

**Miles Greiner, Ph.D.**

Foundation Professor and Department Chair of Mechanical Engineering  
University of Nevada, Reno

Mail Stop 312, 1664 North Virginia Street, Reno, Nevada 89557  
(775) 784-4873, (775) 784-1701 (fax), [greiner@unr.edu](mailto:greiner@unr.edu)







20. US Department of Energy, Nuclear Energy Research Program (NEUP), “Development and Experimental Benchmark of Computational Models to Predict Cladding Temperature and Vapor Removal from UNF Canisters during Drying Operations,” 10/1/2017 to 12/31/2020, \$399,753, PI: Miles Greiner (\$250,000), Co-PI: Mustafa Hadj Nacer (\$149,753), (peer reviewed).

## **Education**

1. (Internally funded) UNR Technology Fee Fund, "MECH 391 Instrumentation Laboratory," 6/02, PI: M. Greiner, \$15,853
2. US Nuclear Regulatory Commission, “The University of Nevada, Reno Fellowship Program in Materials and Thermal Science for Nuclear Power,” 5/1/2010 to 4/30/2014, Co-PIs: D. Chidambaram and M. Greiner, \$399,997 (peer reviewed).
3. SPX Corporation, “Short Course on Wall-Shape-Induced Flow Destabilization and Heat Transfer Augmentation,” 9/2/2010, PI: M. Greiner, \$5538.
4. US Nuclear Regulatory Commission, “Development of Nuclear Materials Engineering and Combustion Courses at the University of Nevada, Reno,” NRC-HQ-11-G-38-0056, 8/22/2011 to 8/31/2013, PI: D. Chidambaram, Co-PI: M. Greiner, \$82,916 (peer reviewed).
5. US Nuclear Regulatory Commission, “The University of Nevada, Reno Fellowship Program in Materials and Thermal Science for Nuclear Energy,” 8/1/2013 to 7/31/2017, Co-PIs: D. Chidambaram and M. Greiner, \$399,926 (peer reviewed).
6. US Department of Energy, Argonne National Laboratory, “Nuclear Packaging Graduate Certificate,” 11/1/2013 to 10/31/2016, PI: M. Greiner, \$49,998.
7. US Department of Energy, Argonne National Laboratory, “Development and Assessment of the UNR Graduate Certificate in Nuclear Packaging Program,” 11/1/2016 to 10/31/2019, PI: M. Greiner, \$50,000.
8. US Department of Energy, Argonne National Laboratory, “Creation of the University of Nevada, Reno Graduate Certificate in Transportation Security and Safeguards,” 05/03/2018-03/31/2020, PI: M. Greiner, \$183,048
9. US Nuclear Regulatory Commission, “The University of Nevada, Reno Fellowship Program in Materials and Thermal Science for Nuclear Energy,” 7/1/2018 to 6/30/2021, Co-PIs: D. Chidambaram and M. Greiner, \$400k?? (peer reviewed).

## **Government Service 6.00**

5. Sandia National Laboratories, 26139, "Package Performance Study Peer Review Panel," 12/21/01 to 9/30/03, PI: M. Greiner, \$5,288.
6. State of Nevada, Agency for Nuclear Projects, "Cask Performance in Fire Environments," 7/21/05 to 1/31/06, PI: M. Greiner, \$24,710.

21/05 to 1H331/: M-1 (. )-5 (G)10 (r)-2 (e)-1 (i)-2 (ne)-1 (r)-2 (, \$5,

11. M. Greiner, R.J. Faulkner, V.T. Van, H.M. Tufo and P.F. Fischer, **2000**, "Simulations of Three-Dimensional Flow and Augmented Heat Transfer in a Symmetrically Grooved Channel with Constant Temperature Walls", *J. Heat Transfer*, Vol. 122, pp. 653-660.
12. D.D. Clarke, V.R. Vasquez, W.B. Whiting, and M. Greiner, **2001**, "Sensitivity and Uncertainty Analysis of Heat-Exchanger Designs to Physical Properties Estimation," *J. Applied Thermal Engineering*, Vol. 21, pp. 993-1017.
13. M. Greiner, P.F. Fischer, H.M. Tufo, and R.A. Wirtz, **2002**, "Three Dimensional Simulations of Enhanced Heat Transfer in a Flat Passage Downstream from a Grooved Channel," *J. Heat Transfer*, Vol. 124, pp. 169-176.
14. M. Greiner, P.F. Fischer and H.M. Tufo, **2002**, "Two-Dimensional Simulations of Enhanced Heat Transfer in an Intermittently Grooved Channel," *J. Heat Transfer*, Vol. 124, pp. 538-545.
15. M. Greiner, P.F. Fischer, and H.M. Tufo, **2002**, "Numerical Simulations of Resonant Heat Transfer Augmentation at Low Reynolds Numbers," *J. Heat Transfer*, Vol. 124, pp. 1169-1175.
16. Ju, H., Greiner, M., and Suo-Anttila, A., **2002** "Computer Simulations of a Generic Truck Cask in a Regulatory Fire Using the Container Analysis Fire Environment (CAFE) Code," *Int. Journal of Radioactive Materials Transport*, Vol. 13, pp. 35-40.
17. Kramer, M.A., Greiner, M., Koski, J.A. Lopez, C., and Suo-Anttila, A., **2003**, "Measurements of Heat Transfer to a Massive Cylindrical Object Engulfed in a Circular Pool Fire," *J. Heat Transfer*, Vol. 125, pp. 110-118, 2003.
18. Greiner, M., and Suo-Anttila, A., **2004**, "Validation of the ISIS Computer Code for Simulating Large Pool Fires Under a Variety of Wind Conditions," *ASME J. Pressure Vessel Technology*, Vol. 126, pp. 360-368.
19. Are, N., Greiner, M., Suo-Anttila, A., **2005**, "Benchmark of a Fast-Running Computational Tool for Analysis of Massive Radioactive Material Packages in Fire Environments," *ASME Journal of Pressure Vessel Technology*, Vol. 127, pp. 508-514.
20. Greiner, M., and Suo-Anttila, A., **2006**, "Radiation Heat Transfer and Reaction Chemistry Models for Risk Assessment Compatible Fire Simulations," *Journal of Fire Protection Engineering*, Vol. 16, pp. 79-103.
21. Araya, P.E.; Greiner, M., **2007**, "Two-dimensional simulations of natural convection/radiation heat transfer for BWR assembly within isothermal enclosure," *Packaging, Transport, Storage and Security of Radioactive Material*, Volume 18, Number 3, 2007, pp. 171-179.
22. Greiner, M., Gangadharan, K.K., and Gudipati, M., **2007**, "Use of Fuel Assembly/Backfill Gas Effective Thermal Conductivity Models to Predict Basket and Fuel Cladding Temperatures within a Rail Package During Normal Transport," *Nuclear Technology*. Vol. 160, pp. 325-336.
23. Mallidi, N., Greiner, M., and Venigalla, V.R.V., **2007**, "Fire Durations of Concern for a Modern Legal Weight Truck Cask," *Nuclear Technology*, Vol. 159, pp. 192-201.
24. Araya, P.E. and Greiner, M., **2007**, "Use of Regular Rod Arrays to Model Heat Transfer from BWR Fuel Assemblies inside Transport Casks," *Packaging, Transport, Storage and Security of Radioactive Material*, Vol. 18, pp. 171-179.
25. Greiner, M., Chalasani, N.R., and Suo-Anttila, A., **2008**, "Thermal Protection Provided by Impact Limiters to Containment Seal within a Truck Package," *ASME Journal of Pressure Vessel Technology*, Vol. 130.
26. Gudipati, M., and Greiner, M., **2008**, "Computational fluid dynamics simulations of fuel cladding and basket surface temperatures in multipurpose canister rail cask during normal transport," *Packaging, Transport, Storage & Security of Radioactive Material*, Vol. 19, No 3, pp 173-179.





1. Maharjan, D., M. Hadj-Nacer, and M. Greiner, “Temperatures Measurement of a Heated Rod Array within a Square Cross-Section Enclosure Filled with Dry Rarefied Helium,” to be submitted to the *ASME Journal of Heat Transfer* in 2019.
2. Maharjan, D., M. Hadj-Nacer, and M. Greiner, “Experimentally-Benchmarked Computational Fluid Dynamics Simulations of a  $7 \times 7$  Array of Heated Rods within a Square-Cross-Section Enclosure Filled with Rarefied Helium,” to be submitted to the *ASME Journal of Heat Transfer* in 2019.
3. Hadj-Nacer, M., Higley, M., Trujillo, C., Greiner, M. “Geometrically-Accurate Three-Dimensional Simulations of Nuclear Fuel Canister under Vacuum Drying,” to be submitted to the *ANS Nuclear Technology* in 2019.
4. Hadj-Nacer, M., D. Maharjan, M. T. Ho, S. K. Stefanov, I. Graur and M. Greiner, “Heat Transfer through Rarefied Gas in Complex Geometry: Comparison betp1 (f)3 (i1 (f)3 (i1 (f)3 , M)-1 8nal).00

8. M. Greiner, S. Shin, B. Snyder and R.A. Wirtz, **1995**

- Mechanical Engineering Congress and Exposition*, paper number IMECE2001/HTD-24250 (Published on CD-ROM, no page numbers) New York, NY, November 11-16, 2001.
21. Ju, H., Greiner, M., and Suo-Anttila, A., **2001** "Computer Simulations of a Generic Truck Cask in a Regulatory Fire Using the Container Analysis Fire Environment (CAFE) Code," presented at the *13th International Symposium on the Packaging and Transportation of Radioactive Material (PATRAM)*, CD-ROM, Chicago, Illinois, September 3-7, 2001.
  22. Kramer, M.A., Greiner, M., Koski, J.A. Lopez, C., and Suo-Anttila, A., **2001** "Measurements of Heat Transfer to a Massive Cylindrical Object Engulfed in a Circular Pool Fire," presented at the *2001 ASME National Heat Transfer Conference*, Paper number NHTC01-11466, (CD-ROM), Anaheim, California, June 10-12.
  23. M. Greiner, P.F. Fischer, and H.M. Tufo, **2001**, "Numerical Simulations of Resonant Heat Transfer Augmentation at Low Reynolds Numbers," presented at the *2001 ASME International Mechanical Engineering Congress and Exposition*, Paper number IMECE2001/HTD-2-8-5-34, CD-ROM, New York, NY, November 11-16.
  24. Kramer, M.A., Greiner, M., Koski, J.A. and Lopez, C., **2002**, "Uncertainty of Heat Transfer Measurements in an Engulfing Pool Fire," presented at the *Symposium on Thermal Measurements: The Foundation of Fire Standards*, Dallas, Texas, December 3, 2001, published in ASTM Stock # STP1427, pp. 111-127.
  25. Greiner, M., and Suo-Anttila, A., **2003** "Validation of the ISIS Computer Code for Simulating Large Pool Fires Under a Variety of Wind Conditions," presented at the *ASME Pressure Vessels and Piping Conference*, Cleveland, Ohio, July 20 - 24.
  26. Greiner, M., and Suo-Anttila, A., **2003**, "Fast Running Pool Fire Computer Code for Risk

33. Chalasani, N.R., and Greiner, M., **2006**, "Natural Convection/Radiation Heat Transfer





- PVP2015-45851, Proceedings of the ASME 2015 Pressure Vessels & Piping Division Conference, PVP2015, July 19-23, 2015, Boston, Massachusetts, USA.
68. Maharjan, D., Hadj-Nacer, M., Chalasani, M., and Greiner, M., **2016** “Experimentally-Benchmarked Computational Fluid Dynamics Simulations of an Array of Heated Rods within a Square-Cross-Section Helium-Filled Pressure Vessel,” Proc. of the ASME Pressure, Vessel, and Pipe (PVP) conference, Vancouver, BC, Canada.
  69. Trujillo, C., Hadj-Nacer M., and Greiner M., **2017**, “Effect of Rarefaction on Cladding Temperatures within a Used Nuclear Fuel Canister Filled with Dry Helium,” Proceedings of the International High-Level Radioactive Waste Management, Charlotte, NC, April 9-13, 2017.
  70. Maharjan, D., M. Hadj-Nacer, and M. Greiner, **2017** “Temperature Measurement of an Array of Heated Rods Subjected to Vacuum Drying Conditions,” Proc. of the ASME Pressure, Vessel, and Pipe (PVP) conference, Waikoloa Village, HI.
  71. Maharjan, D., M. Hadj-Nacer, and M. Greiner, **2017** “Experimentally Benchmarked Computational Fluid Dynamics Simulations of a 7×7 Array of Heated Rods within a Square-Cross-Section Enclosure F41 0 Td( 0.001 Tc 0.019 0.002 Tcu(i)-1 (o)6 (a)--a Tf0.-37.165 05)4 (i)-1 (ed)1.1 and Pipe (PVP) conference, Waikoloa Village, HI.
  72. Maharjan, D., M. Hadj-Nacer, and M. Greiner, **2017** “Experimenooaa0.001 Tc 0.0y Benchm37.165 ked Model to Predict Cladding Temperatures of Used Nuclear Fuel During Vacuum Drying,” ANS Winter Meeting, Washington, DC.
  73. Greiner, M., Liu, YY, Shuler, J., **2017**, “Developmenoaa and Assessmenooa of oaniversitc 0.0ya Of Nevada,--a Tf0.-eno Graduatc 0.0e Certi5icate in Nucle37:165 Educ Paohag, Training, and Work5orce Developmentc 0.9 α.Vacuom DryingTC(conditions) Prob4of(thS ASME Press(001 (n)TJ0 Tc

Education and Training to Improve and Sustain Institutional Knowledge WM2018  
Conference, March 18 – 27, 2018, Phoenix, Arizona.

**Selected Invited Presentations (Not associated with refereed conference  
publications)**

1. M. Greiner, "Dest





**Conference Volumes Edited (Associated with a sessions organized by M. Greiner):**

1. M. Greiner and C.A. Amon, editors, "Symposium on the Fundamentals of Heat Transfer in

Tran2 (e)-1 dκposan2 (e)-1 dκposa0d xpose. 0 Tw 14 0 Td(P (e)-13T5-1.512 (n)5 ((or)-2 (s)4 (ngym)