***Eckhard Groll, Ph.D.***

***Director of Office of Professional Practice / Professor of Mechanical Engineering / Professor of Construction Engineering and Management (by Courtesy)***

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**Degrees**

* B.S. Ruhr-University of Bochum, '86
* M.S. Ruhr-University of Bochum, '89
* Ph.D. University of Hannover, '94

**Research Interests**

* Thermal sciences as applied to HVAC&R systems and equipment

**Research Area(s)**

* [Combustion, Energy Utilization, and Thermodynamics](https://engineering.purdue.edu/ME/People/Areas/?area=Combustion%2C%20Energy%20Utilization%2C%20and%20Thermodynamics)
* [Heating, Ventilating, Air Conditioning & Refrigeration](https://engineering.purdue.edu/ME/People/Areas/?area=Heating%2C%20Ventilating%2C%20Air%20Conditioning%20%26%20Refrigeration)

**Research Links**

* [Faculty Research Presentation](https://engineering.purdue.edu/ME/Research/Presentations/GrollME_Research2007.pdf)

**Awards and Recognitions**

 2011 ASHRAE Distinguished Lecturer

 2010-2011 ACE (American Council on Education) Fellow

 2010 E. K. Campbell Award from ASHRAE in recognition of outstanding service and achievement in teaching and research in subjects relating to the industry and professions represented by ASHRAE.

 2009-10 CIC-ALP Fellow (Committee on Institutional Collaboration Academic Leadership Program), Purdue University

 2009 Faculty Advising Excellence Award, College of Engineering, Purdue University

 2008 Inductee Book of Great Teachers, Purdue University

 2007 Ruth and Joel Spira Award for outstanding contributions to the School of Mechanical Engineering for inspiring students and fostering excellence in commercial or defense product realization.

 2007 Purdue University Faculty Scholar Award

 2006 ASHRAE Fellow

 2005 Fellow of Purdue’s Teaching Academy

 2005 Wilbur T. Pentzer Achievement and Leadership Award for outstanding contributions to the growth and well-being of the International Institute of Refrigeration (IIR) and the U.S. National Committee of the IIR.

 2005 Charles B. Murphy Award for outstanding undergraduate teaching for meritorious and effective performance in the instruction of undergraduate students at PurdueUniversity.

 2004 Team Excellence Award in the Schools of Engineering at PurdueUniversity for outstanding innovation and interdisciplinary teamwork in creating and developing the Global Engineering Alliance for Research and Education (GEARE)

 2003-2005 B.F.S. Schaefer Outstanding Young Faculty Scholar Award from the School of Mechanical Engineering at PurdueUniversity

 2003 ASHRAE Distinguished Service Award

 Guest Professorship at the University of Karlsruhe, Germany, from DAAD (German Academic Exchange Service), January 1 to July 31, 2003

 2002-2003 Senior Resource Faculty for Teacher for Tomorrow Award Program at PurdueUniversity

 2002 Solberg Award for best teacher in Mechanical Engineering at PurdueUniversity

 1997 ASHRAE New Investigator Award

 Six-month International Scholarship at TexasA&MUniversity from DAAD (German Academic Exchange Service), 1988

**Ten Select Publications**

Bradshaw, C.R., Groll, E.A., and Garimella,S.V., ???A Comprehensive Model of a Miniature-Scale Linear Compressor for Electronics Cooling,??? Int???l J. Refrigeration, Vol. 34, No. 1, 2011, pp. 63-72.  
  
Bell, I.H., Groll, E.A., and Braun, J.E., ???Performance of Vapor Compression Systems with Compressor Oil Flooding and Regeneration,??? Int???l J. Refrigeration, Vol. 34, No. 1, 2011, pp. 225-233.  
  
Mathison, M.M., Braun, J.E., and Groll E.A., ???Performance Limit for Economized Cycles with Continuous Refrigerant Injection,???by Int???l J. Refrigeration, Vol. 34, No. 1, 2011, pp. 234-242.  
  
Bell, I.H., and Groll, E.A., ???Air-side Particulate Fouling of Microchannel Heat Exchangers: Experimental Comparison of Air-Side Pressure Drop and Heat Transfer with Plate-Fin Heat Exchanger,??? J. Applied Thermal Engineering, Vol. 31, No. 5, 2011, pp. 742-749.  
  
Palmiter, L., Kim, J.-H., Larson, B., Francisco, P.W., Groll, E.A., and Braun, J.E., ???Measured effect of airflow and refrigerant charge on the seasonal performance of an air-source heat pump using R-410A,??? J. Energy and Buildings, Vol. 43, No. 7, 2011, pp. 1802-1810.  
  
Shen, B., Braun, J.E., and Groll, E.A., "The Impact of Refrigerant Charge, Air Flow and Expansion Devices on the Measured Performance of an Air-Source Heat Pump," ASHRAE Transactions, June 2011.  
  
Shen, B., Braun, J.E., and Groll, E.A., "Modeling Improvements for Air Source Heat Pumps," ASHRAE Transactions, June 2011.  
  
Hengeveld, D.W., Braun, J.E., Groll, E.A.and Williams, A.D., ???Optimal Placement of Electronic Components to Minimize Heat Flux Non-Uniformities,??? Journal ofSpacecrafts and Rockets, Vol. 48, No. 4, 2011, pp. 556-563.  
  
Hengeveld, D.W., Braun, J.E., Groll, E.A.and Williams, A.D., ???Optimal Distribution of Electronic Components to Balance Environmental Fluxes,??? Journal ofSpacecrafts and Rockets, Vol. 48, No. 4, 2011, pp. 694-697.  
  
Leffler, R.A., Bradshaw, C.R., Groll, E.A., and Garimella, S.V., ???Alternative Heat Rejection Methods for Power Plants,??? accepted by J. Applied Energy, October 2011.