Jerome B. Johnson
Research Professor
University of Alaska-Fairbanks
Institute of Northern Engineering
PO Box 755910
Fairbanks, AK 99775-5910
jerome.b.johnson@alaska.edu
907-474-1986

Education

BA Physics/Mathematics, 1972, Central Washington State College
Geophysics, 1974, University of Alaska
Ph.D. Geophysics, 1978, University of Washington

Experience:

- Oct. 2008 – Present: Research Professor and Director of the Alaska Hydrokinetic Energy Research Center, Institute of Northern Engineering, University of Alaska, Fairbanks. Research Professor responsible for conducting physical, thermal and mechanical studies on snow, ice, permafrost, granular media, space sciences, and hydrokinetic energy production.
- USA Cold Regions Research and Engineering Laboratory, Geophysicist. Responsible for conducting physical, thermal and mechanical studies on snow, ice, permafrost, granular media, and space sciences, 1983 – Sept. 2008.
- Geophysical Institute, University of Alaska, Post Doctoral Research Fellow. Responsible for conducting studies on the mechanical properties of sea ice, ice loads on offshore structures, permafrost and the physical properties of snow, 1980 - 1983.
- Oceanographic Services, Inc., Senior Research Engineer. Responsible for applied research on sea ice movement, sea ice mechanics, ice stress measurement, and offshore construction, 1979 - 1980.

Publications:

- Johnson, J. B., A. B. Gelvin, P. Duvoy, G. L. Schaefer, G. Poole and G. D. Horton (2014). "Performance characteristics of a new electronic snow water equivalent sensor in different climates." Hydrologic Processes: 33. doi: 10.1002/hyp.10211.
- Nye, B., A. V. Kulchitsky and J. B. Johnson (2014). "Intersecting dilated convex polyhedra method for modeling complex particles in discrete element method." International Journal for Numerical and Analytical Methods in Geomechanics. doi: 10.1002/nag.2299.
- Johnson, J.B. et al. 2013. Characterization of the Tanana River at Nenana, Alaska, to determine the important factors affecting site selection, deployment, and operation of hydrokinetic devices to generate power. Alaska Center for Energy and Power, Alaska Hydrokinetic Energy Research Center, Fairbanks, AK, 130 pp. URL: http://www.uaf.edu/files/acep/2013_8_8_HKD_report_with_appendices.pdf.
- Knuth, M. A., J. B. Johnson, M. A. Hopkins, R. J. Sullivan and J. M. Moore (2012). "Discrete element modeling of a Mars Exploration Rover wheel in granular material." Journal of Terramechanics **49**: 27-36. doi:10.1016/j.jterra.2011.09.003.
- Johnson, J. B., H. Toniolo, and A. C. Seitz. (2011). Hydrokinetics: The Alaskan way, International Water Power and Dam Construction, July 2011, Vo. 63, No. 7, pp. 38-41, URL: www.waterpowermagazine.com.