Fusion Research Division	
7/00-7/05,	Chair - Nuclear Engineering Department, U.C. Berkeley	
7/09-7/12		
7/98-9/00	Chair, Energy and Resources Group, U.C. Berkeley	
7/94-6/98	Associate Professor - Nuclear Engineering Department, U.C. Berkeley	
6/90-6/94	Assistant Professor - Nuclear Engineering Department, U.C. Berkeley	
6/89-5/90	JSPS Fellow - Tokyo Institute of Technology.	
	Japan Society for the Promotion of Science Fellow.	
9/88-5/89	Assistant Specialist - Mechanical Engineering Department, U.C. Irvine.	
	Heat transfer research and teaching.	
6/88-8/88	Guest Researcher - Tokyo Institute of Technology.	
	Research on reflux thermosyphons with multi-species mixtures.	
8/85-5/88	Research Assistant - Mechanical Engineering Department, U.C. Berkeley.	
	Doctoral research in heat and mass transfer in condensing systems.	
5/82-6/85	Engineer - Bechtel National, Inc., San Francisco, California	
	Design of systems for processing (vitrifying) high-level nuclear waste.	

Publications:

- 1. G.T. Fukuda, **P.F. Peterson**, D.R. Olander, J.M. Prausnitz, "Thermodynamics of the LiF– NaF–BeF₂ system at high temperatures," Fluid Phase Equilibria, Vol. 255, pp. 1–10 (2007).
- C.W. Forsberg, P.F. Peterson, and H. Zhao, "High-Temperature Liquid-Fluoride-Salt Closed-Brayton-Cycle Solar Power Towers," Journal of Solar Energy Engineering, Vol. 129, pp. 141-146, 2007.
- H. Zhao and P.F. Peterson, "Advanced Multi-Effect Distillation System for Desalination Using Waste Heat From Gas Brayton Cycles," Nuclear Technology, Vol. 180, pp. 422-436 (2012).
- 4. J. Schmidt, M. Scheiffele, M. Crippa, **P. F. Peterson**, K. Sridharan, Y. Chen, L.C. Olson, M.H. Anderson and T.R. Allen, "Fabrication, design and testing of ceramic plate type heat exchangers with integrated flow channel design," International Journal of Applied Ceramic Technology, Vol.8, Issue 5, pp. 1073-1086, 2011.

- 5. E. Urquiza, K. Lee, **P.F. Peterson**, R. Greif, "Multi-Scale Transient Thermal, Hydraulic and Mechanical Analysis Methodology of a Printed Circuit Heat Exchanger using an Effective Porous Media Approach," Journal of Thermal Science and Engineering Applications, Vol. 5, pp. 041011-1/8 (2013).
- C. Andreades, R.O. Scarlat, L. Dempsey, and P.F. Peterson, "Reheat Air-Brayton Combined Cycle (RACC) Power Conversion Design and Performance Under Nominal Ambient Conditions," ASME Journal of Engineering for Gas Turbines and Power, vol. 136, No. 6, doi:10.1115/1.4026506 (2014).

Synergistic Activities:

- 1. Registered Professional Engineer in State of California (1985), Reg. Number 23861
- 2. Affiliated Faculty Member, Energy and Resources Group, U.C. Berkeley (Chair 1998-2000)
- 3. Editor-in-Chief, 2002-2005, Editor, 1997-2002, 2006-present, Experimental Heat Transfer
- 4. Chair, Sustainable Nuclear Energy Initiative Advisory Committee, Pacific Northwest National Laboratory, 2007-2010
- 5. Reviewer for Journal of Heat Transfer, Journal of Thermophysics and Heat Transfer, Experimental Heat Transfer, Fusion Technology, International Journal of Multiphase Flow, Nuclear Engineering and Design, Experimental Thermal and Fluid Science, the National Science Foundation and the Department of Energy