

**Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit**

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
ARSC	Peer-reviewed Paper	"Scalable, Parallel, and Distributed Approximate Shortest Paths in Massive Graphs," <u>Arthur Mahoney</u> , Greg Newby and Daniel Watson. Mahoney is listed as first author in the paper delivered at the 2009 International Conference on Parallel and Distributed Processing Techniques and Applications	U
ARSC	Referred Conference Proceedings	<u>Huang, Miaoqing</u> ; <u>Serres, Olivier</u> ; El-Ghazawi, Tarek; Newby, Gregory B. 2009. "Parameterized Hardware Design on Reconfigurable Computers: An Image Registration Case Study." <u>Southern Programming Languages Conference (SPL2009) Proceedings</u> . New York: IEEE. pp 71-77. 6p.	G
ARSC	Referred Conference Proceedings	<u>Newby, Gregory B.</u> ; <u>Fallen, Christopher T (1).</u> ; <u>McCormick, Kylie(2).</u> 2009. "Lucene for n-grams using the CLUEWeb Collection" Text REtrieval Conference (TREC 2009) Gaithersburg, MD: National Institute of Science and Technology	G (1), U (2)
CEM	Article in Conference Proceedings	Seefeldt, S.S., D.L. Barnes, R. Ranft, W. Rhodes, 2009, Persistence of Triclopyr in Alaska Subarctic Environments, Presented at the Annual Meeting of the Weed Science Society of America, Orlando, FL, Feb 9-13	G
CEM	ASCE Special Publication	Zhang, X., Li, L., and Chen, L. (2009). "Impact of a Tree on a Residential Building on Expansive Soils: A Numerical Approach." International Foundation Engineering Congress and Equipment Expo '09 (ICFEE09) March 15-19, Orlando, FL ASCE Geotechnical Special Publication No.187. pp.614-621.	G
CEM	Conference Paper	P. Li, J. Liu, A. Shen, and S. Ping, "Determination of Fatigue Limit for Perpetual Pavement Design in Binzhou, China", the 88th Transportation Research Board Annual Meeting, Washington, D.C., 2009.	G
CEM	Conference Paper	Shur, Y., Kanevskiy, M.Z., Jorgenson, M.T., Fortier, D., Dillon, M., Stephani, E., Bray, M. (2009) Yedoma and thermokarst in the northern part of Seward Peninsula, Alaska, American Geophysical Union 2009 Fall Meeting, December 14-18, 2009, San Francisco, C41A-0443.	G
CEM	Conference Paper	Stephani, E., Dillon, M., Fortier, D., Jorgenson, T., Kanevskiy, M., Shur, Y. (2009) <i>Geomorphological characteristics of Yedoma terrains in the northern part of Seward Peninsula, Alaska</i> , American Geophysical Union 2009 Fall Meeting, December 14-18, 2009, San Francisco, C41A-0435	G
CEM	Conference Paper	Stephani, E., Fortier, D., Shur, Y., Walsh, R. (2009) <i>Control of permafrost degradation under road infrastructures-Overview of Beaver Creek (Yukon) experimental road site project</i> . Arctic American Association for the Advancement of Science, September 14-16, 2009, Juneau, Alaska.	G
CEM	Conference Poster	Lee, J.H., Huang, D., A mesoscopic model of low-density snow under rapid loading, American Geophysical Union Annual Meeting, December, 2009.	G
CEM	Invited meeting presentation	Ghotekar, A., Gerdes, K., Patil, S. L., Dandekar, A. Y., Leigh, M. B.: "Investigation of Microbially Enhanced Oil Recovery for Alaska North Slope Heavy Oils", Presented at the Pacific Section AAPG Conference, May 2009, Ventura, CA.	G
CEM	Journal	Lee, J.H., Wang, W., "Characterization of snow cover using Ground Penetrating Radar for vehicle trafficability – experiments and modeling", J. Terramechanics 46 (2009), 189-202.	G
CEM	Journal Paper	Zhang, X. and Li, L. (2009). Some Limitations in the Constitutive Modeling of Unsaturated Soils and Solutions. ASCE International Journal of Geomechanics ( in Press, Posted ahead of print 30 July 2010 at <a href="http://ascelibrary.aip.org/dbt/dbt.jsp?KEY=IJGNXX&amp;Volume=1&amp;Issue=1">http://ascelibrary.aip.org/dbt/dbt.jsp?KEY=IJGNXX&amp;Volume=1&amp;Issue=1</a> ).	G
CEM	Judged competition	IEEE Micromouse competition, Northwest/Northeast area winners, 2009, Devin Boyer (U), Andrew Hauer (U), and Steven Kibler (G)	U, G
CEM	Judged competition	IEEE Student Paper Contest - local competition, 2009, Devin Boyer (winner)	U
CEM	Peer-Reviewed Conference Proceedings	Lee, J.H., Huang, D., Marshall, H-P, Johnson, J.B., "Microscale direct simulation of snow penetration tests and inversion of signals", 11 <sup>th</sup> European Regional Conference of the International Society for Vehicle-Terrain Systems, Bremen, Germany, Oct. 5-8, 2009.	G
CEM	Peer-Reviewed Conference Proceedings	V. Narravula, C.-f. Chen, and D. Peterson, "Failure Mechanism of Stacked CSP Module under Board-Level Drop Impact," Proceedings of the 59th annual Electronic Components and Technology Conference (ECTC), San Diego, May 27-29, 2009, pp. 2039-2045.	G
CEM	Peer-reviewed Journal Article	Agbalaka, C.C., Dandekar, A.Y., Patil, S.L., Khataniar, S. and Hemsath, J.R.: Coreflooding Studies to Evaluate the Impact of Salinity and Wettability on Oil Recovery Efficiency. Transport in Porous Media, Vol. 76 (1), 77-94, 2009.	G
CEM	Peer-reviewed Journal Article	D'Souza, A., Bandopadhyay, S., Naidu, S., Ganguli, R. and Misra, D., 2009, "Exploration and estimation of gravel resource potential in southeast Chukchi Sea continental shelf off Kivalina, Alaska," Marine Georesources and Geotechnology, 27:4, 255-272.	G
CEM	Peer-reviewed Journal Article	Howe, S., Patil, S.L., Dandekar, A.Y., Nanchary, N., Ogbe, D.O., Hunter, R.B., Chukwu, G.A. And Reynolds, D.: Production Modeling and Economic Analysis of a Potential Methane Hydrate Accumulation on the North Slope of Alaska. Petroleum Science and Technology 27:923-932, 2009.	G
CEM	Peer-reviewed Journal Article	Jaiswal, N.J., Dandekar, A.Y., Patil, S.L., Hunter, R.B. and Collett, T.S.: Relative Permeability Measurements of Gas-water-hydrate Systems, Natural gas hydrates—Energy resource potential and associated geologic hazards: AAPG Memoir 89, p. 1-11, 2009.	G
CEM	Peer-reviewed Journal Article	Lin, H.K., Walsh, D.E., Oleson, J.L. and Chen, X., 2009, "Release of Heavy Metals from Sulfide Flotation Tailings under Deepwater Discharge Environments," Minerals and Metallurgical Processing Vol. 26, No. 3, August.	G
CEM	Peer-reviewed Journal Article	Sahoo, B. C., Vajjha, R.S., Ganguli, R., Chukwu, G. and Das, D.K., 2009, "Determination of Rheological Behavior of Aluminum Oxide Nanofluid and Development of New Viscosity Correlations," Petroleum Science and Technology, 27: 1757:1770.	G
CEM	Peer-reviewed Journal Article	An Energy Efficient Parallel Embedded System for Small Satellite Applications, 2009, D. Peter, D. Raskovic and D. Thorsen, 2009, ISAST Transactions on Computers and Intelligent Systems, vol. 1(2), 8-16	G
CEM	Peer-reviewed Journal Article	Carlson, A.E. and D.L. Barnes, Movement of Trichloroethelene in a Discontinuous Permafrost Zone, 2009, Journal of Contaminant Hydrology	G
CEM	Peer-reviewed Journal Article	Cysewski, M.H. and Y. Shur. 2009. Pre-Thawing: From Mining to Civil Engineering, a Historical Perspective. <i>Cold Regions Engineering 2009: Cold Regions Impacts on Research, Design, and Construction</i> , ed. J. J. Hinzmann and H. D. Mooers, 22-31. Reston, Virginia: American Society of Civil Engineers.	G

**Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit**

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
CEM	Peer-reviewed Journal Article	Dynamic Voltage and Frequency Scaling for On-Demand Performance and Availability of Biomedical Embedded Systems, 2009, D. Raskovic and D. Giessel, IEEE Trans. Inf. Tech. in Biomedicine, vol. 13(6), 903-909	G
CEM	Special Publication	P. Li, J. Liu, and S. Saboundjian, "Resilient Modulus Characterization of Hot Asphalt Treated Alaskan Base Course Material", ASCE Geotechnical Special Publication No. 191, Edited by W. J. Steyn, K. Jenkins, and M. Solaimanian, 168-176, 2009.	G
CEM	judged competition	IEEE Student Paper Contest, Northwest area competition, 2009, Devin Boyer (2nd place)	U
CEM	Paper in Conference Proceedings	Barnes, D.L., R.A. Johnson, R. Wies, T Marsik, C. Miline, S. Underbakke, and D.L. Filler, 2009, Dust measurements to Determine Effectiveness of Rural Dust Strategies, Proceedings of the 14th Conference on Cold Regions Engineering, Cold Regions Engineering, 2009, Cold Regions Impacts on Research, Design and Construction, ASCE, Duluth, MN, Aug 31-Sept 4	G
CLA	juried national presentation, Western States Communication Association	"Between Real and Virtual Worlds: Interaction Effects across Media for Online Gamers"	G
CLA	juried national presentation, Western States Communication Association	"Dream it to Achieve it: Training Goal-Setting for Athlete/Student Success"	G
CLA	juried national presentation, Western States Communication Association	"Social Information Processing as Guide for Academic Boundary Setting in Online Networks"	G
CLA	juried national presentation, Western States Communication Association	"The Standard Agenda: a Development Proposal"	G
CLA	juried national presentation, Western States Communication Association	"Harnessing intercultural energy: Developing training scenarios to improve interdisciplinary insight and solidarity for future energy industry employees"	G
CLA	juried national presentation, Western States Communication Association	Girl Meets Boy, Boy Becomes Man, Girl Becomes Empowered	G
CLA	published bulletin item	From Crisis to Cumulative Effects: Food Security Challenges in Rural Alaska. NAPA Bulletin.	G
CLA	technical publication	<i>Hmong in the Anchorage School District: Cross cultural perspectives on parental involvement, identity and cultural proficiency</i> , published by Anchorage School District.	G
CNSM	Non-referred Presentation	Large Scale Sparse Matrix Analysis for Term-Document Occurrences in Web Text. In The Dynamics of Complex Systems	G
CNSM	Non-referred Presentation	Models and measurements of IA wave velocity during HF radio modification of the polar ionosphere, In RF Ionospheric Interactions Workshop	G
CNSM	Non-referred Presentation, TREC	Distributed multisearch and resource selection for the TREC Million Query Trck. In Proceedings of the Seventeenth Text Retrieval Conference(TREC 2008)	G
CNSM	Paper Publication, Phys. Rev.E80,056211	Transient spatiotemporal chaos is extensive in three reaction-diffusion networks	G
CNSM	Peer-reviewed article	Fiorillo, A.R., Currie, P., McCarthy, P.J. and Flaig, P.P., 2009. Description of two partial skulls of Troodon from the Prince Creek Formation (upper Cretaceous), North Slope, Alaska. Journal of Vertebrate Paleontology, v. 29, p. 178-187.	G
CNSM	Peer-reviewed article	LePain, D.L., McCarthy, P.J. and Kirkham, R., 2009. Sedimentology and sequence stratigraphy of the Middle Albian-Cenomanian Nanushuk Formation in outcrop, central North Slope, Alaska. Alaska Division of Geological and Geophysical Surveys, Report of Investigation 2009-1, 86 p.	G
CNSM	Peer-reviewed article	Tomsich, C.S., Fowell, S.J. and McCarthy, P.J., 2009. Cretaceous flora in an ancient fluvial environment: The lower Cantwell Formation at Sable Mountain, Denali National Park, Alaska. Alaska Park Science, v. 8, p. 21-25.	G
CNSM	Peer-reviewed scholarly publication	Anderson, M. D., Ruess, R. W., Myrold, D. D., & Taylor, D. L. (2009). Host species and habitat affect nodulation by specific Frankia genotypes in two species of Alnus in interior Alaska. Oecologia, 160(4), 1432-1939.	G
CNSM	Peer-reviewed scholarly publication	Angell, A. C., & Kielland, K. (2009). Establishment and growth of white spruce on a boreal forest floodplain: Interactions between microclimate and mammalian herbivory. Forest Ecology and Management, 258, 2475-2480.	G
CNSM	Peer-reviewed scholarly publication	Balcarczyk, K.L., Jones, J.B., Jaffe, R., & Maie, N. (2009) Stream dissolved organic matter bioavailability and composition in watersheds underlain with discontinuous permafrost. Biogeochemistry 94:255-270. DOI 10.1007/s10533-009-9324-x.	G
CNSM	Peer-reviewed scholarly publication	Balshi, M. S., McGuire, A. D., Duffy, P., Flannigan, M., Kicklighter, D. W., & Melillo, J. (2009). Vulnerability of carbon storage in North American boreal forests to wildfires during the 21st century. Global Change Biology, 15, 1491-1510.	G
CNSM	Peer-reviewed scholarly publication	Balshi, M. S., McGuire, A. D., Duffy, P., Flannigan, M., Walsh, J., & Melillo, J. (2009). Assessing the response of area burned to changing climate in western boreal North America using a Multivariate Adaptive Regression Splines (MARS) approach. Global Change Biology, 15, 578-600.	G
CNSM	Peer-reviewed scholarly publication	Beier, C.M., Lovcraft, A.L., & Chapin III, F.S. (2009) Growth and collapse of a resource system: An adaptive cycle of change in public lands governance and forest management in Alaska. Ecology and Society 14(2): 5.	G
CNSM	Peer-reviewed scholarly publication	Bent, E., & Taylor, D. L. (2009). Note: Direct amplification of DNA from fresh and preserved ectomycorrhizal root tips. Journal of Microbiological Methods, 80, 206-208.	G
CNSM	Peer-reviewed scholarly publication	Bentzen, R. L. (2009). Reproductive Patterns in King Eiders. Ph.D. thesis, University of Alaska Fairbanks.	G
CNSM	Peer-reviewed scholarly publication	Betts, E.F., & Jones, J.B. (2009) Impact of wildfire on stream nutrient chemistry and ecosystem metabolism in boreal forest catchments of interior Alaska. Arctic, Antarctic, and Alpine Research 41:407-417. DOI:10.1657/1938-4246-41.4.407.	G

**Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit**

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
CNSM	Peer-reviewed scholarly publication	Booms, T. L., Huettmann, F., & Schempf, P. F. (2009). Gyrfalcon nest distribution in Alaska based on a predictive GIS model. <i>Polar Biol</i> , online(03Sept2009).	G
CNSM	Peer-reviewed scholarly publication	Brinkman, T. J., & Hundertmark, K. J. (2009). Sex identification of northern ungulates using low quality and quantity DNA. <i>Conservation Genetics</i> . 10:1189-1193.	G
CNSM	Peer-reviewed scholarly publication	Brinkman, T. J., Chapin, T., Kofinas, G., & Person, D. K. (2009). Linking hunter knowledge with forest change to understand changing deer harvest opportunities in intensively logged landscapes. <i>Ecology and Society</i> , 14(1), 36.	G
CNSM	Peer-reviewed scholarly publication	Cardona-Marek, T., Knott, K.K., Meyer, B.E., O'Hara, T.M. (2009) Mercury Concentrations in Southern Beaufort Sea Polar Bears: Variation Based on Stable Isotopes of Carbon and Nitrogen. <i>Environmental Toxicology and Chemistry</i> . Vol. 28 No. 7: 1416-1424 [PMID: 19226182]	G
CNSM	Peer-reviewed scholarly publication	Chapin III, F. S., McFarland, J., McGuire, A. D., Euskirchen, E. S., Ruess, R. W., & Kielland, K. (2009). The changing global carbon cycle: linking plant-soil carbon dynamics to global consequences. SPECIAL FEATURE    ESSAY REVIEW PLANT-SOIL INTERACTIONS AND THE CARBON CYCLE. <i>Journal of Ecology</i> , 97, 836-840-850.	G
CNSM	Peer-reviewed scholarly publication	Euskirchen, E.S., McGuire, A.D., Chapin III, F.S., Yi, S., & Thompson, C.C. (2009) Changes in vegetation in northern Alaska under scenarios of climate change 2003-2010: Implications for climate feedbacks. <i>Ecological Applications</i> 19: 1022-1043.	G
CNSM	Peer-reviewed scholarly publication	Fellman, J. B., Franz, E. H., Crenshaw, C. L., & Elston, D. (2009). Global estimates of soil carbon sequestration via livestock waste: a STELLA simulation. <i>Environment, Development and Sustainability</i> .	G
CNSM	Peer-reviewed scholarly publication	Fellman, J. B., Hood, E., Edwards, R. T., & D'Amore, D. V. (2009). Changes in the concentration, biodegradability, and fluorescent properties of dissolved organic matter during stormflows in coastal temperate watersheds. <i>Journal of Geophysical Research Biogeosciences</i> , 114(G01021).	G
CNSM	Peer-reviewed scholarly publication	Fellman, J.B., Hood, E., Edwards, R.T. & Jones, J.B. (2009) Uptake of allochthonous dissolved organic matter from soil and salmon in coastal temperate rainforest streams. <i>Ecosystems</i> . DOI 10.1009/s10021-009-9254-4.	G
CNSM	Peer-reviewed scholarly publication	Fresco, N. & Chapin III, F.S. (2009) Assessing the potential for conversion to biomass fuels in Interior Alaska. Research Paper PNW-RP-573. USDA Forest Service, Pacific Northwest Experiment Station, Portland, OR, 56 pp.	G
CNSM	Peer-reviewed scholarly publication	Geml J, Laursen GA, Timling I, McFarland J, Booth MG, Lennon N, Nusbaum HC, Taylor DL. 2009. Molecular phylogenetic biodiversity assessment of arctic and boreal ectomycorrhizal Lactarius Pers. (Russulales; Basidiomycota) in Alaska, based on soil and sporocarp DNA. <i>Molecular Ecology</i> 18: 2213-2227.	G
CNSM	Peer-reviewed scholarly publication	Geml, J., Laursen, G. A., Timling, I., McFarland, J. M., Booth, M. G., Lennon, N., et al. (2009). Molecular phylogenetic biodiversity assessment of arctic and boreal ectomycorrhizal Lactarius Pers. (Russulales; Basidiomycota) in Alaska, based on soil and sporocarp DNA. <i>Molecular Ecology</i> , 18, 2213-2227.	G
CNSM	Peer-reviewed scholarly publication	Gooseff, M.N., Balsler, A., Bowden, W.B., & Jones, J.B. (2009). Effects on hillslope thermokarst in northern Alaska. <i>EOS, Transactions of the American Geophysical Union</i> 90(4):29-30.	G
CNSM	Peer-reviewed scholarly publication	Gunderson, A. M., Jacobsen, B. K., & Olson, L. E. (2009). REVISED DISTRIBUTION OF THE ALASKA MARMOT, MARMOTA BROWERI, AND CONFIRMATION OF PARAPATRY WITH HOARY MARMOTS. <i>Journal of Mammalogy</i> , 90(4), 859-869.	G
CNSM	Peer-reviewed scholarly publication	Karpovich, S. A., Toien, O., Buck, C. L., & Barnes, B. M. (2009). Energetics of arousal episodes in hibernating arctic ground squirrels. <i>Journal of Comparative Physiology B</i> , 179, 691-700.	G
CNSM	Peer-reviewed scholarly publication	Lanier, H. C., & Olson, L. (2009). Inferring divergence times within pikas ( <i>Ochotona</i> spp.) using mtDNA and relaxed molecular dating techniques. <i>Molecular Phylogenetics and Evolution</i> , 53, 1-12.	G
CNSM	Peer-reviewed scholarly publication	Martin, K. H., Lindberg, M. S., Schmutz, J. A., & Bertram, M. R. (2009). Lesser Scaup Breeding Probability and Female Survival on the Yukon Flats, Alaska. <i>Journal of Wildlife Management</i> , 73(6), 914-923.	G
CNSM	Peer-reviewed scholarly publication	Mitchell, J. S., & Ruess, R. W. (2009). N2 fixing alder ( <i>Alnus viridis</i> spp. <i>fruticosa</i> ) effects on soil properties across a secondary successional chronosequence in interior Alaska. <i>Biogeochemistry</i> , 95, 215-229.	G
CNSM	Peer-reviewed scholarly publication	Mitchell, J. S., and R. W. Ruess. 2009. Seasonal patterns of climate controls over nitrogen fixation by <i>Alnus viridis</i> spp. <i>fruticosa</i> in a secondary successional chronosequence in interior Alaska. <i>Ecoscience</i> 16:341-351.	G
CNSM	Peer-reviewed scholarly publication	Moses, S. K., Whiting, A. V., Muir, D. C. G., Wang, X., & O'Hara, T. M. (2009). Organic nutrients and contaminants in subsistence species of Alaska: Concentrations and relationship to food preparation method. <i>International Journal of Circumpolar Health</i> , 68(4), 354-371.	G
CNSM	Peer-reviewed scholarly publication	Moses, S.K., Whiting, A.V., Bratton, G.R., Taylor, R.J., O'Hara, T.M. (2009). Inorganic nutrients and contaminants in spotted seals ( <i>Phoc Larga</i> ) and sheefish ( <i>Stenodus leucichthys</i> ) of NW Alaska: Linking the health of arctic wildlife and subsistence users. <i>International Journal of Circumpolar Health</i> 68(1): 53-74 [NIHMSID: 107485; PMID: 19331242]	G
CNSM	Peer-reviewed scholarly publication	Mulder, C.P.H., M.N. Grant-Hoffman, D. Towns, P. Bellingham, M. Durrett, D. Wardle, and T. Fukami. 2009. Direct and indirect effects of rats: will their eradication restore functioning of New Zealand seabird islands? <i>Biological Invasions</i> 11:1671-1688.	G
CNSM	Peer-reviewed scholarly publication	Nash, S. H., Kristal, A. R., Boyer, B. B., King, I. B., Metzgar, J. S., & O'Brien, D. M. (2009). Relation between stable isotope ratios in human red blood cells and hair: implications for using the nitrogen isotope ratio of hair as a biomarker of eicosapentaenoic acid and docosahexaenoic acid. <i>American Journal of Clinical Nutrition</i> , 90, 1642-1647.	G

**Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit**

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
CNSM	Peer-reviewed scholarly publication	O'Brien, D. M., Kristal, A. R., Jeannet, M. A., Wilkinson, M. J., Bersamin, A., & Luick, B. (2009). Red blood cell d15N: a novel biomarker of dietary eicosapentaenoic acid and docosahexaenoic acid intake. <i>The American Journal of Clinical Nutrition</i> , 89, 913–919.	U
CNSM	Peer-reviewed scholarly publication	O'Donnell, J.A., Romanovsky, V.E., Harden, J.W., & McGuire, A.D. (2009). The effect of moisture content on the thermal conductivity of moss and organic soil horizons from black spruce ecosystems in Interior Alaska. <i>Soil Science</i> 174: 646-651. doi: 10.1097/SS.0b013e3181c4a7f8.	G
CNSM	Peer-reviewed scholarly publication	Olson, L. E., Rakotomalala, Z., Hildebrandt, K. B. P., Lanier, H. C., Raxworthy, C. J., & Goodman, S. M. (2009). PHYLOGEOGRAPHY OF MICROGALE BREVICAUDATA (TENRECIDAE) AND DESCRIPTION OF A NEW SPECIES FROM WESTERN MADAGASCAR. <i>Journal of Mammalian Evolutionology</i> , 90(5), 1095–1115110.	G
CNSM	Peer-reviewed scholarly publication	Oppel, S., & Powell, A. N. (2009). Carbon isotope turnover in blood as a measure of arrival time in migratory birds using isotopically distinct environments. <i>Journal of Ornithology</i> , .	G
CNSM	Peer-reviewed scholarly publication	Oppel, S., & Powell, A. N. (2009). Does winter region affect spring arrival time and body mass of king eiders in northern Alaska? <i>Polar Biology</i> , 32, 1203–1209.	G
CNSM	Peer-reviewed scholarly publication	Oppel, S., Powell, A. N., & Dickson, L. L. (2009). Using an algorithmic model to reveal individually variable movement decisions in a wintering sea duck. <i>Journal of Animal Ecology</i> , 78, 524–531.	G
CNSM	Peer-reviewed scholarly publication	Oppel, S., Powell, A. N., & O'Brien, D. (2009). Using Eggshell Membrane as a Non-invasive Tool to Investigate the Source of Nutrients in Avian Eggs. <i>Journal of Ornithology</i> , , 1–7.	G
CNSM	Peer-reviewed scholarly publication	Oppel, S., Powell, A. N., & O'Brien, D. M. (2009). Using eggshell membranes as a non-invasive tool to investigate the source of nutrients in avian eggs. <i>Journal of Ornithology</i> , 150, 190–115.	G
CNSM	Peer-reviewed scholarly publication	Phillips, L. M., & Powell, A. N. (2009). Brood Rearing Ecology of King Eiders on the North Slope of Alaska. <i>The Wilson Journal of Ornithology</i> , 121(2), 430–434.	G
CNSM	Peer-reviewed scholarly publication	Ruess, R. W., McFarland, J. M., Trummer, L. M., & Rohrs-Richey, J. K. (2009). Disease-mediated declines in N-fixation inputs by Alder tenuifolia to early-successional floodplains in Interior and south-central Alaska. <i>Ecosystems</i> , 12(3), 489–502.	G
CNSM	Peer-reviewed scholarly publication	Schmidt, J. H., Lindberg, M. S., Johnson, D. S., & Schmutz, J. A. (2009). ENVIRONMENTAL AND HUMAN INFLUENCES ON TRUMPETER SWAN HABITAT OCCUPANCY IN ALASKA. <i>The Condor</i> , 111(2), 266–275.	G
CNSM	Peer-reviewed scholarly publication	Schmidt, J. I., Hundertmark, K. J., Bowyer, R. T., & McCracken, K. G. (2009). Population structure and genetic diversity of moose in Alaska. <i>Journal of Heredity</i> 100:170-180.	G
CNSM	Peer-reviewed scholarly publication	Sears, J., Hatch, S. A., & O'Brien, D. M. (2009). Disentangling eVects of growth and nutritional status on seabird stable isotope ratios. <i>Oecologia</i> , 159, 41–48.	G
CNSM	Peer-reviewed scholarly publication	Sformo, T., Kohl, F., McIntyre, J., Kerr, P., Duman, J. G., & Barnes, B. M. (2009). Simultaneous freeze tolerance and avoidance in individual fungus gnats, <i>Exechia nugatoria</i> . <i>African Journal of Ecology of Comparative Physiology B</i> , 179, 897–902.	G
CNSM	Peer-reviewed scholarly publication	Slowik J. A. 2009. Review of the Cellar Spider Genus <i>Psilochorus</i> Simon 1893 in America North of Mexico (Araneae, Pholcidae). <i>Zootaxa</i> . 2144, 1-53.	G
CNSM	Peer-reviewed scholarly publication	Slowik J., & P. E. Cushing. 2009. Redescription and transfer of <i>Geolycosa grandis</i> (Banks 1894) (Araneae, Lycosidae) to the genus <i>Hogna</i> and proposal of a new specific junior synonym. <i>Journal of Arachnology</i> . 37, 261-265.	G
CNSM	Peer-reviewed scholarly publication	Stevenson, K. T., van Tets, I. G., & Chon, D. Y. (2009). Making No Bones About It: Bone Mineral Density Changes Seasonally in a Nonhibernating Alaskan Rodent. <i>Journal of Mammalogy</i> , 90(1), 25–31.	G
CNSM	Peer-reviewed scholarly publication	Stevenson, K. T., van Tets, I. G., & Nay, L. A. I. (2009). The seasonality of reproduction in photoperiod responsive and nonresponsive northern red-backed voles ( <i>Myodes rutilus</i> ) in Alaska. <i>Canadian Journal of Zoology</i> , 87, 152–164.	G
CNSM	Peer-reviewed scholarly publication	Stewart, K.M., R.T. Bowyer, J.G. Kie, B.L. Dick, and R.W. Ruess. 2009. Population density of North American Elk: effects on plant diversity. <i>Oecologia</i> 161: 303-312.	G
CNSM	Peer-reviewed scholarly publication	Trainor, S.F., Calef, M., Natcher, D., Chapin III, F.S., McGuire, A.D., Huntington, O., Duffy, P., Rupp, T.S., DeWilde, L., Kwart, M., Fresco, N., & Lovcraft, A. (2009) Vulnerability and adaptation to climate-related fire impacts in rural and urban interior Alaska. <i>Polar Research</i> 28: 100-118.	G
CNSM	Peer-reviewed scholarly publication	Walters Jr., K. R., Sformo, T., Barnes, B. M., & Duman, J. G. (2009). Freeze tolerance in an arctic Alaska stonefly. <i>Journal of Experimental Biology</i> , 212, 305–312.	G
CNSM	Peer-reviewed scholarly publication	Walters, K. R., Serianni, A. S., Sformo, T., Barnes, B. M., & Duman, J. G. (2009). A nonprotein thermal hysteresis-producing xylomannan antifreeze in the freeze-tolerant Alaskan beetle <i>Upis ceramoides</i> . <i>Proceedings of the National Academy of Sciences</i> , 106(48), 20210–20215.	G
CNSM	Peer-reviewed scholarly publication	Wang, Y. V., O'Brien, D. M., Jenson, J., Francis, D., & Wooller, M. J. (2009). The influence of diet and water on the stable oxygen and hydrogen isotope composition of Chironomidae (Diptera) with paleoecological implications. <i>Oecologia</i> , 160(2), 225–233.	G
CNSM	Poster Presentation	The para-real algorithm applied to a simple drift-wave turbulence model for transport timescale studies, 51st APS Mtg	
CNSM	Poster Presentation, NSF	Ionospheric Conductivities determined from radar observations. Conference on AMISR Radar New Science	U
CNSM	Poster Presentation, SIAM Conference	Dynamical impurities increase the lifetime of transient spatiotemporal chaos	U
CNSM	Poster Presentation, SIAM Conference	Local collapse of spatiotemporal chaos	G

Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
CNSM	Poster Presentation, SIAM Conference	Stable states of an ice-ocean coupled cell model	G
CNSM	Published abstract	Brumley, K., Mayer, L.A., Coakley, B., Miller, E.L., 2009, Tectonic Geomorphology of the Chukchi Borderland, Arctic Ocean: Constraints for Tectonic Reconstruction Models, GSA Penrose Conference: Tectonic Development of the Amerasia Basin, October, 2009.	G
CNSM	Published Abstract	Bruton, C. and M. West (2010) Parameter calculation from volcanic seismic data. IRIS Workshop, Snowbird, UT, June 9-11, 2010.	G
CNSM	Published Abstract	Buurman, H. and M.E. West (2009), Seismic waveform evolution preceding the 2006 eruption of Augustine Volcano, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract V23D-2108.	G
CNSM	Published Abstract	Gardine, M. and M.E. West (2009) Investigating the deep crustal structure of Colima Volcano, Mexico. Sixth Japan Kamchatka Alaska Subduction Processes Workshop. June 22-26, Fairbanks, AK.	G
CNSM	Published abstract	Gardine, M., M.E. West, and T. Dominguez (2009), The Deep Crustal Seismic Structure of Colima Volcano, Mexico, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract S41C-1950.	G
CNSM	Published Abstract	George, O. and M.E. West (2009) Analysis of deep seismicity at Mount Spurr, Cook Inlet, Alaska. Sixth Japan Kamchatka Alaska Subduction Processes Workshop. June 22-26, Fairbanks, AK.	G
CNSM	Published Abstract	George, O., W.A. Thelen, M.E. West, and H. Buurman (2009), Seismic characteristics of recent eruptions of Bezymianny Volcano, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract S51B-1422.	G
CNSM	Published abstract	Mayer, L.A., Brumley, K., 2009, New views of the Chukchi Borderland and Alpha/Mendeleev Ridge Complex, GSA Penrose Conference: Tectonic Development of the Amerasia Basin, October, 2009.	G
CNSM	Published abstract	Mukasa, S.B., Andronikov, A., Mayer, L.A., Brumley, K., 2009, New Geochemical and 40Ar/39Ar data for the first intraplate lavas recovered from the Arctic Ocean: Bearing on the origin of the Amerasia Basin, GSA Penrose Conference: Tectonic Development of the Amerasia Basin, October, 2009.	G
CNSM	Published Abstract	Payne, J.H., Whalen, M.T., and Day, J.E., 2009, Differential geochemical response during two Late Devonian mass extinction pulses: Implications for global change, Geological Society of America Abstracts with Programs, v. 41, no. 7, p. 513.	G
CNSM	Published Abstract	Reyes, C.G. and M.E. West (2009), The Waveform Suite: A robust platform for accessing and manipulating seismic waveforms in MATLAB, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract S11B-1704.	G
CNSM	Published abstract	Stone, D.B., Brumley, K., 2009, Paleomagnetic Data Supported a Translation plus Rotation Model for Arctic Alaska, GSA Penrose Conference: Tectonic Development of the Amerasia Basin, October, 2009.	G
CNSM	Published Abstract	West, M., M. Gardine, T. Dominguez and D. Wilson (2009), Deep crust magmatism at Colima Volcano, Eos Trans. AGU, 90(22), Jt. Assem. Suppl., Abstract V31E-03.	G
CNSM	Published abstract	West, M.E., M. Gardine, T. Dominguez, S. Grand (2009) The Colima deep seismic experiment (CODEX). XI Reunión Internacional Volcán de Colima, XI Reunión Internacional Volcán de Colima, February 2-6, Colima, Mexico.	G
CNSM	Published Abstract	Whalen, M.T., Sliwinski, M.G., and Day, J., 2009, Comparison of MS and other proxies from the Middle-Late Frasnian: Implications for paleoclimatic analyses, IGCP 580 Meeting, Liege, Belgium, December 2009, p. 54.	G
CNSM	Referred Abstracts/Proceedings	TEC enhancements during HF ionospheric heating experiments. Eons Transactions of the American Geophysical Union, 90(52): Fall Meeting Supplement, Abstract SA13A-1468 Received Outstanding Student Paper Award	G
CNSM	Referred Abstracts/Proceedings	Time-dependent observation and modeling of the enhanced ion-line matching height during HF heating of the F-region ionosphere, in The National Radio Science Meeting (URSI 2009)	G
CNSM	Referred Journal Articles	Radar observations of artificial E-region field-aligned irregularities, Annales Geophysicae, 27(7):p.2699-2710	G
CNSM	Reviewed Conference Abstract	A. Ilgen, M. Newville, T. P. Trainor (2009) Role of Dissolved Iron(II) and Structural Iron in Clay Mineral Mediated Redox Transformations of Arsenic and Antimony. Abstracts of Papers, 237th ACS National Meeting, Salt Lake City, UT, March 22-26, 2009.	G
CNSM	Reviewed Conference Abstract	Carlson, D.A., Donohoue, D, Simpson, W R, Friess, U, Sihler, H, Platt, U, Multiple Axis Differential Optical Absorption Spectroscopy (MAX-DOAS) Observations of Bromine Monoxide (BrO) at Barrow, Alaska: An Instrumental Inter-Comparison, a poster given at the 2009 AGU Fall Meeting, 14-18 Dec 2009, San Francisco, CA.	G
CNSM	Speaker Presentation, AGU	Observation of the Blue Spectra at 10,000 fps	G
CNSM	Speaker Presentation, Complex Sys	Stable states of an ice-ocean coupled cell model	G
CNSM	Conference Abstract	Duffy, L.K., Middlecamp, C.H., Godduhn A., Nicholas-Figueroa, L. and Fabbri, C.E. 2009. Because science matters: engaging students in chemistry using traditional knowledge in Proceedings of "Lessons from continuity and change in the fourth international polar year", Fairbanks, AK.	G
CNSM	Conference Abstract	Rasley, Brian T.; Giles, Spencer L., "Synthesis of Metal Oxide Nanoparticles and Polyoxometallates for the Decomposition of Organic compounds" Chemical and Biological Defense Science and Technology (CBD S&T) Conference, November 2009, Dallas, TX.	G
CNSM	Conference Presentation	Optimal control theory and quadrature formulas. Annual Meeting of AMS, Washington, D.C., Jan. 5-8, 2009.	G
CNSM	Peer-reviewed Journal Article	Magnus' expansion for time-periodic systems: parameter-dependent approximations, Commun. Nonlinear Sci. Numer. Simulat. 14, 4226--4245.	G
CNSM	Peer-reviewed Journal Article	The shallow shelf approximation as a "sliding law" in a thermomechanically coupled ice sheet model, J. Geophys. Res. 114, F03008, doi:10.1029/2008JF001179.	G

Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
CNSM	Peer-reviewed Journal Article	Assigning birds to wintering and breeding grounds using stable isotopes: lessons from two feather generations among three intercontinental migrants. <i>Journal of Ornithology</i> , 147 (2) 395-404	G
CNSM	Peer-reviewed Journal Article	Boundary control approach to the spectral estimation problem. The case of simple poles, <i>Sampling Theory in Signal and Image Processing</i> 8 (2009), no. 3, 225--248.	G (two graduate students)
CNSM	Peer-reviewed Journal Article	<u>Barth BM, Gustafson SJ</u> , Hankins, JL, Kaiser JM, Kester M, and Kuhn TB (2009) Ceramide Kinase Regulates TNF $\alpha$ -Induced NADPH Oxidase Activity and Eicosanoid Biosynthesis in Neuronal Cells (submitted to <i>Journal of Neurochemistry</i> )	G
CNSM	Peer-reviewed Journal Article	<u>Barth, BM, Stewart-Smeets, S.</u> , Kuhn, TB (2009) Proinflammatory cytokines provoke oxidative damage to actin in neuronal cells mediated by Rac 1 and NADPH oxidase, <i>Mol Cell Neurosci</i> . 41(2)274-85.	G
CNSM	Peer-reviewed Journal Article	Dave, K. R., A. Defazio, R., Raval, A. P., Dashkin, O., Saul, I., <u>Ice man, K. E.</u> , Perez-Pinzon, M. A., and Drew, K. L.: Protein kinase C epsilon activation delays neuronal depolarization during cardiac arrest in the euthermic arctic ground squirrel, <i>Journal of neurochemistry</i> , 110, 1170-1179, 2009.	G
CNSM	Peer-reviewed Journal Article	Duffy, L. K., Middlecamp, C. H., <u>Godduhn, A.</u> and Fabbri, C. E.: Using Culture, Policy and Traditional Knowledge to Improve Engagement in Science Courses, <i>American Journal of Applied Sciences</i> , 6, 1560-1566, 2009.	G
CNSM	Peer-reviewed Journal Article	Duffy, L. K., <u>Oehler, M. W., Sr.</u> , Bowyer, R. T., and Bleich, V. C.: Mountain sheep: an environmental epidemiological survey of variation in metal exposure and physiological biomarkers following mine development, <i>American Journal of Environmental Sciences</i> , 5, 295-302, 2009.	G
CNSM	Peer-reviewed Journal Article	<u>Englund, B. M., Griffeth, L.</u> , and Clausen, T. P.: A 9,13-epoxyabdrane from <i>Colophospermum mopane</i> , <i>Phytochemistry Letters</i> , 2, 144-147, 2009.	U
CNSM	Peer-reviewed Journal Article	Hazai, E., <u>Joshi, P.</u> , Skoviak, E. C., <u>Suryanarayanan, A.</u> , Schulte, M. K., and Bikadi, Z.: A comprehensive study on the 5-hydroxytryptamine(3A) receptor binding of agonists serotonin and m-chlorophenylbiguanidine, <i>Bioorganic &amp; medicinal chemistry</i> , 17, 5796-5805, 2009.	G
CNSM	Peer-reviewed Journal Article	<u>K.S. Tanwar</u> , S.C. Petitto, S.K. Ghose, P.J. Eng, T.P. Trainor (2009), Fe(II) Adsorption on Hematite (0 0 0 1). <i>Geochimica et Cosmochimica Acta</i> 73, 4346-4365	G
CNSM	Peer-reviewed Journal Article	<u>Kirschner, D. L.</u> , and Green, T. K.: Separation and sensitive detection of D-amino acids in biological matrices, <i>Journal of Separation Science</i> , 32, 2305-2318, 2009.	G
CNSM	Peer-reviewed Journal Article	<u>Kirschner, D. L., Wilson, A. L.</u> , Drew, K. L., and Green, T. K.: Simultaneous efflux of endogenous D-ser and L-glu from single acute hippocampus slices during oxygen glucose deprivation, <i>Journal of neuroscience research</i> , 87, 2812-2820, 2009.	U
CNSM	Peer-reviewed Journal Article	Mason, S. E., Ice man, C. R., <u>Tanwar, K. S.</u> , Trainor, T. P., and Chaka, A. M.: Pb(II) Adsorption on Isostructural Hydrated Alumina and Hematite (0001) Surfaces: A DFT Study <i>The Journal of Physical Chemistry C</i> , 113, 2159-2170, 2009.	G
CNSM	Peer-reviewed Journal Article	<u>Orr AL, Lohse LA</u> , Drew KL, Hermes-Lima MH, 2009, Physiological oxidative stress after arousal from hibernation in Arctic ground squirrel. <i>Comp Biochem Physiol A Mol Integr Physiol</i> . 2009, 153(2):213-21.	U
CNSM	Peer-reviewed Journal Article	Simultaneous freeze tolerance and avoidance in individual fungus gnats, <i>Exechia nugatoria</i> . <i>Journal of Comparative Physiology B</i> , 179, 897 { 902.	G
CNSM	Reviewed Book Chapter	Drew KL, Christian SL, <u>Jinka TR, Hollen L, Dehn J</u> , 2009, "Natural" tolerance in hibernators: Can we learn from physiological and preconditioning against ischemic or hypoxic brain? In <i>Ischemic Tolerance of the Brain</i> . BJ Schaller (Ed.), Research Signpost, Kerala, India, pp 1-44.	G
CNSM	Reviewed Conference Abstract	<u>Carlson, Z.A., Jinka, T.J.</u> , Moore J.T., Drew, K.L. Adenosine A1 receptor mediated drop in body temperature in response to dietary restriction. University of Alaska Biomedical Research Conference. May 14-15, 2009.	U
CNSM	Reviewed Conference Abstract	<u>Fristoe, Carey R.</u> ; Keller, John W.. Syn-Exo Selective Lewis Acid Catalyzed Diels-Alder Reaction of Carvone with Cyclopentadiene. 64th Northwest Regional Meeting of the American Chemical Society, Tacoma, WA, United States, June 28-July 1 (2009).	U
CNSM	Reviewed Conference Abstract	<u>Huff, D M</u> , Apodaca, R L, <u>Joyce, P L</u> , Fochesatto, G J, Simpson, W R, Deposition of N2O5 to the snowpack at high latitudes, a poster given at the 2009 AGU Fall Meeting, 14-18 Dec 2009, San Francisco, CA.	U
CNSM	Reviewed Conference Abstract	<u>Jinka, T.R., Carlson, Z.A.</u> , Toien, O., Drew, K.L., Torpor mediated through endogenous adenosine is specific to A1AR in hibernating Arctic ground squirrels. University of Alaska Biomedical Research Conference. May 14-15, 2009.	U
CNSM	Reviewed Conference Abstract	Keller, John W.; <u>Chowdhury, Sifat</u> ; <u>Harrod, Bronwyn L.</u> SO2-Formic Acid Dimers. Computational Study of Hydrogen Bond and Donor-Acceptor Interactions. 64th Northwest Regional Meeting of the American Chemical Society, Tacoma, WA, United States, June 28-July 1 (2009).	U
CNSM	Reviewed Conference Abstract	<u>Lopez, T. M.</u> , Carn, S. A., Webley, P. W., Pfeffer, M., Doukas, M. P., Kelly, P. J., Werner, C. A., Prata, F., Schneider, D. J., and Cahill, C. F., (2009). Evaluation of satellite derived sulfur dioxide measurements for volcano monitoring during the 2009 Redoubt eruption. <i>Eos Trans. AGU</i> , 90 (53), Fall Meet. Suppl., Abstract V51F-03.	G
CNSM	Reviewed Conference Abstract	Moore JT, <u>Kirschner DL, Wetherell KG</u> , Drew KL, Resistance to modeled cerebral ischemia in arctic ground squirrel ( <i>Spermophilus parryii</i> ) hippocampal slices studied using a novel, microperfusion device, 332.2, Chicago, Oct. 17-21, 2009.	G
CNSM	Reviewed Conference Abstract	<u>Rinkleff, P.G.</u> and C.F. Cahill (2009). Results from Volcanic Ash Aerosol Collection and Analysis from the Recent Eruptions of Pavlof, Okmok, and Kasatochi Volcanoes, Alaska, <i>Eos Trans. AGU</i> , 90 (53), Fall Meet. Suppl., Abstract V31A-1947.	G
CNSM - ATM	Peer-reviewed Journal Article	<u>B.Thurairajah</u> , R.L.Collins, and K.Mizutani, 2009. Multi-Year Temperature Measurements of the Middle Atmosphere at Chatanika, AK (65oN, 147oN). <i>Earth Planets Space</i> . 61(6), 755-764.	G

**Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit**

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
CNSM - ATM	Peer-reviewed Journal Article	M.J.Taylor, Y.Zhao, P.-D.Pautet, M.J.Nicolls, R.L.Collins, J. Baker-Tvedtness, C.D.Burton, <b>B. Thurairajah</b> , J.Reimuller, R.H.Varney, C.J.Heinselman, and K. Mizutani, 2009. Coordinated Optical and Radar Image Measurements of Noctilucent Clouds and Polar Mesospheric Summer Echoes. <i>J. Atmos. Sol.-Terr. Phys.</i> , 71, 675-687.	G
CNSM - ATM	Peer-reviewed Journal Article	<b>Mesquita, M.d.S.</b> , Atkinson, D.E., and Hodges, K., 2009. Characteristics and Variability of Storm Track in the North Pacific, Bering Sea and Alaska. <i>Journal of Climate</i> .	G
CNSM - ATM	Peer-reviewed Journal Article	Mesquita, M.d.S., D. E. Atkinson, I. Simmonds, K. Keay, and J. Gottschalck. New perspectives on the synoptic development of the severe October 1992 Nome storm. <i>Geophy. Res. Lett.</i> Doi:10. 1029/2009GL038824.	G
CNSM - ATM	Peer-reviewed Journal Article	<b>PaiMazumder, D.</b> and Mölders, N., 2009. Theoretical assessment of uncertainty in regional averages due to network density and design. <i>J. Appl. Meteor.</i> , 48, 1643-1666.	G
CNSM - ATM	Peer-reviewed Journal Article	Sassen, K., and J. Zhu, 2009, A Global Survey of CALIPSO Linear Depolarization Ratios in Ice Clouds: Initial Findings, <i>J. Geophys. Res.</i> , 114, D001H07, doi:10.1029/2009JD012279.	G
CNSM-DGG	Published Abstract and Conference Poster	Kienholz, C. and Prakash, A., 2009, Glaciers in the Copper River Area (Southern Alaska) – A Spatio-Temporal Analysis Based on Satellite Imagery and Aerial Photographs, ASPRS/MAPPS Specialty Conference: From Elevation to Information, San Antonio, TX, November 16 - 19.	G
CNSM-DGG	Published Abstract and Conference Poster	Kienholz, C. and Prakash, A., 2009, Use of Alaska High Altitude Program (AHAP) Imagery to Determine Changes in Alaska's Glaciers, Geological Society of America Annual Meeting, Portland, OR, October.	G
CNSM-DGG	Published Abstract and Conference Poster	Kienholz, C., Prakash, A., and Kolker, A., 2009, Geothermal Exploration in Akutan, Alaska, Using Multitemporal Thermal Infrared Images. <i>Eos Trans. AGU</i> 90(52), Fall Meet. Suppl., Abstract no. H53F-1009.	G
CNSM-DGG	Published Abstract and Conference Poster	Wyatt, C., Prakash, A. et al., 2009, An Integrated Multi-Scale Approach to the Study of Evapotranspiration on the Alaskan North Slope: Preliminary Characterization of Fluxes and Turbulence in the Imnavait Creek Basin. <i>Eos Trans. AGU</i> 90(52), Fall Meet. Suppl., Abstract no. H41G-0980.	G
CNSM-DGG	Published Abstract and Workshop Poster	Prakash, A., Anderson, M., Baise, L., Csaplovics, E., Fochesatto, J., Gens, R., Gupta, R.P., Kane, D., Mumm, J., Okkonen S.R., Oommen, T., Saha, A., Trochim, E., Wilson R., and Wyatt, C., 2009, HyspIRI Preparatory Science at the University of Alaska Fairbanks, Second HyspIRI Mission Science Workshop, Pasadena, CA, August 11-13.	G
IAB	Peer-reviewed scholarly publication	Anderson, M. D., Ruess, R. W., Myrold, D. D., & Taylor, D. L. (2009). Host species and habitat affect nodulation by specific Frankia genotypes in two species of Alnus in interior Alaska. <i>Oecologia</i> , 160(4), 1432–1939.	G
IAB	Peer-reviewed scholarly publication	Angell, A. C., & Kielland, K. (2009). Establishment and growth of white spruce on a boreal forest floodplain: Interactions between microclimate and mammalian herbivory. <i>Forest Ecology and Management</i> , 258, 2475–2480.	G
IAB	Peer-reviewed scholarly publication	Balcarczyk, K.L., Jones, J.B., Jaffe, R., & Maie, N. (2009) Stream dissolved organic matter bioavailability and composition in watersheds underlain with discontinuous permafrost. <i>Biogeochemistry</i> 94:255-270. DOI 10.1007/s10533-009-9324-x.	G
IAB	Peer-reviewed scholarly publication	Balshi, M. S., McGuire, A. D., Duffy, P., Flannigan, M., Kicklighter, D. W., & Melillo, J. (2009). Vulnerability of carbon storage in North American boreal forests to wildfires during the 21st century. <i>Global Change Biology</i> , 15, 1491–1510.	G
IAB	Peer-reviewed scholarly publication	Balshi, M. S., McGuire, A. D., Duffy, P., Flannigan, M., Walsh, J., & Melillo, J. (2009). Assessing the response of area burned to changing climate in western boreal North America using a Multivariate Adaptive Regression Splines (MARS) approach. <i>Global Change Biology</i> , 15, 578–600.	G
IAB	Peer-reviewed scholarly publication	Beier, C.M., Lovcraft, A.L., & Chapin III, F.S. (2009) Growth and collapse of a resource system: An adaptive cycle of change in public lands governance and forest management in Alaska. <i>Ecology and Society</i> 14(2): 5.	G
IAB	Peer-reviewed scholarly publication	Bent, E., & Taylor, D. L. (2009). Note: Direct amplification of DNA from fresh and preserved ectomycorrhizal root tips. <i>Journal of Microbiological Methods</i> , 80, 206–208.	G
IAB	Peer-reviewed scholarly publication	Bentzen, R. L. (2009). Reproductive Patterns in King Eiders. Ph.D. thesis, University of Alaska Fairbanks.	G
IAB	Peer-reviewed scholarly publication	Betts, E.F., & Jones, J.B. (2009) Impact of wildfire on stream nutrient chemistry and ecosystem metabolism in boreal forest catchments of interior Alaska. <i>Arctic, Antarctic, and Alpine Research</i> 41:407-417. DOI:10.1657/1938-4246-41.4.407.	G
IAB	Peer-reviewed scholarly publication	Booms, T. L., Huettmann, F., & Schempf, P. F. (2009). Gyrfalcon nest distribution in Alaska based on a predictive GIS model. <i>Polar Biol</i> , online(03Sept2009).	G
IAB	Peer-reviewed scholarly publication	Brinkman, T. J., & Hundertmark, K. J. (2009). Sex identification of northern ungulates using low quality and quantity DNA. <i>Conservation Genetics</i> . 10:1189-1193.	G
IAB	Peer-reviewed scholarly publication	Brinkman, T. J., Chapin, T., Kofinas, G., & Person, D. K. (2009). Linking hunter knowledge with forest change to understand changing deer harvest opportunities in intensively logged landscapes. <i>Ecology and Society</i> , 14(1), 36.	G
IAB	Peer-reviewed scholarly publication	Cardona-Marek, T., Knott, K.K., Meyer, B.E., O'Hara, T.M. (2009) Mercury Concentrations in Southern Beaufort Sea Polar Bears: Variation Based on Stable Isotopes of Carbon and Nitrogen. <i>Environmental Toxicology and Chemistry</i> . Vol. 28 No. 7: 1416-1424 [PMID: 19226182]	G
IAB	Peer-reviewed scholarly publication	Chapin III, F. S., McFarland, J., McGuire, A. D., Euskirchen, E. S., Ruess, R. W., & Kielland, K. (2009). The changing global carbon cycle: linking plant-soil carbon dynamics to global consequences. SPECIAL FEATURE ■ ESSAY REVIEW PLANT-SOIL INTERACTIONS AND THE CARBON CYCLE. <i>Journal of Ecology</i> , 97, 836–840-850.	G

**Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit**

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
IAB	Peer-reviewed scholarly publication	Euskirchen, E.S., McGuire, A.D., Chapin II, F.S., Yi, S., & Thompson, C.C. (2009) Changes in vegetation in northern Alaska under scenarios of climate change 2003-2010: Implications for climate feedbacks. <i>Ecological Applications</i> 19: 1022-1043.	G
IAB	Peer-reviewed scholarly publication	Fellman, J. B., Franz, E. H., Crenshaw, C. L., & Elston, D. (2009). Global estimates of soil carbon sequestration via livestock waste: a STELLA simulation. <i>Environment, Development and Sustainability</i> .	G
IAB	Peer-reviewed scholarly publication	Fellman, J. B., Hood, E., Edwards, R. T., & D'Amore, D. V. (2009). Changes in the concentration, biodegradability, and fluorescent properties of dissolved organic matter during stormflows in coastal temperate watersheds. <i>Journal of Geophysical Research Biogeosciences</i> , 114(G01021).	G
IAB	Peer-reviewed scholarly publication	Fellman, J.B., Hood, E., Edwards, R.T. & Jones, J.B. (2009) Uptake of allochthonous dissolved organic matter from soil and salmon in coastal temperate rainforest streams. <i>Ecosystems</i> . DOI 10.1009/s10021-009-9254-4.	G
IAB	Peer-reviewed scholarly publication	Fresco, N. & Chapin III, F.S. (2009) Assessing the potential for conversion to biomass fuels in Interior Alaska. Research Paper PNW-RP-573. USDA Forest Service, Pacific Northwest Experiment Station, Portland, OR, 56 pp.	G
IAB	Peer-reviewed scholarly publication	Geml J, Laursen GA, Timling I, McFarland J, Booth MG, Lennon N, Nusbaum HC, Taylor DL. 2009. Molecular phylogenetic biodiversity assessment of arctic and boreal ectomycorrhizal <i>Lactarius</i> Pers. (Russulales: Basidiomycota) in Alaska, based on soil and sporocarp DNA. <i>Molecular Ecology</i> 18: 2213-2227.	G
IAB	Peer-reviewed scholarly publication	Geml, J., Laursen, G. A., Timling, I., McFarland, J. M., Booth, M. G., Lennon, N., et al. (2009). Molecular phylogenetic biodiversity assessment of arctic and boreal ectomycorrhizal <i>Lactarius</i> Pers. (Russulales: Basidiomycota) in Alaska, based on soil and sporocarp DNA. <i>Molecular Ecology</i> , 18, 2213-2227.	G
IAB	Peer-reviewed scholarly publication	Gooseff, M.N., Balsler, A., Bowden, W.B., & Jones, J.B. (2009). Effects on hillslope thermokarst in northern Alaska. <i>EOS, Transactions of the American Geophysical Union</i> 90(4):29-30.	G
IAB	Peer-reviewed scholarly publication	Gunderson, A. M., Jacobsen, B. K., & Olson, L. E. (2009). REVISED DISTRIBUTION OF THE ALASKA MARMOT, <i>MARMOTA BROWERI</i> , AND CONFIRMATION OF PARAPATRY WITH HOARY MARMOTS. <i>Journal of Mammalogy</i> , 90(4), 859-869.	G
IAB	Peer-reviewed scholarly publication	Karpovich, S. A., Toien, O., Buck, C. L., & Barnes, B. M. (2009). Energetics of arousal episodes in hibernating arctic ground squirrels. <i>Journal of Comparative Physiology B</i> , 179, 691-700.	G
IAB	Peer-reviewed scholarly publication	Lanier, H. C., & Olson, L. (2009). Inferring divergence times within pikas ( <i>Ochotona</i> spp.) using mtDNA and relaxed molecular dating techniques. <i>Molecular Phylogenetics and Evolution</i> , 53, 1-12.	G
IAB	Peer-reviewed scholarly publication	Martin, K. H., Lindberg, M. S., Schmutz, J. A., & Bertram, M. R. (2009). Lesser Scaup Breeding Probability and Female Survival on the Yukon Flats, Alaska. <i>Journal of Wildlife Management</i> , 73(6), 914-923.	G
IAB	Peer-reviewed scholarly publication	Mitchell, J. S., & Ruess, R. W. (2009). N2 fixing alder ( <i>Alnus viridis</i> spp. <i>fruticosa</i> ) effects on soil properties across a secondary successional chronosequence in interior Alaska. <i>Biogeochemistry</i> , 95, 215-229.	G
IAB	Peer-reviewed scholarly publication	Mitchell, J. S., and R. W. Ruess. 2009. Seasonal patterns of climate controls over nitrogen fixation by <i>Alnus viridis</i> spp. <i>fruticosa</i> in a secondary successional chronosequence in interior Alaska. <i>Ecoscience</i> 16:341-351.	G
IAB	Peer-reviewed scholarly publication	Moses, S. K., Whiting, A. V., Muir, D. C. G., Wang, X., & O'Hara, T. M. (2009). Organic nutrients and contaminants in subsistence species of Alaska: Concentrations and relationship to food preparation method. <i>International Journal of Circumpolar Health</i> , 68(4), 354-371.	G
IAB	Peer-reviewed scholarly publication	Moses, S.K., Whiting, A.V., Bratton, G.R., Taylor, R.J., O'Hara, T.M. (2009). Inorganic nutrients and contaminants in spotted seals ( <i>Phoca largha</i> ) and sheefish ( <i>Stenodus leucichthys</i> ) of NW Alaska: Linking the health of arctic wildlife and subsistence users. <i>International Journal of Circumpolar Health</i> 68(1): 53-74 [NIHMSID: 107485; PMID: 19331242]	G
IAB	Peer-reviewed scholarly publication	Mulder, C.P.H., M.N. Grant-Hoffman, D. Towns, P. Bellingham, M. Durrett, D. Wardle, and T. Fukami. 2009. Direct and indirect effects of rats: will their eradication restore functioning of New Zealand seabird islands? <i>Biological Invasions</i> 11:1671-1688.	G
IAB	Peer-reviewed scholarly publication	Nash, S. H., Kristal, A. R., Boyer, B. B., King, I. B., Metzgar, J. S., & O'Brien, D. M. (2009). Relation between stable isotope ratios in human red blood cells and hair: implications for using the nitrogen isotope ratio of hair as a biomarker of eicosapentaenoic acid and docosahexaenoic acid. <i>American Journal of Clinical Nutrition</i> , 90, 1642-1647.	G
IAB	Peer-reviewed scholarly publication	O'Brien, D. M., Kristal, A. R., Jeannet, M. A., Wilkinson, M. J., Bersamin, A., & Luick, B. (2009). Red blood cell d15N: a novel biomarker of dietary eicosapentaenoic acid and docosahexaenoic acid intake. <i>The American Journal of Clinical Nutrition</i> , 89, 913-919.	U
IAB	Peer-reviewed scholarly publication	O'Donnell, J.A., Romanovsky, V.E., Harden, J.W., & McGuire, A.D. (2009). The effect of moisture content on the thermal conductivity of moss and organic soil horizons from black spruce ecosystems in Interior Alaska. <i>Soil Science</i> 174: 646-651. doi: 10.1097/SS.0b013e3181c4a7f8.	G
IAB	Peer-reviewed scholarly publication	Olson, L. E., Rakotomalala, Z., Hildebrandt, K. B. P., Lanier, H. C., Raxworthy, C. J., & Goodman, S. M. (2009). PHYLOGEOGRAPHY OF MICROGALE BREVICAUDATA (TENRECIDAE) AND DESCRIPTION OF A NEW SPECIES FROM WESTERN MADAGASCAR. <i>Journal of Mammalian Evolutionology</i> , 90(5), 1095-1115110.	G
IAB	Peer-reviewed scholarly publication	Oppel, S., & Powell, A. N. (2009). Carbon isotope turnover in blood as a measure of arrival time in migratory birds using isotopically distinct environments. <i>Journal of Ornithology</i> , .	G
IAB	Peer-reviewed scholarly publication	Oppel, S., & Powell, A. N. (2009). Does winter region affect spring arrival time and body mass of king eiders in northern Alaska? <i>Polar Biology</i> , 32, 1203-1209.	G

**Graduate and Undergraduate Student Independently Reviewed Research and Creative Products CY2009  
by College/School/Institute Unit**

Unit	Product	Citation, Show or Performance Title	Undergraduate or Graduate
IAB	Peer-reviewed scholarly publication	Oppel, S., Powell, A. N., & Dickson, L. L. (2009). Using an algorithmic model to reveal individually variable movement decisions in a wintering sea duck. <i>Journal of Animal Ecology</i> , 78, 524–531.	G
IAB	Peer-reviewed scholarly publication	Oppel, S., Powell, A. N., & O'Brien, D. (2009). Using Eggshell Membrane as a Non-invasive Tool to Investigate the Source of Nutrients in Avian Eggs. <i>Journal of Ornithology</i> , , 1–7.	G
IAB	Peer-reviewed scholarly publication	Oppel, S., Powell, A. N., & O'Brien, D. M. (2009). Using eggshell membranes as a non-invasive tool to investigate the source of nutrients in avian eggs. <i>Journal of Ornithology</i> , 150, 190–115.	G
IAB	Peer-reviewed scholarly publication	Phillips, L. M., & Powell, A. N. (2009). Brood Rearing Ecology of King Eiders on the North Slope of Alaska. <i>The Wilson Journal of Ornithology</i> , 121(2), 430–434.	G
IAB	Peer-reviewed scholarly publication	Ruess, R. W., McFarland, J. M., Trummer, L. M., & Rohrs-Richey, J. K. (2009). Disease-mediated declines in N-fixation inputs by Alder tenuifolia to early-successional floodplains in Interior and south-central Alaska. <i>Ecosystems</i> , 12(3), 489–502.	G
IAB	Peer-reviewed scholarly publication	Schmidt, J. H., Lindberg, M. S., Johnson, D. S., & Schmutz, J. A. (2009). ENVIRONMENTAL AND HUMAN INFLUENCES ON TRUMPETER SWAN HABITAT OCCUPANCY IN ALASKA. <i>The Condor</i> , 111(2), 266–275.	G
IAB	Peer-reviewed scholarly publication	Schmidt, J. I., Hundertmark, K. J., Bowyer, R. T., & McCracken, K. G. (2009). Population structure and genetic diversity of moose in Alaska. <i>Journal of Heredity</i> 100:170-180.	G
IAB	Peer-reviewed scholarly publication	Sears, J., Hatch, S. A., & O'Brien, D. M. (2009). Disentangling eVects of growth and nutritional status on seabird stable isotope ratios. <i>Oecologia</i> , 159, 41–48.	G
IAB	Peer-reviewed scholarly publication	Sformo, T., Kohl, F., McIntyre, J., Kerr, P., Duman, J. G., & Barnes, B. M. (2009). Simultaneous freeze tolerance and avoidance in individual fungus gnats, <i>Exechia nugatoria</i> . <i>African Journal of Ecology of Comparative Physiology B</i> , 179, 897–902.	G
IAB	Peer-reviewed scholarly publication	Slowik J. A. 2009. Review of the Cellar Spider Genus <i>Psilochorus</i> Simon 1893 in America North of Mexico (Araneae, Pholcidae). <i>Zootaxa</i> . 2144, 1-53.	G
IAB	Peer-reviewed scholarly publication	Slowik J., & P. E. Cushing. 2009. Redescription and transfer of <i>Geolycosa grandis</i> (Banks 1894) (Araneae, Lycosidae) to the genus <i>Hogna</i> and proposal of a new specific junior synonym. <i>Journal of Arachnology</i> . 37, 261-265.	G
IAB	Peer-reviewed scholarly publication	Stevenson, K. T., van Tets, I. G., & Chon, D. Y. (2009). Making No Bones About It: Bone Mineral Density Changes Seasonally in a Nonhibernating Alaskan Rodent. <i>Journal of Mammalogy</i> , 90(1), 25–31.	G
IAB	Peer-reviewed scholarly publication	Stevenson, K. T., van Tets, I. G., & Nay, L. A. I. (2009). The seasonality of reproduction in photoperiod responsive and nonresponsive northern red-backed voles ( <i>Myodes rutilus</i> ) in Alaska. <i>Canadian Journal of Zoology</i> , 87, 152–164.	G
IAB	Peer-reviewed scholarly publication	Stewart, K.M., R.T. Bowyer, J.G. Kie, B.L. Dick, and R.W. Ruess. 2009. Population density of North American Elk: effects on plant diversity. <i>Oecologia</i> 161: 303-312.	G
IAB	Peer-reviewed scholarly publication	Trainor, S.F., Calef, M., Natcher, D., Chapin III, F.S., McGuire, A.D., Huntington, O., Duffy, P., Rupp, T.S., DeWilde, L., Kwart, M., Fresco, N., & Lovcraft, A. (2009) Vulnerability and adaptation to climate-related fire impacts in rural and urban interior Alaska. <i>Polar Research</i> 28: 100-118.	G
IAB	Peer-reviewed scholarly publication	Walters Jr., K. R., Sformo, T., Barnes, B. M., & Duman, J. G. (2009). Freeze tolerance in an arctic Alaska stonefly. <i>Journal of Experimental Biology</i> , 212, 305–312.	G
IAB	Peer-reviewed scholarly publication	Walters, K. R., Serianni, A. S., Sformo, T., Barnes, B. M., & Duman, J. G. (2009). A nonprotein thermal hysteresis-producing xylomannan antifreeze in the freeze-tolerant Alaskan beetle <i>Upis ceramboides</i> . <i>Proceedings of the National Academy of Sciences</i> , 106(48), 20210–20215.	G
IAB	Peer-reviewed scholarly publication	Wang, Y. V., O'Brien, D. M., Jenson, J., Francis, D., & Wooller, M. J. (2009). The influence of diet and water on the stable oxygen and hydrogen isotope composition of Chironomidae (Diptera) with paleoecological implications. <i>Oecologia</i> , 160(2), 225–233.	G
SOE	\$5,000 competitive Alaska Space Grant Fellowship	"Inspire Connect Educate (ICE) - Professional development series for STEM teachers and STEM Pre-service in Alaska"	G
SOE	Multimedia K-12 curriculum	Showcasing Sea Ice Research in the Arctic	G
SOE	Web-based earth science course for educators	"Dynamic Earth Systems"	G
SOM	Peer-reviewed journal article	A. Williams, M. Herrmann, and K.R. Criddle (2009). "The Effects of Chilean Coho Salmon and Rainbow Trout Aquaculture on Markets for Alaskan Sockeye Salmon." <i>North American Journal of Fisheries Management</i> . vol. 29, pp. 1777-1796.	G

8/2/2011











ents)





