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Keith Hollingsworth is Professor and Chair of the Mechanical and Aerospace Engineering Department at the University of Alabama in Huntsville. Prior to 2011, he was a member of the Mechanical Engineering faculty of the University of Houston where he was the Director of the Heat Transfer and Phase Change Laboratory. Professor Hollingsworth's research interests include boiling and two-phase flows, turbulent convective heat transfer, liquid crystal imaging of complex temperature fields, and biomedical heat transfer. He has advised over 35 theses and dissertations, and he is a Fellow of the American Society of Mechanical Engineers and an associate editor of the Journal of Heat Transfer.

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RELEVANT PUBLICATIONS:

1. Fully Developed Nucleate Boiling in Narrow Vertical Channels; M. Lakshminarasimhan, Q. Lu, Y. Chin, D. K. Hollingsworth, L. C. Witte, &, ASME J. Heat Transfer, August, 2005, Vol. 127, No. 8, pp. 941-944.
2. Reduction in the Emittance of Thermal Radiator Coatings Caused by the Accumulation of Simulated Martian Dust; D. K. Hollingsworth, L. C. Witte, J. G. Hinke, & K. Hurlbert, Applied Thermal Engineering, December, 2006, vol. 26, pp. 2383-2392.
3. The Thickness of the Liquid Microlayer Between a Cap-Shaped Sliding Bubble and a Heated Wall: Experimental Measurements; Xin Li, D. K. Hollingsworth, L. C. Witte, ASME J. Heat Transfer, September, 2006, Vol. 128, pp. 934-944.
4. High-Speed Visualization of Two-Phase Flow in a Micro-Scale Pin-Fin Heat Exchanger; T. Cognata, D. K. Hollingsworth, & L. C. Witte, Heat Transfer Engineering, October, 2007, Vol. 28, No. 10, pp. 861-869 and featured on the cover of the volume.
5. Transition from Boiling Onset to Fully Developed Nucleate Boiling in a Narrow Vertical Channel; E. Daniel, D. K. Hollingsworth & L. C. Witte, Heat Transfer Engineering, October, 2007, Vol. 28, No. 10, pp. 885-894.
6. Vapor Bubble Rise Under a Heated Inclined Plate; Xin Li, D. K. Hollingsworth, & L. C. Witte, J. Exp. Thermal & Fluid Science, November, 2007, Vol. 32, No. 2, pp. 529-544.
7. The Thickness of the Liquid Microlayer Between a Cap-Shaped Sliding Bubble and a Heated Wall: Comparison of Models to Experimental Data; D. K. Hollingsworth, Xin Li, L. C. Witte, ASME J. Heat Transfer, November 2008, Vol. 130, No. 111501.
8. Enhancement of Heat Transfer Behind Sliding Bubbles; D. Keith Hollingsworth, Larry C. Witte, Marcelino Figueroa, ASME J. Heat Transfer, special edition, Dec. 2009, Vol 131, No. 121005-1.
9. Imaging of Surface-Tension-Driven Convection Using Liquid Crystal Thermography; T. W. Dutton, L. R. Pate & D. K. Hollingsworth, ASME J. Heat Transfer, Dec. 2010, Vol 132, No. 121601.
10. The effect of sliding bubbles on nucleate boiling of a subcooled liquid flowing in a narrow channel; Arif Ozer, Ahmet Oncel, D. K. Hollingsworth, & L. C. Witte, Int. J. Heat and Mass Transfer, 2011, Vol 54, pp. 1930-1940.
11. A Method of Concurrent Thermographic-Photographic Visualization of Flow Boiling in a Minichannel; Arif Ozer, Ahmet Oncel, D. K. Hollingsworth, & L. C. Witte, J. Exp. Thermal & Fluid Science November, 2011, Vol. 35, No. 8, pp. 1522-1529.