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Education:

Ph.D., Applied Physics, Harvard University, June 1990
M.S., Applied Physics, Harvard University, 1983
B.E., Stevens Institute of Technology, 1981

MIT Service:

2000-Present Associate Professor with Tenure
1999 - 2000 Associate Professor
1993- 1999 Assistant Professor

Other Related Experience

1990-1993 Post Doctoral Associate, LosAlamos Laboratories
1981-1990 Research Assistant, Harvard University
1981-1981 Reliability Analyst, Foster Wheeler Energy Corp.

Consulting & Patents

Consulting

Advanced Mechanical Technology, Inc. (AMTI) (Consultant)
United Technologies Research Center (Consultant)
Temptronics Inc (Consultant)
Scotsman/Enodis (Consultant)

Patent

Patent: J. G. Brisson, J.L. Smith, Jr., and T. Baker, Novel Ice Cream Production Method, Provisional patent filed Nov. 17 2004

Professional Registration

None

Principal Publications (for last five years)



People

FACULTY
EMERITUS FACULTY
ADMIN STAFF
TEACHING STAFF
LECTURERS
RESEARCH STAFF
TECHNICAL STAFF
SUPPORT STAFF
POSTDOCS
VISITORS
FACULTY CLOUD

1. Phillips C. and Brisson J.G., "Dissipation in Metal Welded Bellows and Its Consequences for Sub-Kelvin Refrigerators," Cryocoolers 11, Proceedings of the 11th International Cryocoolers Conference pp. 605-612 (2001).
2. Sullivan S., Zhang, X., Ayon A.A. and Brisson J.G., "Demonstration of a Microscale Heat Exchanger for a Silicon Micro Gas Turbine Engine," 11th International Conference on Solid-State Sensors and Actuators, Transducer's 01, Technical Digest, Munich, Germany, pp. 1606-1609 (2001).
3. Miller F.K. and Brisson J.G., "The Design and Performance of a Superfluid 3He-4He Compressor", Advances in Cryogenic Engineering, Vol. 47, pp. 312-319 (2002).
4. Smith J.L. Jr., Brisson, J.G. Traum, M.J., Hannon, C. and Gerstmann J., "Description of a High-Efficiency Floating-Piston Expander for a Miniature Cryocooler", Proceedings of IMECE2002, Vol. 3, Paper IMECE2002-33402, ASME, 2002.
5. Smith B.A., Radovinsky A., Titus P.H., Smith J.L. Jr., Brisson J.G., J.V. Minervini, Schultz, J.H. Camille R.J. Jr., Molzon W.R., Hebert M., Liu T.J. and Hassenzahl W.V., "Superconducting Magnet Systems for the Muon-Electron Conversion Experiment", IEE Transactions on Applied Superconductivity, Vol. 13, No. 2, pp 1377-1380 (2003).
6. Ozer T., Kenworthy M., Brisson J.G., Cravalho E.G. and McKinley G.H., "On Developments in Interactive Web-based Learning Modules in a Thermal-Fluids Engineering Course," Int. J. Eng., Vol. 19, No. 2, pp. 305-315 (2003).
7. Hannon C.L., Gerstman J., Traum, M.J., Brisson, J.G., and Smith J.L., Jr., "Development of a Medium-Scale Collins-Type 10K Cryocooler", Cryocoolers 12: Proceedings of the 12th International Cryocoolers Conference, pp. 587-594 (2003).
8. Miller F.K. and Brisson J.G., "Preliminary Performance of a Superfluid 3He-4He Compressor", Cryocoolers 12: Proceedings of the 12th International Cryocoolers Conference, pp. 675-679 (2003).
9. Phillips C. and Brisson J.G., "Preliminary Experimental Results using a Three-Stage Superfluid Stirling Refrigerator," Cryocoolers 12: Proceedings of the 12th International Cryocoolers Conference, pp. 681-686 (2003).
10. Hannon C.L., Gerstmann J., Traum M.J., Brisson J.G., and Smith J.L., Jr., "Development of a Small-Scale Collins Type Cryogenic Refrigerator", in Proceedings of 2003 International Mechanical Engineering Congress & Exhibition, Vol. 3, Paper Number IMECE2003-42300, ASME, (2003).
11. Hannon C.L., Gerstmann J., Traum M.J., Brisson J.G., and Smith J.L., Jr., "Development of a Small-Scale Collins Type Cryocooler for Space and Terrestrial Applications", in Proceedings of the 1st International Energy Conversion Engineering Conference, Paper Number AIAA 2003-6029, AIAA, (2003).
12. Hannon C.L., Gerstmann J., Krass B.J., Traum M.J., Brisson J.G., and Smith, J.L. Jr., "Floating Piston Expander Development for a Small-Scale Collins Type 10 K Cryocooler for Space Applications", Advances in Cryogenic Engineering 49B, pp. 1650-1657, (2004).
13. Traum M.J., Smith J.L. Jr., Brisson J.G., Gertsman J. and Hannon C.L., "Electromagnetic Smart Valves for Cryogenic Applications," Advances of Cryogenic Engineering, 49A, pp 428-435, (2004).
14. Hannon C.L., Krass B.J., Gerstmann J., Chaudhry G., Brisson J.G., and Smith J.L. Jr., "Development of a Small-Scale Collins-Type 10K Cryocooler for Space Applications", Cryocoolers 13, pp. 41-50 (2004).
15. Hannon C.L., Krass B.J., Gerstmann J., Chaudhry G., Brisson J.G., and Smith J.L. Jr., "Development and Testing of a Small-Scale Collins-Type Cryocooler", Proceedings of IMECE2004, Vol. 3, Paper Number IMECE2004-60388, American Society of Mechanical Engineers, New York

- (2004).
16. Cui L. and Brisson J.G., "Modeling of MEMS-Type Rankine Cycle Machines," *Journal of Gas Turbines and Power*, pp 683-692, (Jul. 2005).
 17. Miller F. and Brisson J.G., "Proof-of-Principle Measurements of the Superfluid Joule-Thomson Refrigerator Concept", *Journal of Low Temperature Physics*, Vol. 141, Nos. 3/4, pp. 179-190 (2005).
 18. Hannon C.L., Krass B., Gerstmann J., Chaudhry G., Brisson J.G. and Smith J.L. Jr., "Development and Testing of a Small-Scale Collins Type Cryocooler", *Advances in Cryogenic Engineering*, Vol. 51B, pp. 1877-1884 (2006).
 19. Chaudhry G., Brisson J.G., Smith J.L. Jr., Hannon C.L., Krass B. and Gerstmann J., "Modeling of a 10K Collins Type Cryocooler", *Advances in Cryogenic Engineering*, Vol. 51A, pp. 337-344 (2006).
 20. Miller F.K. and Brisson J.G., "The Experimental Evaluation of a Proof of Principle Superfluid Joule-Thomson Refrigerator", *Advances in Cryogenic Engineering*, Vol. 51A, pp. 946-953 (2006).
 21. Baker T., Smith J.L. Jr. and Brisson J.G., "Carbon Dioxide Flash-Freezing Process Applied to Ice Cream Production", submitted for publication in *Cryocoolers 14*. (2006).
 22. Hannon C.L., Krass B., Gerstmann J., Chaudhry G., Brisson J.G., and Smith J.L. Jr., "Modeling, Development and Testing of a Small-Scale Collins Type Cryocooler", submitted for publication in *Cryocoolers 14*. (2006).

Scientific & Professional Societies

American Society of Mechanical Engineers

American Physical Society