



Alan Gillespie

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Major Interests: Quaternary geology, remote sensing
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Education and Degrees:

Ph.D.	Geology	California Institute of Technology	1982	Thesis advisor: Clarence R. Allen. <i>Quaternary Glaciation and Tectonism in the Southeastern Sierra Nevada, Inyo County, California.</i>
M.S.	Geology	California Institute of Technology	1977	
B.S.	Geophysics	Stanford University	1969	

Professional Experience:

1987- present	<u>Professor</u> and <u>Director</u> , Keck Remote Sensing Lab, Dept. Earth & Space Sci., University of Washington, Seattle, WA.
1999-2000	<u>Interim Executive Director</u> , Division of Earth & Ecological Sci., Desert Research Institute, Reno, NV.
1975-1979	<u>Vice President</u> , GeoImages, Inc., Altadena, CA.
1974-1975	<u>Software Consultant</u> , Rand Corporation, Santa Monica, CA.
1969-1987	<u>Member, Tech. Staff</u> , Image Processing Lab, Geology Group Jet Propulsion Laboratory, Pasadena, CA.

Honors and Awards:

- Mongolian Academy of Science, 29 June 2010, Khubilai Khaan Award for collaborative research
- Don J Easterbrook Distinguished Scientist Award, GSA/QGG 5/22/08
- 2009 Caswell Silver Distinguished Lecturer, Earth and Planetary Sciences, University of New Mexico, 10/9/09
- NASA Group Achievement Award, 2000, ASTER Science Team.
- NASA Group Achievement Award, 1975, ERTS geological analysis & image processing team.
- Editor's Citation, 1985, *Geophysical Research Letters*, excellence in reviews.
- Editor's Citation, 1990, *Journal of Geophysical Research*, excellence in reviews.
- Editor's Citation, 2006, *Geosphere*, excellence in reviews (*GSA Today* vol x(n), pp.
- Distinguished Visiting Scientist, Jet Propulsion Laboratory, 9/1/97-8/30/1999.
- Fellow, Geological Society of America, 5/4/08

Professional Societies:

- American Geophysical Union
- Geological Society of America (1984-2012).
- American Quaternary Association
- American Epigraphic Society
- International Quaternary Association

Service outside the University of Washington (selected):

- Councilor, American Quaternary Association, 2002-2006
- Chair, GSA Quaternary Geology & Geomorphology Division, 2002-2004
- Editor, *Quaternary Research*, 2000-2006 and 2008-present (Assoc. Editor, 1996-2000)
- Guest Editor, *First JPL Workshop on Remote Sensing of Land Surface Emissivity*, Pasadena CA, Jan. 1999
- Guest Editor, *Geografiska Annaler* 80A (3-4), Nov. 1998
- Member, Editorial Board, *Quaternary Science Reviews*, 2004-present
- Member, Editorial Board, *Geology*, 1988-1991
- Member, GSA Quaternary Geology & Geomorphology Panel, 1992-1994
- Associate Editor, *Journal of Geophysical Research*, 1993-1995
- Member, Editorial Board, *Remote Sensing of Environment*, 1999-present
- Member, SES Panel on Remote Sensing, "Solid-Earth Science and Society," Nat'l Research Council, Nat'l Academy Press
- Chair, Board of Directors, Epigraphic Society, 2006- (Member of Board, 1996-present)
- Member, Board of Directors, Damdin Da Intellectual Development Fund, Mongolia, 1998-present
- Chair, Landscape dynamics, evolution, and modeling panel, Zyzyzyx, CA, April 1998.
- Adjunct Professor, Humboldt State University, Arcata, CA, 1988- present
- Chair, Special Session on Hyperspectral Thermal Imaging, IGARSS, Seattle, July, 1998.
- Member, International Scientific Committee, Recent Advances in Quantitative Remote Sensing Symposium, 2002-present.
- Co-convenor, Sudden Climate Change Workshop, University of Washington, Seattle, Oct. 1988.
- Co-convenor, Spectral Mixture Analysis Workshop I, University of Washington, Seattle, Oct. 1990.
- Co-convenor, Spectral Mixture Analysis Workshop II, University of Washington, Seattle, Oct. 1992.
- Co-convenor, The glacial history of the Sierra Nevada: A symposium in Memorial to Clyde Wahhaftig, Univ. Calif. White Mtn. Res. Stn., Sept. 1995
- Co-convenor, The geomorphic and climatic significance of rock glaciers, Absarokas, WY, Aug. 1997.
- Co-convenor, Rock Art Dating Workshop, Boulder City, NV, Oct. 1998.
- Co-convenor, SN: Geomorphology From Earth Orbits Posters, American Geophysical Union Fall Meeting 2008.
- Editor, Special Issue on Scientific Results from ASTER, *Remote Sensing of Environment* 99(1-2), 2005
- Member, Collaborative Innovation Centre for Arid Environments and Climate Change, Lanzhou University, China
- Member, Board, Gloria Farley Publications Inc. (nonprofit), Denver CO., 2006 – present
- Co-chair, Temperature/Emissivity Separation Working Group (TEWG), U.S. – Japanese ASTER Science Team, 1992—present
- Chair, AMQUA meeting, Seattle, August 2014
- Member, Technical Program Committee, AMQUA, Seattle, 2014
- Member, NASA Review Panel, Earth Venture Instrument -2, Jan-Apr 2014,

Students Advised (Chair or Co-Chair) (16)

Jigjidsuren Batbaatar	PhD	Department of Geological Sciences, UW
Paul Bierman	PhD	Department of Geological Sciences, UW
Douglas Clark	PhD	Department of Geological Sciences, UW
Iryna Danilina	PhD	Department of Earth and Space Sciences, UW
Degui Gu	PhD	Department of Geophysics, UW
Wen-Hao Li	PhD	Department of Geological Sciences, UW
Van Kane	PhD	College of Forest Resources, UW
Amit Mushkin	PhD	Department of Earth and Space Sciences, UW
Randall Perry	PhD	Department of Earth and Space Sciences, UW
Matthew Smith	PhD	Department of Earth and Space Sciences, UW
Stephen Thompson	PhD	Department of Geological Sciences, UW
Paul Zehfuss	PhD	Department of Earth and Space Sciences, UW
Kyle Bland	MSc	Department of Geological Sciences, UW
Jennifer Kay	MSc	Department of Earth and Space Sciences, UW
Stephen Martel	MSc	Department of Earth Sciences, Stanford University
Laura Trunk	MSc	Department of Earth and Space Sciences, UW

Students Advised (Committee member, including graduate School Representative) (37)

Rolf Aalto	PhD	Department of Geological Sciences, UW
Kostas Andreadis	PhD	Department of Civil Engineering, UW
Adam Barker	PhD	Department of Earth and Space Sciences, UW
Brian Collins	PhD	Department of Earth and Space Sciences, UW
Jennifer Francis	PhD	Department of Atmospheric Sciences, UW
Jan Heine	PhD	Department of Geological Sciences, UW
Jennifer Kay	PhD	Department of Earth and Space Sciences, UW
Juan-Carlos Jiménez-Muñoz	PhD	Departament de Física de la Terra i Termodinàmica, University of Valencia, Spain
Kristine Crossen	PhD	Department of Geological Sciences, UW
Christina Giovas	PhD	Department of Anthropology
Issac Larsen	PhD	Department of Earth and Space Sciences, UW
Jim Lutz	PhD	College of Forest Resources, UW
Meghan Halabisky	PhD	School of Environmental and Forest Sciences, UW
Karen Hutten	PhD	School of Environmental and Forest Sciences, UW
Nir Naveh	PhD	Department of Civil Engineering, UW
Michele Koppes	PhD	Department of Earth and Space Sciences, UW
Michael O'Neal	PhD	Department of Earth and Space Sciences, UW
Martin Pincheira	PhD	College of Forest Resources, UW
Elizabeth Safran	PhD	Department of Geological Sciences, UW
Sanjoy Som	PhD	Department of Earth and Space Sciences, UW
Leslie Reid	PhD	Department of Earth and Space Sciences, UW
Dar Roberts	PhD	Department of Geological Sciences, UW
Summer Rupper	PhD	Department of Earth and Space Sciences, UW
Don Sabol	PhD	Department of Geological Sciences, UW
Eric Steig	PhD	Department of Geological Sciences, UW
Terry Swanson	PhD	Department of Geological Sciences, UW
Glenn Thackray	PhD	Department of Geological Sciences, UW
Van Kane	PhD	College of Forest Resources, UW
Kelin Whipple	PhD	Department of Geological Sciences, UW
Michael Wiedmer	PhD	School of Environmental and Forest Sciences, UW
Guang Zheng	PhD	College of Forest Resources, UW
Byron Amerson	MSc	Department of Earth and Space Sciences, UW
Fred Fischer	MSc	Department of Geology, Humboldt State University
James McCaughey	MSc	Department of Geological Sciences, University of Nevada, Reno
Doug LaFarge	MSc	Department of Geology, Humboldt State University
Joanna Redwine	MSc	Department of Geology, Humboldt State University
Maureen Timmons	MSc	Department of Geological Sciences, UW

Post-Doctoral Research Associates

Rebecca Handcock	Department of Earth and Space Sciences, UW
Charles Hibbitts	Department of Earth and Space Sciences, UW
Amit Mushkin	Department of Earth and Space Sciences, UW
Robin Weeks	Department of Earth and Space Sciences, UW

Visiting scholars

Yehouda Enzel	The Institute of Earth Sciences, The Hebrew University of Jerusalem, Givat Ram Campus, Israel
Jigjidsuren Batbaatar	Mongolian University of Science and Technology, Ulaanbaatar, Mongolia
Osmar Abilio de Carvalho Júnior	University of Brasilia, Brasilia, Brazil
Wang Guangjun	China University of Geosciences (Beijing), China, March 1 2013 – February 28 2014
Amit Mushkin	Geological Survey of Israel, July 15 2013 – July 14 2015

Publications (4 books, 244 articles (36=1st author), 325 abstracts and other presentations (133=1st author))

Articles and Books (* - reviewed)

1970

*Gillespie, A. R., and Gillespie, R. W., 1970. Stonehenge and the Piri Re'is Map. *Navigation* 17, 122-123.

1972

*Gillespie, A. R., and Soha, J. M., 1972. An orthographic photomap of the south pole of Mars from Mariner 6 and 7. *Icarus* 16, 522-527.

1975

Gillespie, A. R., 1975. Color manipulation of digital images. *Proceedings of the Society of Photographic Science and Engineering, Symposium IV, Unconventional Photographic Systems*, Washington, D.C., Nov. 20-21, pp. 35-37.

Goetz, A. F. H., Billingsley, F. C., Gillespie, A. R., Abrams, M. J., Squires, R. L., Shoemaker, E. M., Luchitta, I., and Elston, D. P., 1975. Application of ERTS images and image processing to regional geologic problems and geologic mapping in northern Arizona. *NASA-JPL Technical Report 32-1597*, May 15.

Kahle, A. B., Gillespie, A. R., Goetz, A. F. H., and Addington, J. D., 1975. Thermal inertia mapping. *Proceedings of the 10th International Symposium on Remote Sensing of the Environment*, Ann Arbor, MI, Oct. 6-10, p. 985-994.

Siegal, B. S., Kahle, A. B., Goetz, A. F. H., Gillespie, A. R., and Abrams, M. J., 1975. Detectability of geothermal areas using Skylab X-5 data. *Proceedings of the NASA Earth Resources Survey Symposium*, NASA TM X-58168, Vol. I-B, Houston, TX, pp. 625-640.

Siegal, B. S., Kahle, A. B., Goetz, A. F. H., Gillespie, A. R., Abrams, M. J., and Pohn, H. A., 1975. Final report on the detection of geothermal areas from Skylab thermal data. *NASA-JPL Technical Memorandum 33-728*, June 15.

1976

Abrams, M. J., Siegal, B. S., Goetz, A. F. H., and Gillespie, A. R., 1976. Computer image processing techniques applied to geologic problems. In *Applications of Computer Methods in the Mineral Industry* (R. V. Ramani, ed.), *Proceedings of the 14th International Symposium*, Pennsylvania State University, Oct. 4-8.

Gillespie, A. R., 1976. Directional fabrics introduced by digital filtering of images. *Proceedings of the Second International Conference on Basement Tectonics*, University Delaware, Newark, DE, July 13-17, p. 500-507.

Goetz, A. F. H., Abrams, M. J., Gillespie, A. R., Siegal, B. S., Elston, D. P., Lucchitta, I., Wu, S. S. C., Sanchez, A., DiPaola, W. D., Schaefer, F. J., and Jordan, R., 1976. Comparison of Skylab and Landsat images for geologic mapping in Northern Arizona. Final Report, NASA 7-100, Task Order RD-161, National Technology Information Service E76-10206, Feb. 27.

*Kahle, A. B., Gillespie, A. R., and Goetz, A. F. H., 1976. Thermal inertia imaging: A new geologic mapping tool. *Geophysics Research Letters* 3, 26-28.

Soha, J. M., Gillespie, A. R., Abrams, M. J., and Madura, D. P., 1976. Computer techniques for geological applications. *Proceedings of the Caltech/JPL Conference on Image Processing Technology, Data Sources and Software for Commercial and Scientific Applications*, Caltech, Pasadena, CA, Nov. 3-5, pp. 4-1 through 4-21.

1977

*Gillespie, A. R., and Kahle, A. B., 1977. The construction and interpretation of a digital thermal inertia image. *Photogrammetric Engineering and Remote Sensing* 43, 983-1000.

*Offield, T.W., Abbott, E. A., Gillespie, A. R., and Loguercio, S. O., 1977. Structure mapping on enhanced Landsat images of Southern Brazil: Tectonic control of mineralization and speculations on metallogeny. *Geophysics* 42(3), 482-500.

1979

*Benton, J. F., Gillespie, A. R., and Soha, J. M., 1979. Digital image processing applied to the photography of manuscripts. *Scriptorium* 33, 40-55.

Gillespie, A. R., 1979. Simulations of Stereosat data and characteristics. *Preliminary Stereosat Mission Description*, NASA/JPL Technical Report 720-33, May 30.

1980

*Gillespie, A. R., 1980. Digital techniques of image enhancement. In B. S. Siegal and A. R. Gillespie, eds., *Remote Sensing in Geology*, Wiley, NY, pp. 139-226.

*Lorre, J. J., and Gillespie, A. R., 1980. Artifacts in digital images. In *Application of Digital Image Processing to Astronomy*. *Society of Photo-Optical Instruments and Engineering* 264, 123-135.

Schildge, J. P., Kahle, A. B., Alley, R. E., and Gillespie, A. R., 1980. Use of thermal inertia properties for material identification. *Proceedings of the Society of Photo-Optical Instruments and Engineering, 24th Annual Technical Symposium, Image Processing for Missile Guidance*, SPIE 238 (T. F. Wenner, ed.), San Diego, CA, Jul. 28 - Aug. 1, pp. 350-357.

1982

*Gillespie, A. R., Huneke, J. C., and Wasserburg, G. J., 1982. An assessment of ⁴⁰Ar-³⁹Ar dating of incompletely degassed xenoliths. *Journal of Geophysical Research* 87, 9247-9257.

1983

*Gillespie, A. R., and Criss, R. E., 1983. Correlation of infrared reflectance ratios at 2.3 μm /1.6 μm and 1.1 μm /1.6 μm with $\delta^{18}\text{O}$ values delineating fossil hydrothermal systems in the Idaho batholith. *International Geosciences Remote Sensing Symposium (IGARSS '83)* 1, TA-4, pp. 4.1-4.6.

*Gillespie, A. R., Huneke, J. C., and Wasserburg, G. J., 1983. Eruption age of a Pleistocene basalt from ^{40}Ar - ^{39}Ar analysis of partially degassed xenoliths. *Journal of Geophysical Research* 88, 4897-5008.

1984

*Allen, C. R., Gillespie, A. R., Han, Y., Sieh, K. E., Zhang, B., and Zhu, C., 1984. Red River and associated faults, Yunnan Province, China. *Bulletin of the Geological Society of America* 95, 686-700.

*Allen, C. R., Han, Y., Sieh, K. E., Zhang, B., Gillespie, A. R., and Zhu, C., 1984. Study of the Quaternary activities of the Red River Fault (I) - General survey of its contemporary activities and evidence of the active faulting. *Chinese Journal of Seismological Research* 7(1), 39-51. (In Chinese).

*Allen, C. R., Han, Y., Sieh, K. E., Zhang, B., Gillespie, A. R., and Zhu, C., 1984. Study of the Quaternary activities of the Red River Fault (II) - Its features of activity, slip rate and recurrence intervals of earthquakes. *Chinese Journal of Seismological Research* 7(2), 171-186. (In Chinese).

*Gillespie, A. R., Huneke, J. C., and Wasserburg, G. J., 1984. Eruption age of a ~100,000-year-old basalt from ^{40}Ar - ^{39}Ar analysis of partially degassed xenoliths. *Journal of Geophysical Research* 89, 1033-1048.

*Gillespie, A. R., Kahle, A. B., and Palluconi, F. D., 1984. Mapping alluvial fans in Death Valley, California, using multichannel thermal infrared images. *Geophysical Research Letters* 11, 1153-1156.

Gillespie, A. R., and Abbott, E. A., 1984. Mapping compositional differences in silicate rocks with 6-channel thermal images. *Proceedings of the 9th Canadian Symposium on Remote Sensing*, St. Johns, Newfoundland, Canada, Aug., p. 327-336.

1985

*Budinger, F. E. Jr., Boley, J. L., and Gillespie, A. R., 1985. A reassessment of a hearth-like feature at the Calico site using TL, ESR, paleomagnetic, and ^{40}Ar - ^{39}Ar techniques. *Current Research in the Pleistocene* 3, 40-43.

Gillespie, A. R., 1985. Lithologic Mapping of Silicate Rocks Using TIMS. *The TIMS Data Users' Workshop*, June 18 - 19, Jet Propulsion Laboratory Publication 86-38, pp. 29-44.

1986

*Crook, R. Jr., and Gillespie, A. R., 1986. Weathering rates in granitic boulders measured by P-wave speeds. In S. M. Colman and D. Dethier (eds.), *Rates of Chemical Weathering of Rocks and Minerals*, Academic Press, p. 395-417.

*Gillespie, A. R., Kahle, A. B., and Walker, R. E., 1986. Color enhancement of highly correlated images, I. Decorrelation and HSI contrast stretches. *Remote Sensing of Environment* 20, 209-235.

1987

*Gillespie, A. R., A. B. Kahle and R. E. Walker, 1987. Color enhancement of highly correlated images, II. Channel ratio and chromaticity transformation techniques. *Remote Sensing of Environment* 22, 343-365.

*Martel, S. J., Harrison, T. M., and Gillespie, A. R., 1987. Late Quaternary displacement rate on the Owens Valley Fault Zone at Fish Springs, California. *Quaternary Research* 27, 113-129.

Gillespie, A. R., 1987. Enhancing TIMS images for photointerpretation. *Proceedings of the Workshop on Thermal Infrared Multispectral Scanner*, Jet Propulsion Laboratory Publication 36-38, Pasadena, CA, p. 12-24.

Gillespie, A. R., 1987. Letter to the editor in response to an article by R. I Dorn. *Quaternary Research* 28, 102-103.

Gillespie, A. R., 1987. Lithologic mapping of silicate rocks using TIMS data. *Proceedings of the Workshop on Thermal Infrared Multispectral Scanner*, Jet Propulsion Laboratory Publication 36-38, Pasadena, CA, p. 29-44.

Smith, M. O., Adams, J. B., and Gillespie, A. R., 1987. Evaluation and calibration of AVIRIS test-flight data, Owens Valley, CA, Final Report NASA Contract No. NAGW 1135, 17 p.

Smith, M. O., Roberts, D. A., Shipman, H. M., Adams, J. B., Willis, S. C., and Gillespie, A. R., 1987. Calibrating AIS images using the surface as a reference. *Proceedings of the 3rd Airborne Imaging Spectrometer Data Analysis Workshop*, Jet Propulsion Laboratory Publication 87-30, Pasadena, CA, pp. 63-69.

1988

*Kahle, A. B., Gillespie, A. R., Abbott, E. A., Abrams, M. J., Walker, R. E., Hoover, G., and Lockwood, J. P., 1988. Relative dating of Hawaiian lava flows using multispectral thermal infrared Images: A new tool for geologic mapping of young volcanic terranes. *Journal of Geophysical Research* 93, 15239-15251.

1989

*Adams, J. B., Smith, M. O., and Gillespie, A. R., 1989. Simple models for complex natural surfaces: A strategy for the hyperspectral era of remote sensing. *Proceedings of the International Geoscience Remote Sensing Symposium (IGARSS '89)* 1, 16-21.

*Gillespie, A. R., Budinger, F., Jr., and Abbott, E. A., 1989. Verification of prehistoric campfires by Ar-40/Ar-39 analysis. *Journal of Archaeological Science* 16, 271-291.

Gillespie, A. R., 1989. Big Pine Volcanic Field. In Smith, G. I. (ed.), *Field Guide to Eastern California*, International Geological Congress, Washington, D.C., Aug.

- Martel, S. J., Harrison, T. M., and Gillespie, A. R., 1989. Adjustments to calculated Quaternary displacement rates across the Fish Springs fault, Owens Valley fault zone, California. *Quaternary Research* 32, 342-343.
- 1990**
- *Smith, M. O., Ustin, S. L., Adams, J. B., and Gillespie, A. R., 1990. Vegetation in deserts: I. A regional measure of abundance from multispectral images. *Remote Sensing of Environment* 31, 1-26.
- *Smith, M. O., Ustin, S. L., Adams, J. B., and Gillespie, A. R., 1990. Vegetation in deserts: II. Environmental influences on regional abundance. *Remote Sensing of Environment* 31, 27-52.
- Adams, J. B., Kapos, V., Smith, M. O., Filho, R. A., Gillespie, A. R., and Roberts, D. A., 1990. A new Landsat view of land use in Amazonia. *Proceedings of the International Symposium on Primary Data Acquisition, ISPRS, MANAUS/1990* 28(1), 177-185 (Brazil).
- Fox, L., III, Fischer, A. F., III, Gillespie, A. R., and Smith, M. O., 1990. Investigation of AVIRIS imagery for application in differentiating soil chronosequences. *Proceedings of the Second Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop*, Jet Propulsion Laboratory Publication 90-54, Pasadena, CA., pp 94-99.
- Gillespie, A. R., 1990. Big Pine Volcanic Field, California. In Wood, C.A., and Kienle, J., ed., *Volcanoes of North America: United States and Canada*. Cambridge University Press, New York.
- Gillespie, A. R., Burke, R. M., Fischer, A. F., III, Smith, M. O., and Fox, L., III, 1990. Distinguishing soils and surfaces in a carbonate-enriched desert chronosequence with TIMS. In E. A. Abbott (ed.), *Proceedings of the Second Thermal IR Multispectral Scanner (TIMS) Workshop*, Jet Propulsion Laboratory Publication 90-55, Pasadena, CA., p. 119-135.
- Gillespie, A. R., Smith, M. O., Adams, J. B., and Willis, S. C., 1990. Spectral mixture analysis of multispectral thermal infrared images. In E. A. Abbott, ed., *Proceedings of the Second Thermal IR Multispectral Scanner (TIMS) Workshop*, Jet Propulsion Laboratory Publication 90-55, Pasadena, CA., p. 57-74.
- Gillespie, A. R., Smith, M. O., Adams, J. B., and Willis, S. C., 1990. Spectral mixture analysis of multispectral thermal infrared images: Two test cases. *Proceedings of the 5th Australasian Remote Sensing Conference*, Committee of the 5th Australasian Remote Sensing Conference Inc. 1990, Perth, Western Australia, 8-12 Oct., Vol. 1, 381-390.
- Gillespie, A. R., Smith, M. O., Adams, J. B., Willis, S. C., Fischer, A. F., III, and Sabol, D., 1990. Interpretation of residual images: Spectral mixture analysis of AVIRIS images, Owens Valley, California. *Proceedings of the Second Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop*, Jet Propulsion Laboratory Publication 90-54, Pasadena, CA., p. 243-270.
- Roberts, D. A., Smith, M. O., Adams, J. B., Sabol, D. E., Gillespie, A. R., and Willis, S. C., 1990. Isolating woody plant material and senescent vegetation from green vegetation in AVIRIS data. *Proceedings of the Second Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop*, Jet Propulsion Laboratory Publication 90-54, Pasadena, CA., pp 42-57.
- 1991**
- Adams, J. B., Barron, E. E., Bloom, A. A., Breed, C., Dohrenwend, J., Evans, D. L., Farr, T. G., Gillespie, A. R., Isacks, L. B., and Williams, R. S., 1991. Report of the Panel on the Land Surface: Processes of Change. In *Solid Earth Science in the 1990s, Volume 2 - Panel Reports*. NASA Technical Memorandum 4256, v. 2, V-1 - V-28, Feb.
- *Bierman, P. R., Gillespie, A. R., and Keuhner, S., 1991. Precision of rock varnish cation-ratio ages. *Geology*, 19, 135-139.
- *Bierman, P. R., and Gillespie, A. R., 1991. Range fires: A significant factor in the dating and evolution of geomorphic surfaces. *Geology* 19, 641-644.
- *Bierman, P. R., and Gillespie, A. R., 1991. Accuracy of rock-varnish chemical analyses: Implications for cation-ratio dating. *Geology* 19, 196-199.
- Bierman, P. R. and A. R. Gillespie, A. R., 1991. Lowering rates of granitic landforms determined by measurement of *in situ* produced cosmogenic nuclides. *EOS* 72(44), 575.
- Bierman, P., Gillespie, A. R., Whipple, K. X., and Clark, D. H., 1991. Quaternary geomorphology and geochronology of Owens Valley, California. In Walawender, M.J., and Hanan, B.B., (eds.), *Geological Excursions in Southern California and Mexico: Guidebook*, 1991 Geological Society of America Annual Meeting, p. 199-223.
- Gillespie, A. R., 1991. Testing a new climatic interpretation for the Tahoe glaciation. In *Natural History of Eastern California and High-Altitude Research*, edited by C. A. Hall, Jr., V. Doyle-Jones, and B. Widawski, *Proceedings of the White Mountain Research Station. Symposium 3*, 383-398.
- Gillespie, A. R., 1991. Quaternary subsidence of Owens Valley, California In *Natural History of Eastern California and High-Altitude Research*, edited by C. A. Hall, Jr., V. Doyle-Jones, and B. Widawski, *Proceedings of the White Mountain Research Station. Symposium 3*, 356-382.
- Gillespie, A. R., 1991. Trail Canyon fans: Capture history of Rock Creek. In Reheis, M. C., Slate, J. C., Sawyer, T. L., Sarna-Wojcicki, A. M., Harden, J. W., Pendall, E. G., Gillespie, A. R., and Burbank, D. M., *Guidebook for Field Trip to Fish Lake Valley, California-Nevada, Pacific Cell, Friends of the Pleistocene*, U. S. Geological Survey Open-File Report 91-290, p.178-184.
- Harden, J. W., Slate, J. L., Lamothe, P., Chadwick, O. A., Pendall, E. G., and Gillespie, A. R., 1991. Soil formation on the Trail Canyon alluvial fan. U. S. Geological Survey Open-File Report 91-291, 22 p.

- Roberts, D. A., Smith, M. O., Adams, J. B. and Gillespie, A. R., 1991. Spectral mixture analysis of AVIRIS data: Leaf spectral types, residuals and canopy shade. *Proceedings of the Third Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop*, Jet Propulsion Laboratory Publication 91-28, Jet Propulsion Laboratory, Pasadena, CA., p. 43-50.
- Sabol, D. E., Adams, J. B., Smith, M. O., and Gillespie, A. R., 1991. Target detection thresholds using imaging spectrometer data. *Proc. of the Third Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop*, Jet Propulsion Laboratory Publication 91-28, Jet Propulsion Laboratory, Pasadena, CA., p. 99-108.

1992

- *Gillespie, A. R., 1992. Enhancement of multispectral thermal infrared images: Decorrelation contrast stretch. *Remote Sensing of Environment* 42, 147-155.
- *Gillespie, A. R., 1992. Spectral mixture analysis of multispectral thermal infrared images. *Remote Sensing of Environment* 42, 137-145.
- Bierman, P. R., and Gillespie, A. R., 1992. Accuracy of rock-varnish chemical analyses: Implications for cation-ratio dating. Reply to comment by T. A. Cahill. *Geology* 20, 469-472.
- Bierman, P. R., and Gillespie, A. R., 1992. Accuracy of rock-varnish chemical analyses: Implications for cation-ratio dating. Reply to comment by R. I. Dorn. *Geology* 20, 471-472.
- Bierman, P. R., and Gillespie, A. R., 1992. Range fires: A significant factor in the dating and evolution of geomorphic surfaces. Reply to comment by R. I. Dorn. *Geology* 20, 283-285.
- Bierman, P., Gillespie, A., Harrington, C., Raymond, R., McFadden, L. and Wells, S., 1992. Throwing rocks. *American Scientist* 80, 110-112.
- Gillespie, A. R., Smith, M. O., and Sabol, D., 1992. A field technique for measuring the shadow fraction in spectral mixture analysis. *Proceedings of the Airborne Science Workshop: AVIRIS*, Jet Propulsion Laboratory, Pasadena, CA., 1-5 June.

1993

- *Adams, J. B., Smith, M. O., and Gillespie, A. R., 1993. A Mixing-model Strategy for Analyzing and Interpreting Hyperspectral Images. In C. M. Pieters and P. J. Englert, eds., Remote Geochemical Analysis: Elemental and Mineralogical Composition, Cambridge University Press/Lunar and Planetary Institute, Cambridge, 145-166.
- *Bursik, M. I., and Gillespie, A. R., 1993. Late Pleistocene glaciation of Mono Basin, California. *Quaternary Research* 39, 24-35.
- *Reheis, M. C., Sawyer, T. L., Slate, J. L., and Gillespie, A. R., 1993. Geologic map of Late Cenozoic deposits and faults in the southern part of the Davis Mountain 15' Quadrangle, Esmeralda County, Nevada. U.S. Geological Survey, Miscellaneous Investigations Series Map I-2342.

1994

- *Bierman, P. R., and Gillespie, A. R., 1994. Evidence against reliability and reproducibility of rock-varnish cation-ratio dating methods. *Quaternary Research* 40, 82-90.
- *Bierman, P. R., and Gillespie, A. R., 1994. Evidence suggesting that methods of rock-varnish cation-ratio dating are neither comparable nor consistently reliable. *Quaternary Research* 41, 82-90.
- *Clark, D. H., Clark, M. M., and Gillespie, A. R., 1994. Debris-covered glaciers in the Sierra Nevada, California, and their implications for snowline reconstructions. *Quaternary Research* 41, 139-153.
- *Kahle, A. B., Njoku, E. J., Palluconi, F. D., Gillespie, A. R., Hook, S. J., Hayden, C.M., Tsuchiya, K., and Dozier, J., Eds. 1994. Remote Sensing of Earth's Surface and Atmosphere. New York, Pergamon Press.
- *Watson, K., and Knepper, E., with contributions by Abrams, M. J., Gillespie, A. R., Kahle, A. H., and Rowan, L., 1994. Airborne Remote Sensing for Geology and the Environment--Present and Future. U.S. Geological Survey Bulletin 1926, 43 pp.
- Clark, D. H., and Gillespie, A. R., 1994. Reply to comment by M. Jakob on debris-covered glaciers in the Sierra Nevada, California, and their implications for snowline reconstruction. *Quaternary Research* 42, 359-362.
- Resmini, R. G., Sunshine, J. M., Schaum, A., McCord, T. B., Forsythe, J. L., and Gillespie, A. R., 1994. Assessment of the linear mixing model for subpixel materials detection in thermal infrared multispectral scanner (TIMS) images. *Proceedings of the International Symposium on Spectral Remote Sensing '94*, 1, 149-159.

1995

- *Adams, J. B., Sabol, D., Kapos, V., Almeida Filho, R., Roberts, D. A., Smith, M. O., and Gillespie, A. R., 1995. Classification of multispectral images based on fractions of endmembers: Application to land-use change in the Brazilian Amazon. *Remote Sensing of Environment* 52, 137-154.
- *Bierman, P. B., Gillespie, A. R., and Caffee, M., 1995. Cosmogenic age estimates for earthquake recurrence intervals and debris-flow fan deposition, Owens Valley, California. *Science*, 270, 447-450.
- *Bierman, P. B., Gillespie, A. R., Caffee, M., Elmore, D., 1995. Estimating erosion rates and exposure ages with ³⁶Cl produced by neutron activation. *Geochimica Cosmochimica Acta* 59, 3779-3798.
- *Gillespie, A. R., Adams, J. B., Smith, M. O., Gu, D., Sabol, D. E., and Zukin, J. H., 1995. Forest Mapping Potential of ASTER, *Journal of the Remote Sensing Society of Japan* 15 (1), 62-71.

- *Gillespie, A. R., and Bierman, P. R., 1995. Precision of terrestrial exposure ages and erosion rates from analysis of cosmogenic isotopes produced in situ. *Journal of Geophysical Research, Solid Earth and Planets* 100(B12), 24,637-24,649.
- *Gillespie, A. R., and Clark, D. H., 1995. Potential of ASTER for inferring paleoclimatic conditions, *Journal of the Remote Sensing Society of Japan* 15 (1), 39-49.
- *Gillespie, A. R., and Molnar, P., 1995. Asynchronism of maximum advances of mountain and continental glaciations. *Reviews of Geophysics* 33, 311-364.
- *Gillespie, A. R., Rokugawa, S., Hook, S. J., Matsunaga, T., and Kahle, A. B., 1995. Temperature/emissivity separation Algorithm theoretical basis document, Version 2.0. NASA report, Contract NAS5-31372, 84 pp., 20 Sept.
- Bierman, P. R., and Gillespie, A. R., 1996. Reply to comment by R. I. Dorn and by C. Harrington and J. Whitney on "Evidence suggesting that methods of rock-varnish cation ratio dating are neither comparable nor consistently reliable." *Quaternary Research* 43, 274-276.
- Sabol, D. E., Smith, M. O., Adams, J. B., Zukin, J. H., Tucker, C. J., Roberts, D. A., and Gillespie, A. R., 1995. AVIRIS spectral trajectories for forested areas of Gifford Pinchot National Forest, *Proc. 5th Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop, Vol. 1.*, Jet Propulsion Laboratory Publication 95-1, Jet Propulsion Laboratory, Pasadena, CA., 133-136.
- Smith, M. O., Weeks, R. J., and Gillespie, A. R., 1995. A strategy to quantify moisture and roughness from SAR images using finite impulse response filters. *Institute of Electrical and Electronics Engineers (IEEE) Transactions on Geoscience and Remote Sensing, Toulouse*, Oct.
- 1996**
- *Gillespie, A. R., Rokugawa, S., Hook, S. J., Matsunaga, T., and Kahle, A. B., 1996. Temperature/emissivity separation Algorithm theoretical basis document, Version 2.3. JPL D-13916, Jet Propulsion Lab., Pasadena, CA, 16 Aug., 65 pp.
- *Gosse, J. C., Reedy, R. C., Poths, J., and Gillespie, A. R., 1996. Terrestrial cosmogenic nuclide dating: tested and ready for action. *EOS* 77(29), 275,276.
- *Weeks, R. J., Smith, M. O., Pak, K., Li, W. H., Gillespie, A. R., and Gustafson, W., 1996. Surface roughness, radar backscatter and VNIR reflectance in Death Valley, California. *Journal of Geophysical Research* 101, 23077,23090.
- Gillespie, A. R., Matsunaga, T., Rokugawa, S., and Hook, S. J., 1996. Temperature and Emissivity Separation from Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) Images. *Proceedings of the International Society for Optical Engineering (SPIE)* 2817-11 (session 3), pp.82-94, Denver, August 4-9.
- Sabol, D. E., Jr., Smith, M. O., Adams, J. B., Gillespie, A. R., and Tucker, C. J., 1996. Monitoring forest regrowth in the Gifford Pinchot National Forest, Washington, using a multi-platform time series. *Proceedings of the 6th Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Workshop*, Jet Propulsion Laboratory, Pasadena, CA, March 4-8, 6 pp.
- Smith M.O., Weeks R., and A.R. Gillespie, 1996. Using background factors to optimize roughness from multipolarized SAR images, *Presented 2nd Int'l. Airborne Rem. Sens. Conf. Exhib.*, San Francisco 24-27 June.
- 1997**
- *Clark, D. H., and Gillespie, A. R., 1997. Timing and significance of late-glacial and Holocene glaciation in the Sierra Nevada, California. *Quaternary International* 38/39, 21-38.
- *Clark, D.H., Steig, E. J., Potter, N., and Gillespie, A.R., 1997. Genetic variability of rock glaciers. *Geografiska Annaler* 80A(3-4), 175-182.
- *Gillespie, A. R., 1997. A precise petroglyph equinox marker in eastern California. *Epigraphic Society Occasional Papers* 23, 71-85.
- *Gillespie, A. R., Clark, D. H., Steig, E., and Potter, N., 1997. Chapman Conference on rock glaciers. *EOS*, 78(20),208,209.
- *Weeks, R. J., Smith, M. O., Pak, K., and Gillespie, A. R., 1997. Inversions of SIR-C and AIRSAR data for the roughness of geological surfaces. *Remote Sensing of Environment* 59, 383,396.
- 1998**
- *Gillespie, A. R., Rokugawa, S., Matsunaga, T., Cothorn, J. S., Hook, S. J., and Kahle, A. B., 1998. Temperature and Emissivity Separation from Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) Images. *Institute of Electrical and Electronics Engineers (IEEE) Transactions on Geoscience and Remote Sensing* 36, 1113-1126.
- *Gu, D., and Gillespie, A. R., 1998. Topographic normalization of Landsat TM images of forests based on sun-canopy-sensor geometry. *Remote Sensing of Environment* 64, 166-175.
- *Li, W.-H., Weeks, R. J., and Gillespie, A. R., 1998. Multiple scattering in the remote sensing of natural surfaces. *International Journal of Remote Sensing*, 19(9), 1725-1740.
- *Steig, E.J., Clark, D.H., Potter, N. Jr., and Gillespie, A. R., 1998. The geomorphic and climatic significance of rock glaciers. *Geografiska Annaler* 80A(3-4), 173-174.
- McDonald, E., Lancaster, J., Wells, S., Beck, C., Doe, W., Gillespie, A., Isaacson, J., Kreidberg, R., Hamerlynck, E, Harmon, R., Harrison, B., Lancaster, N., Morrill, V., Mouat, D., Nickling, W., Smith, L., and Warren, S., 1998. New Research Directions in Desert Surficial Processes and Landscape Dynamics on Military Lands: A Workshop Report. *Zyzyx*, CA., April, 1998, U.S. Army Research Office, Desert Research Institute.

1999

- *Gillespie, A. R., Burke, R. M., and Clark, M. M., 1999. Eliot Blackwelder and the Alpine Glaciations of the Sierra Nevada. *Classic California Cordilleran Centennial Concepts*, Geological Society of America Volume (C5), May 99.
- *Gu, D., Gillespie, A. R., Adams, J. B., and Weeks, R., 1999. A statistical approach for topographic correction of satellite images using spatial context information. *Institute of Electrical and Electronics Engineers (IEEE) Transactions on Geoscience and Remote Sensing* 37(1), 236-246.
- Gillespie, A.R., 1999. Thirty years of remote sensing in Death Valley: What have we learned? USGS Open File Report.
- Gu, D., and Gillespie, A.R., 1999. Response to Dymond and Shepherd's comment on "Topographic normalization of Landsat TM images of forest based on subpixel sun-canopy-sensor geometry" (*Remote Sens. Environ.* 64: 166-175, 1998). *Remote Sensing of Environment* 69, 195-196.

2000

- *Gu, D., Gillespie, A. R., Kahle, A. B., and Palluconi, F. D., 2000. Autonomous atmospheric compensation (AAC) of high-resolution hyperspectral thermal infrared remote-sensing imagery. *Institute of Electrical and Electronics Engineers (IEEE) Transactions on Geoscience and Remote Sensing* 38(6), 2557-2570.
- *Gu, D., Gillespie, A.R., 2000. A new approach for temperature and emissivity separation. *International Journal of Remote Sensing* 21(10), 2127-2132, DOI: 10.1080/01431160050021358.

2001

- *Bierman, P., Clapp, E., Nichols, K., Gillespie, A., and Caffee, M., 2001, Using cosmogenic nuclide measurements in sediments to understand background rates of erosion and sediment transport. In Harmon, R.S., and III, W.W.D. (eds.), *Landscape erosion and evolution modeling*; New York, Kluwer Academic/Plenum Publishers, p. 89-115.
- *Zehfuss, P. H., Bierman, P. R., Gillespie, A. R.; Burke, R. M., Caffee, M. W., 2001. Slip rates on the Fish Springs Fault, Owens Valley, California, deduced from cosmogenic ¹⁰Be and ²⁶Al and soil development on fan surfaces. *Geological Society of America Bulletin* 113; 241-255.
- Balick, L.K., Gillespie, A.R., E. Abbott, E., Sabol, D., Kahle, A.B., Borel, C.C., and Pendergast, M., 2001. Multiscale thermal-infrared measurements of the Mauna Loa caldera, Hawai'i. *Proceedings of the SPIE Aerosense Conference*, 4381, 440-446 (Orlando FL, April).

2002

- *Sabol, D.E., Gillespie, A.R., Adams, J.B., Smith, M.O., and Tucker, C.T., 2002. Structural stage in Pacific Northwest forests estimated using simple mixing models of multispectral images. *Remote Sensing of Environment* 80/1, 1-16.
- Gillespie, A., 2002. Trends in temperature/emissivity separation algorithms (extended abstract). First International Symposium on Recent Advances in Quantitative Remote Sensing (RAQRS), Auditori de Torrent, Spain, 16-20 September.

2003

- *Buck, P., Sabol, D.E., and Gillespie, A.R., 2003. Subpixel artifact detection using remote sensing. *Journal of Archaeological Science* 30(8), 973-989.
- *Jiménez-Muñoz, J. C., Sobrino, J, A., Gillespie, A. R., and Sabol, D., 2003. Separación emisividad/temperatura a partir de datos DAIS y aplicación del contraste espectral para discriminar distintos tipos de vegetación. *Revista del Teledetección* 19, 51-58 (in Spanish with English abstract).
- *Kargel, J., R. Carlson, A. Davies, B. Fegley, Jr., A. Gillespie, R. Greeley, R. Howell, K. L. Jessup, L. Kamp, L. Keszthelyi, R. Lopes, T. MacIntyre, F. Marchis, A. McEwen, M. Milazzo, J. Perry, J. Radebaugh, L. Schaefer, N. Schmerr, W. Smythe, J. Spencer, D. Williams, J. Zhang, M. Zolotov, 2003. Extreme Volcanism on Io: Latest Insights at the End of Galileo Era. *Eos* 84(33), 313.
- *Kay, J. E., Gillespie, A. R., Hansen, G. B., and Petit, E. C., 2003. Spatial relationships between snow contaminant content, grain size, and surface temperature from multispectral images of Mt. Rainier, Washington (USA). *Remote Sensing of Environment* 86, 216-231.
- *Solomon, S.C., Baker, V.R., Bloxham, J.B., Donnellan, A., Elachi, C., Evans, D., Rignot, E., Burbank, D., Chao, B., Chave, A., Gillespie, A., *et al.*, 2003. Plan for living on a restless planet sets NASA's solid Earth agenda. *Eos* 84 (45), 485-491.
- Clark, D., Gillespie, A. R., Clark, M. M., and Burke, R. M., 2003. Mountain glaciations of the Sierra Nevada. In Easterbrook, D. J., Ed., *Quaternary Geology of the United States*: International Quaternary Association (INQUA) 2003 Field Guide Volume, XVI INQUA Congress, Desert Research Institute, Reno, NV, 287-312.
- Easterbrook, D. J., Pierce, K., Gosse, J., Gillespie, A. R., Evenson, E., and Hamblin, K., 2003. Quaternary geology of the western United States. In Easterbrook, D. J., (ed.), *Quaternary Geology of the United States*, Desert Research Institute, Reno, NV, 19-80.
- Krivosogov, S., Mistryukov, A., Sheinkman, V., Kashiwaya, K., Gillespie, A., 2003. The Darhad paleolake: A polygon for studies of long-term and short-term environmental changes in northern Mongolia. *The Japan-China Joint Scientific Cooperation Program, International Workshop, Terrestrial Sediment Information and Long-Term Environmental Changes in East Eurasia*, Kanazawa, Japan, Nov. 24-28, p.43-46.

2004

- *Gillespie, A. R., Porter, S. C., and Atwater, B. F. (eds.), 2004. The Quaternary Period in the United States. Developments in Quaternary Science Vol 1, Elsevier, 584 pp.
- *Kaufman, D. S., Porter, S. C., and Gillespie, A. R., 2004. Quaternary alpine glaciation in Alaska, the Pacific Northwest, Sierra Nevada, and Hawaii. In Gillespie, A. R., Porter, S. C., and Atwater, B. F. (eds.), The Quaternary Period in the United States. Developments in Quaternary Science Vol 1, Elsevier, 77-103.
- *Montgomery, D.R., Hallet, B., Liu Y.-P., Finnegan, N., Anders, A., Gillespie, A., Greenburg, H. M., 2004. Evidence for Holocene megafloods down the Tsangpo River gorge, southeastern Tibet. *Quaternary Research* 62(2), 201-207.
- Mushkin, A., and Gillespie, A. R., 2004. Estimating sub-pixel surface roughness using remotely sensed stereoscopic data. *Proceedings of the International Geoscience and Remote Sensing Symposium (IGARSS 04)*, Anchorage, Alaska, Vol. 2, 1292 – 1295.
- Gillespie, A. R., 2004. Rollin W. Gillespie. *Pre-Columbiana* 3(1-3), 165-167.
- Gillespie, A. R., and Zehfuss, P. H., 2004. Glaciations of the Sierra Nevada, California, USA. In Ehlers, J., and Gibbard, P. L., (eds.), *Quaternary Glaciations and Chronology*. Part II: North America, Developments in Quaternary Science Vol 2b, Amsterdam, Elsevier.

2005

- *Cherkauer, K. A., Burges, S. J., Handcock, R.N., Kay, J.E., Kampf, S. K. and Gillespie, A. R., 2005. Assessing Satellite-Based and Aircraft-Based Thermal Infrared Remote Sensing for Monitoring Pacific Northwest River Temperature. *Journal of the American Water Resources Association* 41(5), 1149-1159.
- *Gillespie, A. R., Montgomery, D. R., and Mushkin, A., 2005. Active glaciers on Mars? (Brief Communications Arising from J. W. Head *et al.* Nature 434, 346–351 (2005)). *Nature* 438, E9-E10 (8 December 2005), doi:10.1038/nature04357.
- *Gillespie, A. R., 2005. Rock-art dating at the end of the millennium. *Epigraphic Society Occasional Papers*, 24, 127-130..
- *Gillespie, A.R., and Sabol, D.E., 2005. Astronomical dating of a solstice sun-dagger petroglyph at Swansea, Inyo County, California, *Epigraphic Society Occasional Publications* 24, 131-149.
- *Kay, J. E., Kampf, S. K., Handcock, R. N., Cherkauer, K. A., Gillespie, A.R., and Burges, S. J., 2005. Accuracy of lake and stream temperatures estimated from thermal infrared images. *Journal of the American Water Resources Association* 41(5), 1161-1175.
- *McFadden, L. D., Eppes, M. C., Gillespie, A. R., and Hallet, B., 2005. Physical weathering in arid landscapes due to diurnal variation in the direction of solar heating. *Bulletin of the Geological Society of America* 117, 161-173.
- *Montgomery, D. R., Gillespie, A., 2005. Formation of Martian outflow channels by catastrophic dewatering of evaporite deposits. *Geology* 33, 625-628, doi: 10.1130/G21270.1.
- *Mushkin, A., and Gillespie, A. R., 2005. Estimating sub-pixel surface roughness using remotely sensed stereoscopic data. *Remote Sensing of Environment* 99, 75-83.
- *Mushkin, A., Balick, L. K., and A. R. Gillespie, A. R., 2005. Extending surface temperature and emissivity retrieval to the mid-infrared (3-5 μm) using the Multispectral Thermal Imager (MTI). *Remote Sensing of Environment* 98, 141-151.
- Gillespie, A. R., 2005. In Memoriam: Rollin W. Gillespie. *Epigraphic Society Occasional Papers*, 24, 303-304.
- Gillespie, A. R., 2005. Interview with Gloria Farley. *Epigraphic Society Occasional Papers*, 24, 267-272.
- Gillespie, A. R., 2005. Interview with Roderick Schmidt. *Epigraphic Society Occasional Papers*, 24, 274-287.
- Gillespie, A., Abrams, M., & Yamaguchi, Y., 2005. Scientific results from ASTER. *Remote Sensing of Environment* 99, 1-2.

2006

- *Adams, J. B., and Gillespie, A. R., 2006. Remote Sensing of Landscapes with Spectral Images. Cambridge University Press, Cambridge UK
- *Balick, L. K., Gillespie, A. R., McCabe, M. F., Mushkin, A., 2006. Forward modeling of linear mixing in thermal IR ground leaving radiance spectra. SPIE online doi:10.1117/12.683816, 10 pp.
- *Handcock, R. N., Gillespie, A. R., Cherkauer, K. A., Kay, J. E., Burges, S. J. Kampf, S. K., 2006. Accuracy and uncertainty of thermal-infrared remote sensing of stream temperatures at multiple spatial scales. *Remote Sensing of Environment* 100(4), 427-440.
- *Jiménez-Muñoz, J. C., Sobrino J. A., Gillespie, A. R., Sabol, D., and Gustafson, W. T., 2006. Improved Land Surface Emissivities over Agricultural Areas Using ASTER NDVI. *Remote Sensing of Environment* 103(4), 474-487.
- *Mushkin, A., and Gillespie, A. R., 2006. Mapping sub-pixel surface roughness on Mars using high-resolution satellite image data. *Geophysical Research Letters* 33(18), L18204 (6 pp), doi: 10.1029/2006GL027095.
- *Nichols, K. K., Bierman, P. R., Foniri, W. R., Gillespie, A. R., Caffee, M., and Finkel, R., 2006. Dates and rates of arid-region geomorphic processes from analysis of cosmogenic nuclides. *GSA Today* 16(8), 4-11, doi: 10.1130/GSAT01608.1
- Amit, R., Crouvi, O., Simhai, O., Mushkin, A., Gillespie, A., Matmon, A., MacDonald, E., and Enzel, Y., 2006. Hyperarid early Pleistocene geomorphic surfaces: Paran plains, Israel (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute,
- Balick, L. K., Gillespie, A. R., McCabe, M. F., Theiler, J., and Mushkin, A., 2006. Forward modeling of linear mixing in thermal IR temperature retrieval. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 247-254.

- Brigham-Grette, J., Anderson, S., Clague, J., Cole, J., Doran, P., Gillespie, A. R., Grimm, E., Guccione, M., Hughen, K., Jackson, S., Jull, T., Leavitt, S., Mandel, R., Ortiz, J., Rodbell, D., Schweger, C., Smith, A., Styles, B., 2006. Petroleum award to novelist is inappropriate. *EOS Forum* 5 Sept., *EOS* 87(36), 364.
- Crouvi, O., Amit, R., Enzel, Y., Ait Mushkin, A., and Gillespie, A., 2006. Predicting desert loess distribution using remote sensing and GIS techniques (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute, <http://www.dana.geology.washington.edu/publications.html>
- Crouvi, O., Cohen, A., Amit, R., Enzel, Y., McDonald, E., McGwire, K., Mushkin, A., and Gillespie, A., 2006. GIS-based desert soil database for the ARO project: The Israeli soil profiles. Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute,
- Danilina, I., Mushkin, A., Gillespie, A. R., O'Neal, M. A., Pietro, L. S., and Balick, L. K., 2006. Roughness effects on sub-pixel radiative temperatures in kinetically isothermal surfaces. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 13-18.
- Gillespie, A. R., Amit, R., Mushkin, A., Crouvi, O., Enzel, Y., Danilina, I., and Abbott, E., 2006. Challenges in compositional mapping of playas: Yotvata Playa, Israel (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute.
- Gillespie, A. R., and Mushkin, A., 2006. Lithologic mapping with spectral remote sensing (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute, <http://www.dana.geology.washington.edu/publications.html>
- Gillespie, A. R., Gilson, L., O'Neal, M. A., and Kane, V. R., 2006. A framework for estimating unresolved spectral shade. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 385-390.
- Gillespie, A. R., Gilson, L., O'Neal, M. A., and Kane, V., 2006. Parsing Shade. *Proceedings of the Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, 385-390.
- Gillespie, A., Enzel, Y., Mushkin, A., Abbott, E., Amit, R., and Crouvi, O., 2006. Precipitation response by Qom Playa, Iran (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute, <http://www.dana.geology.washington.edu/publications.html>
- Gillespie, A., Mushkin, A., Sabol, D., Danilina, I., 2006. Differential thermal inertia – a tactical measurement of soil properties (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute, <http://www.dana.geology.washington.edu/publications.html>
- Gustafson, W. T., Gillespie, A. R., and Yamada, G., 2006. Revisions to the ASTER temperature/emissivity separation algorithm. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 770-775.
- Hibbitts, C., Gillespie, A., Mushkin, A., Bauer, J., and Delitsky, M., 2006. Remote-sensing techniques for mapping desert pavements. Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute, <http://www.dana.geology.washington.edu/publications.html>
- Jiménez-Muñoz, J. C., Sobrino, J. A., Gillespie, A., Sabol, D., Gustafson, W. T., Balick, L., and Pasapera-Gonzales, J. J., 2006. Land Surface Temperature and Emissivity Retrieval from ASTER Data over Agricultural Areas: Standard Products and Alternative Methods. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 137-141.
- Jiménez-Muñoz, J. C., Sobrino, J. A., Gillespie, A. R., Sabol, D., Gustafson, W. T., Balick, L. K., and Pasapera, J. J. 2006. Land surface and emissivity retrieval from ASTER data over agricultural areas: Standard products and alternative methods. 2nd International Symposium on Recent Advances in Quantitative Remote Sensing. Valencia, Spain, 25-29 September, 2006.
- Mushkin, A., and Gillespie, A., 2006. Subpixel roughness profiles (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute, <http://www.dana.geology.washington.edu/>
- Mushkin, A., Gillespie, A. R., O'Neal, M., Danilina, I., Abbott, E. A., and Balick, L. K. Thermal infrared cavity radiation compensation using sub-pixel roughness estimates from ASTER stereo images". 2nd International Symposium on Recent Advances in Quantitative Remote Sensing. Valencia, Spain, 25-29 September, 2006.
- Mushkin, A., Gillespie, A. R., Danilina, I., O'Neal, M. A., Pietro, L. S., Abbott, E. A., and Balick, L. K., 2006. Using sub-pixel roughness estimates from ASTER stereo images to compensate for roughness effects in the thermal infrared. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 255-260.
- Narantsetseg, Ts., Tomorkhuu, D., Dolgorsuren, H., Oyunchimeg, Ts., Baigal, O., Tuvshinjargal, H., Krivinogov, S., Kazanskyi, A., Matasova, G., Bezrukova, E., Gillespie, A., Bayasgalan, A., and Batbaatar, J., 2006. Research of the sediments from paleolake in Darthad depression. *Institute of Minerals and Resources, Mongolian Academy of Sciences, Ulaan Baatar, Mongolia, 15 pp (in Mongolian)*.
- Peters, M., Benson, S., Cerling, T., Curry, J., Enzel, Y., Finley, J., Gillespie, A. R., Glantz, M., Soreghan, L., 2006. Global Climate Change. Geological Society of America Position Statement. <http://rock.geosociety.org/aboutus/position10.htm>

- Sabol, D. E., Gillespie, A. R., McDonald, E., and Danilina, I., 2006. Differential Thermal Inertia of Geological Surfaces. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 193-198.
- Sabol, D., Caldwell, T., Gillespie, A., and McDonald, E., 2006. Remote sensing for mapping near-surface playa moisture (Poster). Appendix Final Technical Report, Desert Terrain Project, Army Research Office contract to Desert Research Institute, <http://www.dana.geology.washington.edu/publications.html>
- Sobrino, J.A., Cuenca, J., Sòria, G., Jiménez-Muñoz, J. C., Gómez, M. Zaragoza, M. Romaguera, M., Julien, Y., Shen, Q., Barella-Ortiz, A., Morales, L., Gillespie, A., Balick, L., Peres, L., Libonati, R., Nerry F., and Fortier, M., 2006. Thermal remote sensing in the framework of the SEN2FLEX Project: Field measurements, airborne data and applications. In J. A. Sobrino, ed., *Second Recent Advances in Quantitative Remote Sensing*, Publicacions de la Universitat de València, Spain, ISBN: 84-370-6533-X ; 978-84-370-6533-5, 142-146.
- 2007**
- *Hibbitts, C.A., and Gillespie, A. R., 2007. Polarization of visible light by desert pavements. *Remote Sensing of Environment* 112(4), 1808-1819.
- *Kargel, J. S., Rodriguez, A. P., Furfaro, R., Montgomery, D. R., Gillespie, A. R., Prieto-Ballesteros, O.; Wood, S. E., and Marion, G., 2007. Martian hydrogeology sustained by thermally insulating gas and salt hydrates. *Geology*.35(11), 975 – 978, doi 10.1130/G23783A.1.
- *McCord, T. B., J. B. Adams, G. Bellucci, J-P. Combe, A. R. Gillespie, G. Hansen, H. Hoffmann, R. Jaumann, G. Neukum, P. Pinet, F. Poulet, K. Stephan, 2007. Mars Express High Resolution Stereo Camera spectrophotometric data: Characteristics and science analysis. *Journal of Geophysical Research – Planets* 112, E06004, doi:10.1029/2006JE002769 (27 pp).
- *Sobrino J. A., Jiménez-Muñoz, J. C., Balick, L., Gillespie, A. R., Sabol, D. A., and Gustafson, W. T., 2007. Accuracy of ASTER Level-2 thermal-infrared Standard Products of an agricultural area in Spain. *Remote Sensing of Environment* 106, 146-153.
- Balick, L., McCabe, M., Clodius, W., Jeffery, C., Theiler, J., Gillespie, A., Mushkin, A., and Danilina, I., 2007. Model and Measurements of Linear Mixing in Thermal IR Ground Leaving Radiance Spectra. *Proceedings of the SPIE ERS07 Conference* 6749, Florence, Italy, 17-21 Sept., doi:10.1117/12.738102, 12 pp.
- Gillespie, A.R., Batbaatar, J., and Mushkin, A., 2007. Report on the expedition to the Gov'i, July 2007. Darcy Law and Modern Science Annual Scientific Congress, Mongolian University of Science and Technology, Ulaan Baatar, 10 November.
- Mushkin, A., Gillespie, A., R., Bayasgalan, A., 2007. Late Quaternary deformation in the Gobi-Altai Fault System. *Proceedings of the 50th Anniversary Earthquake Conference Commemorating the 1957 Gobi-Altay Earthquake*, July 25-27, Ulaanbaatar, Mongolia.
- Mushkin, A., Danilina, I., Gillespie, A., R., Balick, L., and McCabe, M., 2007. Roughness effects on thermal-infrared emissivities estimated from remotely sensed images. *Proceedings of the SPIE ERS07 Conference*, 6749, Florence, Italy, 17-21 Sept., doi:10.1117/12.738125, 10 pp.
- 2008**
- *Gillespie, A.R., Burke, R.M., Komatsu, G., Bayasgalan, A., 2008. Chronology of late Pleistocene glaciers in Darhad Basin, northern Mongolia. *Quaternary Research* 69, 169-187.
- *Kane, V. R., Gillespie, A. R., McGaughey, R., James Lutz, J., Ceder, K., and Jerry F. Franklin, J. F., 2008. Interpretation and topographic correction of conifer forest canopy self-shadowing using spectral mixture analysis. *Remote Sensing of Environment* 112(10), 3820-3832.
- *Komatsu, G., Arzhannikov, S. G., Gillespie, A. R., Burke, R. M., Miyamoto, H., Baker, V. R., 2008. Cataclysmic floods along the Yenisei River and late Quaternary paleolakes in the Sayan mountains, Siberia. *Geomorphology* 104, 143-164.
- *Koppes, M., Gillespie, A. R., Burke, R. M., Thompson, S., and Stone, J., 2008. Late Quaternary glaciation in the Kyrgyz Tien Shan. *Quaternary Science Reviews* 28, 846-866, doi:10.1016/j.quascirev.2008.01.009.
- *McCabe, M., Balick, L., Theiler, J., Gillespie, A., Mushkin, A., 2008. Linear mixing in thermal infrared temperature retrieval. *International Journal of Remote Sensing*, 29 (17, 18)5047-5061, doi: 10.1080/01431160802036474.
- *Sobrino, J. A., J. C. Jimenez-Munoz, G. Soria, M. Gomez, A. Barella Ortiz, M. Romaguera, M. Zaragoza, Y. Julien, J. Cuenca, M. Atitar, V. Hidalgo, B. Franch, C. Mattar, A. Ruescas, L. Morales, A. Gillespie, L. Balick, Z. Su, F. Nerry, L. Peres and R. Libonati, "Thermal remote sensing in the framework of the SEN2FLEX project: field measurements, airborne data and applications", *International Journal of Remote Sensing*, Vol. 29:17, pp 4961-4991. 2008.
- *Smith, M. R., Gillespie, A. R., and Montgomery, D. R., 2008. The effect of obliteration on crater-count chronologies for Martian surfaces. *Geophysical Research Letters* 35, LXXXXX, doi: 10.1029/2008GL033538.
- Batbaatar, J., Gillespie, A. R., Fedotov, A., and Bayasgalan, A., 2008. The 92-m sediment core from Paleolake Darhad, Mongolia. *Proceedings of the 7th International Symposium on Environmental Changes in East Eurasia and Adjacent Areas-High resolution environmental records of terrestrial sediments, Ulaanbaatar-Hatgal, Mongolia, August 23-29*, pp. 66-7.

Batbaatar, J., Gillespie, A.R., 2008. Glacial chronology on the southern margin of Siberia. The XIV Glaciological Symposium on Glaciology from International Geophysical Year to International Polar Year, Glaciological Association, Institute of Geography RAS and Institute of Geography of Siberian Branch of RAS, Irkutsk, 3-11 September.

2009

- *Adams, J. B., Gillespie, A. R., Jackson, M.P.A., Montgomery, D.R., Dooley, T.P., Combe, J.-P., Schreiber, B.C., 2009. Salt tectonics and collapse tectonics and collapse of Hebes Chasma, Valles Marineris, Mars. *Geology* 37, 691-694, doi:10.1130/G30024A.1
- *Balick, L., Gillespie, A. R., French, A., Danilina, I., Allard, J. P., and Mushkin, A., 2009. Longwave thermal infrared spectral variability in individual rocks. *IEEE Geoscience and Remote Sensing Letters* 6(1), 52-56.
- *Balick, L., Howard, M., Gledhill, H., Klawitter, A., and Gillespie, A., 2009. Variation and sensitivity in spectral thermal IR emissivity measurements. IEEE, Proc. First Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing, Grenoble, France, 26 – 28 August.
- *Crouvi, O., Amit, R., Enzel, Y., Porat, N., Gillespie, A. R., and McDonald, E., 2009. Significance of primary hilltop loess in reconstructing dust chronology, accretion rates and sources: An example from the Negev desert, Israel. *Journal of Geophysical Research*, 114 J. Geophys. Res., 114, F02017, 1-16, doi:10.1029/2008JF001083.
- *Danilina, I., Gillespie, A., Balick, L., Mushkin, A., Smith, M., and O'Neal, M., 2009. Subpixel roughness effects in spectral thermal infrared emissivity images. IEEE, Proc. First Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing, Grenoble, France, 26 – 28 August.
- *Montgomery, D. R., Som, S. M., Jackson, M. P. A., Schreiber, B. C., Gillespie, A. R., and Adams, J. B., 2009. Continental-scale salt tectonics on Mars and the origin of Valles Marineris and associated outflow channels. *Geological Society of America Bulletin* 121(1-2), 117-133, DOI: 10.1130/B26307.1
- *Rupper, S., Roe, G., and Gillespie, A.R., 2009. Spatial patterns of Holocene glacier advance and retreat in Central Asia. *Quaternary Research* 72, 337-346.
- *Sabol, D. E. Jr., Gillespie, A. R., Abbott, E. A., and Yamada, G., 2009. Field Validation of the ASTER Temperature-Emissivity Separation Algorithm. *Remote Sensing of Environment* 113, 2328-2344, doi:10.1016/j.rse.2009.04.025.
- *Smith, M. R., Gillespie, A. R., Montgomery, D. R., and Batbaatar, J., 2009. Crater-fault dating: A new technique for dating fault zones on planetary surfaces. *Earth and Planetary Science Letters* 284, 151-156.
- *Su, Z., Timmermans, W.J., van der Tol, C., Dost, R., Bianchi, R., Gómez, J.A., House, A., Hajnsek, I., Menenti, M., Magliulo, V., Esposito, M., Haarbrink, R., Bosveld, F., Rothe, R., Baltink, H.K., Vekerdy, Z., Sobrino, J.A., Timmermans, J., van Laake, P., Salama, S., van der Kwast, H., Claassen, E., Stolk, A., Jia, L., Moors, E., Hartogensis, O., and Gillespie, A., 2009. EAGLE 2006 – Multi-purpose, multi-angle and multi-sensor in-situ and airborne campaigns over grassland and forest. Special Issue "Advances in Land Surface Hydrological Processes – Field Observations, Modeling and Data Assimilation," *Hydrology and Earth System Sciences (HESS)* 13, 833-845.

2010

- *Crouvi, O., Amit, R., Enzel, Y., and Gillespie, A. R., 2010. Active sand seas and the formation of desert loess. *Quaternary Science Reviews* 29, 2087-2098, doi:10.1016/j.quascirev.2010.04.026. .
- *Danilina, I., Gillespie, A. R., Smith, M., Balick, L., and Abbott, E. A., 2010. Thermal infrared radiosity and heat diffusion model verification and validation. IEEE, Proc. Second Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing, Reykjavik, Iceland, 14-16 June.
- *Mushkin, A., Gillespie, A. R., Montgomery, D., R., Schreiber, B. C., and Arvidson, R. E., 2010. Spectral constraints on the composition of low-albedo slope streaks in the Olympus Mons Aureole, *Geophysics Research Letters* 37, L22201, doi:10.1029/2010GL044535.
- *Mushkin, A., Gillespie, A., Montgomery, D. R., Schreiber, B. C., and Arvidson, R. E., 2010. Spectral constraints on the composition of active slope streaks on Mars. IEEE, Proc. Second Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing, Reykjavik, Iceland, 14-16 June.
- *Wiedmer, M., Montgomery, D. R., Gillespie, A. R., Greenberg, H., 2010. Late Quaternary Megafloods from Glacial Lake Atna, Southcentral Alaska, U.S.A. *Quaternary Research* 73(3), 413-424, doi:10.1016/j.yqres.2010.02.005.
- Abbott, E. A., and Gillespie, A. R., 2010. Thermal Infrared Imaging of Weathering Changes of Mauna Ulu Basalts, Big Island, Hawaii. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p. 50-51.
- Balick, L. K., Danilina, I., Gillespie, A. R., Jolin, J., and Mushkin, A., 2010. Small-Scale Roughness Effects on thermal IR spectra. *International Society for Photogrammetry and Remote Sensing*, Technical Commission VII Symposium, Vienna, July 5-7, p. 56-61.
- Danilina, I., Gillespie, A. R., Balick, L. K., Mushkin, A., Smith, M. R., and Blumberg, D., 2010. Compensation for sub-pixel roughness effects in thermal-infrared images. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p. 64.
- Gillespie, A. R. and Clark, D. H., 2010. Quaternary glaciation of the Sierra Nevada. In Ehlers, J., and Gibbard, P. L., (eds.), *Quaternary Glaciations and Chronology*. Part II: North America, Developments in Quaternary Science Vol 2b, Amsterdam, Elsevier.

- Gillespie, A., Abbott, E., Gilson, L., Hulley, G., Jiménez-Muñoz, J.-C., and Sobrino, J. A., 2010. Incomplete separation between temperature and emissivity in ASTER standard products AST08 and AST05. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p 34-35.
- Jiménez-Muñoz, J.-C., Sobrino, J. A., and Gillespie, A. R., 2010. Noise in emissivity images obtained from Temperature and Emissivity Separation (TES) algorithm: A case study of airborne imagery and implications for ASTER. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p 57.
- Smith, M. R., Gillespie, A. R., and Montgomery, D. R., 2010. Effect of obliteration on crater-count chronologies for Martian surfaces ERRATUM. *Geophysical Research Letters* doi:10.1029/2010GL042399, in press.
- Smith, M. R., Bandfield, J. L., and Gillespie, A. R., 2010. Aqueous Alteration of Granitoid-bearing Terrains in Northwest Syrtis Major, Mars: Evidence for Alteration Gradients in a Hydrothermal Environment. *41st Lunar and Planetary Science Conference (2010), Abstract #2194*
- Smith, M. R., Gillespie, A. R., and Balick, L. K., 2010. Testing In-Scene Atmospheric Corrections of Hyperspectral Thermal Data from Nadir- and Oblique-Looking Geometries. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p 75-76.
- 2011**
- *Amit, R., Enzel Y., Crouvi, O., Simhai, O., Matmon, A. Porat, N., McDonald, E., Gillespie, A. R., 2011. The role of the Nile in initiating a massive dust influx to the Negev late in the middle Pleistocene. *Bulletin of the Geological Society of America* 123, 873-889.
- *Carvalho Júnior, O., A., Fontes Guimarães, R., Gillespie, A. R., Correia da Silva, N., Trancoso Gomes, R. A., 2011. A New Approach to Change Vector Analysis Using Distance and Similarity Measures. *Remote Sensing* 3 (11), 2473–2493; doi:10.3390/rs3112473..
- *Gillespie, A. R., 2011. Glacial geomorphology and landforms evolution. In Haritashya, U. K., Singh, V., and Singh, P., eds., *Encyclopedia of Snow, Ice and Glaciers*, Springer, New York, 341–357.
- *Gillespie, A. R., Abbott, E. A., Gilson, L., Hulley, G., Jiménez-Muñoz, J.-C., and Sobrino, J. A., 2011. Residual errors in ASTER temperature and emissivity standard products AST08 and AST05. *Remote Sensing of Environment* [115 \(12\)](#), 3681–3694, DOI: 10.1016/j.rse.2011.09.007.
- *Jackson, M.P.A., Adams, J. B., Dooley, T.B., Gillespie, A. R., Montgomery, D.R., 2011. Modeling the Collapse of Hebes Chasma, Valles Marineris, Mars. *Bulletin of the Geological Society of America* 123, no. 7–8 1596–1627, doi: 10.1130/B30307.
- *Mushkin, A., and Gillespie, A., 2011. Using ASTER stereo images to quantify surface roughness. In Ramachandran, B., Justice, C., Abrams, M., eds., *Land Remote Sensing and Global Environmental Change: NASA's Earth Observing System and the Science of ASTER and MODIS*. Remote Sensing and Digital Image Processing Series, 1st Edition, v. 11, Springer-Verlag, 873 pp.
- Gillespie, A. R., 2011. Quaternary glaciation in northern Central Asia (Invited). Proceedings, University of Tomsk.
- Wiedmer, M., Montgomery, D. R., Gillespie, A. R., Greenberg, H., 2011. Reply to the comments of Reger, Lowell, and Evenson on "Late Quaternary megafloods from Glacial Lake Atna, Southcentral Alaska, U.S.A. *Quaternary Research* 75, 303-304.
- 2012**
- *Crouvi, O., Schepanski, K., Amit, R., Gillespie, A., Enzel, Y., 2012. Multiple dust sources in the Sahara Desert: the importance of sand dunes. *Geophysical Research Letters* 39 (13), L13401—<http://dx.doi.org/10.1029/2012GL052145>
- *Gillespie, A. R., 2012. Quaternary glaciation in northern Central Asia. *Tomsk State University Journal of Biology* 2 (18), 194–209.
- *Handcock, R.N., Torgersen, C.E., Cherkauer, K.A., Gillespie, A.R., Tockner, K., Faux, R. N., Tan, J., 2012. Thermal Infrared Remote Sensing of Water Temperature in Riverine Landscapes. In *Fluvial Remote Sensing for Science and Management* (Eds. P. E. Carbonneau and H. Piégay). John Wiley & Sons, Chichester, UK. doi: 10.1002/9781119940791.ch5.
- *Jiménez-Muñoz, J.-C., Sobrino, J. A., and Gillespie, A. R., 2012. Surface Emissivity Retrieval from Airborne Hyperspectral Scanner Data: Insights on Atmospheric Correction and Noise Removal. *IEEE Geoscience and Remote Sensing Letters* 9(2), 180–184.
- 2013**
- *Abbott, E. A., Gillespie, A. R., and Kahle, A. B., 2013. Thermal-infrared imaging of weathering and alteration changes on the surfaces of basalt flows, Hawai'i, USA. Special Issue: Third International Symposium on Recent Advances in Quantitative Remote Sensing, *International Journal of Remote Sensing* 34(9-10), 3332–3355, DOI: 10.1080/01431161.2012.716920.
- *Amit, R., Enzel, Y., Mushkin, A., Gillespie, A., Jigjidsuren, B., Crouvi, O., Vandenberghe, J., An, Z.S., 2013: Linking coarse silt production in Asian sand deserts and the accretion of the Chinese Loess Plateau. *Geology*, Dec. 5, DOI: 10.1130/G34857.1.

- *Carvalho, O. A., Jr., Guimarães, R. F., Silva, N. C., Gillespie, A. R., Gomes, R. A.T, Silva, C. R., Carvalho, A. P., 2013. Radiometric Normalization of Temporal Images Combining Automatic Detection of Pseudo-Invariant Features from the Distance and Similarity Spectral Measures, Density Scatter plot Analysis and Robust Regression. *Remote Sensing* 5 (6), 2763–2794. doi:10.3390/rs5062763
- *Danilina, I., Gillespie, A. R., Balick, L. K., Mushkin, A., Smith, M. R., and Blumberg, D., 2013. Compensation for sub-pixel roughness effects in thermal-infrared images. Special Issue: Third International Symposium on Recent Advances in Quantitative Remote Sensing, *International Journal of Remote Sensing* 34(9-10), 3425–3436, DOI: 10.1080/01431161.2012.716919.
- *Som, S., Hagadorn, J., Thelen, W., Gillespie, A., David Catling, D., Buick, R., 2013. Quantitative discrimination between geological materials with low density contrast by high resolution X-ray computer tomography: an example using amygdule size-distribution in ancient lava flows. *Computers and Geosciences* 54, 231–238.
- *Smith, M. R., Gillespie, A. R., Mizzon, H., Balick, L. K., Jiménez-Muñoz, J.-C., and Sobrino, J. A., 2013. In-scene atmospheric correction of hyperspectral thermal infrared image with nadir, horizontal, and oblique view angles. Special Issue: Third International Symposium on Recent Advances in Quantitative Remote Sensing, *International Journal of Remote Sensing* 34(9-10), 3164–3176, DOI: 10.1080/01431161.2012.716547.

2014

- *Carvalho Júnior, O., A., Guimarães, R., Montgomery, D., Gillespie, A. R., Gomes, R. A., Martins, E., Silva, N., 2014. Karst Depression Detection Using ASTER, ALOS Prism and SRTM-derived Digital Elevation Models in the Bambuí Group, Brazil. *Remote Sensing in Geomorphology. Remote Sens.* 2014, 6(1), 330-351; doi:[10.3390/rs6010330](https://doi.org/10.3390/rs6010330)
- *Bishop, M. P., Bush, A. B. G., Furfaro, R., Gillespie, A. R., Hall, D. K., Haratashya, U. K., Shroder, J. F. Jr., 2014. Theoretical foundations of remote sensing for glacier assessment and mapping. In Kargel J., Bishop, M., Kaebaeb, A. Raup (eds.), *Global Land Ice Measurements From Space*, Praxis-Springer, Chichester, in press.
- *Gillespie, A. R., 2014. Overview of the Quaternary Period in Washington State (invited). In Cheney, E. S., and Sherrod, B. L., eds., *Rocks, Fire and Ice*, University of Washington Press, pp xxx-xxx, *in press*.
- *Gillespie, A. R., 2014. The geologic setting of Washington State (invited). In Cheney, E. S., and Sherrod, B. L., eds., *Rocks, Fire and Ice*, University of Washington Press, pp xxx-xxx, *in press*.
- *Gillespie, A. R., 2014. Land Surface Temperature (invited). In Njuko, E. G., ed., *Encyclopedia of Remote Sensing*, Springer, New York, ISBN 978-0-387-36698-27.
- *Gillespie, A. R., 2014. Land Surface Emissivity (invited). In Njuko, E. G., ed., *Encyclopedia of Remote Sensing*, Springer, New York, ISBN 978-0-387-36698-2.

In Preparation

- Carvalho Júnior, O., A., Correia da Silva, N., Fontes Guimarães, R., Gillespie, A. R., Trancoso Gomes, R. A.: Transform methods in change detection. *International Journal of Remote Sensing*.
- Gillespie, A. R., and Batbaatar, J., 2014. Pleistocene megafloods down the Maliiy Yenesei river, Siberia (INVITED).
- Gillespie, A. R., Abbott, E. A., and Hulley, G.: Validation of ASTER emissivities for land surfaces, *Remote Sensing of Environment*.
- Gillespie, A. R., and Thackray, G.: Glaciations of the Pacific Coast of North America., *Quaternary Science Reviews*.
- Gillespie, A. R., Abbott, E. A., and kahle, A. B.: Thermal infrared emissivity of cooling pahoehoe, Pu'u O'o, Hawai'i (USA). *Journal of Geophysical Research*.
- Mushkin, A., Gillespie, A.R., Feathers, J. K. and Bayasgalan, A.: Late Pleistocene lateral slip rates along the Gobi-Altay fault system and their implication on the kinematics of Central Asia.
- Koppes, M., and Gillespie, A. R., et al. Glacial chronology of northern Central Asia, *Journal of Quaternary Science*.

Abstracts

1972

- Gillespie, A. R., 1972. Computer-assisted identification of white clouds on Mars. *Proceedings of the American Astronomical Society, Division of Planetary Science*, Kailua, Hawaii, March.

1976

- Gillespie, A. R., and Goetz, A. F. H., 1976. Digital filtering of space images: Possibilities and pitfalls. *Proceedings of the 2nd International Conference on The New Basement Tectonics*, University of Delaware, Newark, DE, July 19.
- Kahle, A. B., Gillespie, A. R., and Morrill, M. E., 1976. Topographic effects in surface thermal inertia. *EOS* 57, 273.

1977

- Soha, J. M., Gillespie, A. R., and Abrams, M. J., 1977. Multispectral transformations of remote sensing data with applications to geology. *Proceedings of the 30th Annual Conference of the Society of Photogrammetric Scientists and Engineers*, N. Hollywood, CA, May 1-6.

1981

Clark, M. M., and Gillespie, A. R., 1981. Record of the late Quaternary faulting along the Hilton Creek Fault in the Sierra Nevada, California. *Earthquake Notes, Seismological Society of America* 52, 46.

1982

Gillespie, A. R., 1982. Geologic utility of improved orbital measurements. *Workshop on the Use of Future Multispectral Imaging Capabilities for Lithologic Mapping*, Jet Propulsion Laboratory Publication 82-93 (M. Settle, ed.), Pasadena, CA, Apr. 20-21.

Gillespie, A. R., Huneke, J. C., and Wasserburg, G. J., 1982. Dating Pleistocene basalts by ^{40}Ar - ^{39}Ar analysis of granitic xenoliths. American Geophysical Union, Spring Meeting., Philadelphia, PA, June 1-4, *EOS* 65.

Sieh, K. E., Allen, C. R., Gillespie, A. R., Han, Y., Zhu, C., and Zhang, B., 1982. Quaternary activity of the Red River Fault, Yunnan Province, China. American Geophysical Union, Spring Meeting, Philadelphia, PA, June 1-4, *EOS* 65.

1984

Albee, A. L., Abrams, M. J., Gillespie, A. R., and Kahle, A. B., 1984. Discrimination of lithologic units in the Panamint Mountains using spectral and multichannel image data. *Geological Society of America, Abstracts with Program* 16(6), 427.

Farr, T. G., and Gillespie, A. R., 1984. Measurement of microrelief on alluvial fans and its relation to age, lithology and radar response. *Geological Society of America, Abstracts with Program* 16(6), 506.

Gillespie, A. R., 1984. Assessment of image data for the relative dating of alluvial fans broken by faults. *Earthquake Notes, Seismological Society of America* 55(1), 7.

Gillespie, A. R., 1984. Evidence for both Wisconsin and Illinoian ages for the Tahoe glaciation, Sierra Nevada, California. *Geological Society of America, Abstracts with Program* 16(6), 519.

Gillespie, A. R., and Criss, R. E., 1984. Correlation of infrared reflectance and $\delta^{18}\text{O}$ profiles across a fossil hydrothermal system in the Idaho batholith. American Geophysical Union, Spring Meeting, Cincinnati, OH, May, *EOS* 66.

Kahle, A. B., Gillespie, A. R., Abrams, M. J., Bartholomew, M. J., Nash, D. B., Palluconi, F. D., Paylor, E. D., and Shumate, M. S., 1984. Discrimination of age and compositional units of alluvial fans in Death Valley, California. *Geological Society of America, Abstracts with Program* 16(6), 553.

Lang, H. R., Gillespie, A. R., Abbott, E. A., and Conel, J. E., 1984. Geologic applications of the Thermal Infrared Multispectral Scanner. *Proceedings of the International Symposium on Remote Sensing for Exploration Geology*, Colorado Springs, CO, April 16-19.

Martel, S. J., Harrison, T. M., and Gillespie, A. R., 1984. Late Quaternary displacement rate on the Owens Valley Fault Zone at Fish Springs cinder cone, California. American Geophysical Union, Spring Meeting, Cincinnati, OH, May, *EOS*.

Pieri, D. C., Gillespie, A. R., Kahle, A. B., and Baloga, S. M., 1984. Thermal infrared observations of lava flows during the 1984 Mauna Loa eruption. *Geological Society of America, Abstracts with Program* 16(6), 623.

1985

Preisig, J., Wu, F., and Gillespie, A. R., 1985. Tectonic interpretation of the Altyn Tagh Fault, China. American Geophysical Union, Spring Meeting, Cincinnati, OH, May, *EOS* 66.

1986

Adams, J. B., Smith, M. O., Ustin, S. L., and Gillespie, A. R., 1986. Vegetation cover as an indicator of age of soils on alluvial fans, Owens Valley, California. *Geological Society of America, Abstracts with Program* 18(6), 522.

Burke, R. M., Lundstrom, S., Harden, J., Gillespie, A. R., and Berry, M., 1986. Soil chronosequence on eastern Sierra Nevada fans, CA, supports remote sensing studies. *Geological Society of America, Abstracts with Program* 18(6), 553.

Crook, R. Jr., and Gillespie, A. R., 1986. Relative dating of alluvial fans in Owens Valley, California, by the clast-sound method. *Geological Society of America, Abstracts with Program* 18(6), 576.

Gillespie, A. R., Abbott, E. A., and Hoover, G. L., 1986. Spectral basis for relative dating of granitic alluvial fans, Owens Valley, California. *Geological Society of America, Abstracts with Program* 18(6), 614.

Gillespie, A. R., Kahle, A. B., and Abrams, M. J., 1986. Relative dating of basalts by remotely sensed changes in thermal emittance, Kilauea, Hawaii. *EOS* 67(44), 1074.

Kahle, A. B., Abrams, M. J., Gillespie, A. R., and Abbott, E. A., 1986. A new quantitative approach to relative dating of basalts. *Geological Society of America, Abstracts with Program* 18(6), 650.

Turrin, B., and Gillespie, A. R., 1986. K/Ar ages of basaltic volcanism of the Big Pine volcanic field, California: Implications for glacial stratigraphy and neotectonics of the Sierra Nevada. *Geological Society of America, Abstracts with Program* 18(6), 777.

1987

Gillespie, A. R., 1987. ^{40}Ar - ^{39}Ar "exposure" ages of geomorphic surfaces: The effect of rangefires. *EOS* 68(44), 1286-1287.

1988

Gillespie, A. R., 1988. Quaternary Subsidence of Owens Valley. *Geological Society of America, Cordilleran Section, Abstracts with Program*: 20(3), 163.

1989

Adams, J. B., Barron, E., Bloom, A., Breed, C., Dohrenwend, J., Evans, D., Farr, T. G., Gillespie, A. R., Isacks, B., and Williams, R. S., 1989. COOLFONT panel report - The land surface: Processes of change. *EOS* 70(43), p 1061.

- Bierman, P. R., and Gillespie, A. R., 1989. Rock varnish, alluvial fans and tectonism in the southern Owens Valley, California. *Geological Society of America, Abstracts with Program* 21(6), A343.
- Chadwick, O. A., Sowers, J. L., and Gillespie, A. R., 1989. Empirically driven remote sensing interpretation of soil-geomorphic surface distribution at Kyle Canyon, Nevada (Abstr.). Proceedings of the Soil Society of America Annual Meeting, Las Vegas, NV, p 250.
- Kahle, A., Abbott, E., Abrams, M., Realmuto, V., and Gillespie, A., 1989. Weathering processes detectable by thermal infrared remote sensing of Hawaiian volcanoes (Abstract). International Geological Congress Symposium D-12 (Arvidson, Remote Sensing).

1990

- Bierman, P. R., and Gillespie, A. R., 1990. Varnish cation ratio dates: How precise can they be? *Geological Society of America, Cordilleran Section, Abstracts with Program* 22(3), A8.
- Bierman, P. R., and Gillespie, A. R., 1990. Range Fire: A dramatic and significant factor in the dating and evolution of geomorphic surfaces. *Geological Society of America, Abstracts with Program* 22(7), A109.
- Bierman, P. R., and Gillespie, A. R., 1990. An Independent evaluation of the potential precision and accuracy of rock-varnish cation ratio dates. *Geological Society of America, Abstracts with Program* 22(7), A270.
- Evenson, E. B., Gillespie, A. R., and Stephens, G. C., 1990. Extensive boulder spalling resulting from a range fire at the Pinedale type locality, Fremont Lake, Wyoming. *Geological Society of America, Abstracts with Program* 22(7), A110.

1991

- Bierman, P. R., and Gillespie, A. R., 1991. Lowering rates of granitic landforms determined by measurement of *in situ* produced cosmogenic nuclides. *EOS Supplement* 72(44), 575.
- Bierman, P. R., and Gillespie, A. R., 1991. The evolution of granitic landforms -- Field observations and cosmogenic insights. *Geological Society of America, Abstracts with Program* 23(5), 89.
- Bursik, M. I., and Gillespie, A. R., 1991. Relative ages of late Pleistocene moraines in Mono Basin. *Geological Society of America, Abstracts with Program* 23(5), 224.
- Clark, D. H., Clark, M. M., and Gillespie, A. R., 1991. A late Pleistocene ice field in the Mokelumne drainage, north-central Sierra Nevada. *Geological Society of America, Cordilleran Section, Abstracts with Program* 23(2), 13.
- Gillespie, A. R., and Bierman, P. R., 1991. Theoretical precision estimates for exposure-age and erosion-rate data from analysis of cosmogenic isotopes. *Geological Society of America, Abstracts with Program* 23(5), 408.
- Gillespie, A. R., 1991. Inception of the latest glaciation in the Sierra Nevada, California, and the time of the glacial maximum. *International Union for Quaternary Research (INQUA), XII International Congress*, Beijing, China, p 111.
- Pendall, E., Harden, J., Slate, J., Gillespie, A. R., and Trumbore, S., 1991. Pedogenic stable isotopes as indicators of climate in Fish Lake Valley, Nevada. *American Geophysical Union, Chapman Conference*.
- Sabol, D.E., Adams, J.B., Smith, M.O., and Gillespie, A.R., 1991. Target detection thresholds using imaging spectrometer data. *Proceedings of the Airborne Science Workshop: AVIRIS*, Jet Propulsion Laboratory, Pasadena, CA. 4-5 June, 99-104.

1992

- Clark, D. H., Gillespie, A. R., and Clark, M. M., 1992. Effects of debris cover on ELA estimates of cirque glaciers, Sierra Nevada, California. *Geological Society of America, Cordilleran Section, Abstracts with Program* 24(5), 15.
- Clark, D. H., Clark, M. M., and Gillespie, A. R., 1992. Little Ice Age rock glaciers and moraines of the Sierra Nevada: Thinly covered glacial ice. *Geological Society of America, Cordilleran Section, Abstracts with Program* 24(5), 15.
- Gillespie, A. R., 1992. Spectral mixture analysis of thermal infrared images: An investigative strategy for EOS. *World Space Congress Book of Abstracts*, American Institute of Aeronautics & Astronautics, Washington DC, 317-318.

1993

- Adams, J. B., Sabol, D. E., Kapos, V., Filho, R. A., Roberts, D. A., Smith, M. O., and Gillespie, A. R., 1993. Satellite remote-sensing of spectral changes to infer surface processes in the Brazilian Amazon. *EOS Supplement* 74(43) 69-70.
- Adams, J.B., Sabol, D.E., Kapos, V., Filho, R.A., Roberts, D.A., Smith, M.O., and Gillespie, A.R., 1993. Satellite remote-sensing of spectral changes to infer surface processes in the Brazilian Amazon. *Remote Sensing of Environment*, 1p.
- Bierman, P. R., Gillespie, A. R., and Caffee, M., 1993. Cosmogenic isotope exposure age estimates for Lone Pine Creek debris-flow fan boulders, southeastern Sierra Nevada. *Geological Society of America, Abstracts with Program* 25(6), A461.
- Bierman, P. R., Massey, C. A., Gillespie, A. R., Elmore, D., and Caffee, M., 1993. Erosion rate and exposure age of granitic landforms estimated with cosmogenic ^{36}Cl . *Geological Society of America, Abstracts with Program* 25(6), A141.
- Clark, D. H., Gillespie, A. R., and Clark, M. M., 1993. Effects of local topography on ELA trends of cirque glaciers. *Geological Society of America, Abstracts with Program* 25(6), 156.
- Clark, M. M., and Gillespie, A. R., 1993. Variations in late Quaternary behavior along and among range-front faults of the Sierra Nevada, California. *Geological Society of America, Cordilleran - Rocky Mountain Sections, Abstracts with Program* 25(5), 21.

- Fischer, A. F., III, Gillespie, A. R., and Burke, R. M., 1993. Geomorphic surfaces, pedogenesis, and soil spectral evolution: Implications for spectral discrimination and regional mapping of contemporaneous surfaces and soil chronosequences in semi-arid environments. *Pecora Conference*, Sioux Falls, SD, August.
- Gillespie, A. R., and Molnar, P. 1993. Asynchronism of mountain and continental glaciations. *Geological Society of America, Abstracts with Program* 25(6), 157.
- Gillespie, A. R., Burke, R. M., Clark, D. H., Mu, G., Wang, S., and Yan, S., 1993. Soil development on late Pleistocene glacial deposits in the Tien Shan, Western China. *Geological Society of America, Abstracts with Program* 25(6), 394.
- Gillespie, A. R., Clark, D. H., and Burke, R. M., 1993. New interpretation of glacial sequences, Tian Shan, western China: Implications for late Pleistocene snowline depression. *Geological Society of America, Cordilleran - Rocky Mountain Sections, Abstracts with Program* 25(5), 42.
- 1994**
- Clark, D. H., and Gillespie, A. R., 1994. Late glacial and Holocene fluctuations in the Sierra Nevada, California. *Programme and Abstracts, IGCP 253 Termination of the Pleistocene, Fluctuations of Local Glaciers Workshop*, Aberdeen, Scotland, May 22.
- Clark, M. M., and Gillespie, A. R., 1994. A new interpretation for late-glacial and Holocene glaciation in the Sierra Nevada, California, and its implications for regional paleoclimate reconstructions. *Geological Society of America, Abstracts with Program* 26(7), 447.
- Gillespie, A. R., Burke, R. M., and Harden, J., 1994. Timing and regional paleoclimate significance of alluvial fan deposition, western Great Basin. *Geological Society of America, Abstracts with Program* 26(7), 150.
- 1995**
- Bierman, P. R., Gillespie, A. R., and Caffee, M., 1995. First ^{10}Be , ^{26}Al and ^{36}Cl age estimates for earthquake recurrence intervals and debris-flow fan deposition, Owens Valley, California. *Geological Society of America, Abstracts with Program* 27(6), A376.
- Clark, D. H., Bierman, P. R., and Gillespie, A. R., 1995. New cosmogenic ^{10}Be and ^{26}Al measurements of glaciated surfaces, Sierra Nevada, California - they're precise but are they accurate? *Geological Society of America, Abstracts with Program* 27(6), 170.
- Gillespie, A. R., Li, W.-H., Gu, D.-G., Adams, J. B., and Kahle, A. B., 1995. Measuring change in forests with EOS/ASTER. *EOS Transactions, American Geophysical Union*, 76(46), 132.
- Smith, M. O., Gillespie, A. R., Adams, J. B., Tucker, C. J., Sabol, D., Zukin, J., and Roberts, D. A., 1995. Logging history of Bluff Creek, northern California, from mixture analysis of a 22-year series of Landsat MSS images. *Proceedings of the 10th Thematic Conference and Workshops on Applied Geologic Remote Sensing, The Environmental Research Institute of Michigan (ERIM)*, Seattle, WA, Oct.
- Weeks, R. J., Smith, M. O., and Gillespie, A. R., 1995. The Use of Adaptive Filters in Estimation of Surface Roughness from SAR data. *EOS Transactions, American Geophysical Union*, 76(17), 196.
- Zukin, J., Adams, J. B., Smith, M. O., Sabol, D., Gillespie, A. R., and Tucker, C. J., 1995. Forest Resource Management Using Spectral Mixture Analysis of Satellite Images. *Proceedings of the 10th Thematic Conference and Workshops on Applied Geologic Remote Sensing, The Environmental Research Institute of Michigan (ERIM)*, Seattle, WA, Oct.
- Zukin, J.H., Adams, J.B., Smith, M.O., Sabol, D.E., Gillespie, A.R., and Tucker, C.J., 1995. Spectral changes accompanying developmental stages in Pacific Northwest Forests. *Third Thematic Conference Remote Sensing for Marine and Coastal Environments, September 18-20*.
- 1996**
- Clark, D. H., Gillespie, A. R., and Clark, M. M., 1996. Origins of rock glaciers in the Sierra Nevada, California, and implications for paleoclimatic studies. Chapman Conference, Aug.
- Clark, D. H., Heine, J. T., and Gillespie, A. R., 1996. Glacial and climatic complexities in the American Cordillera during the Younger Dryas period. *Geological Society of America, Abstracts with Program* 28(7), 233.
- Gillespie, A. R., and Clark, D. H., 1996. New exposure ages support asynchronism between alpine glaciation and sea-level fluctuations, Sierra Nevada, California. *Geological Society of America, Abstracts with Program* 28(7), 233.
- Gillespie, A.; T. Matsunaga; S. Rokugawa; and S. Hook, 1996. *Temperature and emissivity separation from Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) images*, presented at Infrared Spaceborne Remote Sensing IV, Denver, CO.
- Li, W.-H., Weeks, R. J., and Gillespie, A. R., 1996. Multiple scattering in the remote sensing of natural surfaces. *Proceedings of the 11th Thematic Conference and Workshops on Applied Geologic Remote Sensing, The Environmental Research Institute of Michigan (ERIM), Las Vegas, NV, 27-29 Feb.*
- Smith, M. O., Gillespie, A. R., and Adams, J. B., 1996. Spectral Background: Impact on endmember detection and abundance estimates (INVITED). *Proceedings of the Conference on Progress in Electromagnetic Research Symposium 1996*, Innsbruck, Austria, 8-12 July.
- Smith, M. O., Weeks, R., and Gillespie, A. R., 1996. Using background factors to optimize estimates of surface moisture and roughness from multipolarized SAR images. *Proceedings of the 2nd International Airborne Remote Sensing Conference and Exhibition*, San Francisco, 24-27 June.

1997

- Gillespie, A. R., 1997. Hyperspectral TIR Remote Sensing of Fans and Bedrock near Yuma, Arizona, USA. *Proceedings of the IEEE International Geosciences Applied Remote Sensing Symposium IGARSS97*, Singapore, 3-8 August.
- Gillespie, A. R., 1997. Joint Analysis of Radar and VNIR/SWIR Images for Mapping Alluvial Fans. *Proceedings of the IEEE International Geosciences Applied Remote Sensing Symposium IGARSS97*, Singapore, 3-8 August.
- Gillespie, A. R., 1997. Temperature and Emissivity Separation from Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) Images. *Proceedings of the Institute of Electrical and Electronics Engineers (IEEE) International Geosciences Applied Remote Sensing Symposium IGARSS97*, Singapore, 3-8 Aug.
- Gillespie, A. R., Kahle, A. B., and Morrison, A., 1997. ASTER contributions to Earth Systems Science (INVITED). *Proceedings of the Annual Meeting of the American Society of Photogrammetry and Remote Sensing*, Land Satellite Information in the Next Decade II: Sources and Applications, Bethesda, MD, 3 Dec.
- Kahle, A. B., Abbott, E., and Gillespie, A. R., 1997. Future TIR systems (INVITED). *Proceedings of the Annual Meeting of the American Society of Photogrammetry and Remote Sensing*, Land Satellite Information in the Next Decade II: Sources and Applications, Bethesda, MD, 3 Dec.

1998

- Gillespie, A. R., Cothorn, J. S., Alley, R. and Kahle, A., 1998. In-scene atmospheric characterization and compensation in hyperspectral thermal infrared images. In V. Realmuto, ed., 7th Jet Propulsion Laboratory Airborne Earth Science Workshop, Pasadena, CA., 21 – 24.
- Gu, D., Gillespie, A. R., and Adams, J. B., 1998. A multi-scale textural classification algorithm for interpretation of satellite images. *EOS Transactions*, American Geophysical Union, San Francisco.
- Kahle, A. B., Yamaguchi, Y., and Gillespie, A. R., 1998. *ASTER data products and science applications*. International Geoscience and Remote Sensing Symposium (IGARSS) '98, Seattle, WA.
- Zehfuss, P. H., R. Burke, et al., 1998. A comparison of relative and numerical dating techniques applied to tectonically offset fan surfaces, Owens Valley, CA. *Geological Society of America, Abstracts with Program* 30(7), A141.

1999

- Gu, D., Gillespie, A. R., Kahle, A. B., and Palluconi, F. D., 1999. Autonomous Land/Atmosphere Parameter Inversion From Remotely Sensed High-Resolution Hyperspectral Thermal Infrared Data. *EOS Transactions, American Geophysical Union*, Baltimore.

2000

- Buck, P., Sabol, D., Yamada, G., and Gillespie, A., 2000. The thermal detectability of obsidian and ceramic artifacts (poster). *Annual Meeting of the Strategic Environmental Research and Development Program (SERDP)*, Army Research Office.
- Gillespie, A. R., and Burke, R. M., 2000. Pre-LGM alpine glaciation in Central Asia. *Geological Society of America, Abstracts with Program* 32(7), 511.
- Gillespie, A. R., Bierman, P. R., 2000. Fan-moraine synchronism, Sierra Nevada, California (Abstract 52295). *Geological Society of America, Abstracts with Program* 32(7), A-472.
- Gillespie, A., Kahle, A., Abbott, E., Sabol, D., 2000. MODIS-ASTER (MASTER) Airborne simulator characterization of thermal emissivity spectra at terra validation sites on Hawaii. *Proceedings of the 14th Thematic Conference and Workshops on Applied Geologic Remote Sensing, The Environmental Research Institute of Michigan (ERIM)*, Las Vegas, NV., Nov.
- Gillespie, A.R., and Bierman, P.R., 2000. Fan-moraine synchrony, Sierra Nevada, California. *Geological Society of America, Abstracts with Program* 32(7), 472.
- McFadden, L. D., Eppes, M. C., Wells, S. G., and Gillespie, A. R., 2000. Farouk El-Baz Award: The evolution of desert pavement surfaces and studies of the origin of desert pavement and soils (Abstract 52449). *Geological Society of America, Abstracts with Program* 32(7), A-222.
- Pieri, D., Abbott, E. A., Abrams, M., Kahle, A., Gillespie, A. R., 2000. Thermal monitoring of the Mauna Loa summit crater from orbit: First views from ASTER (Poster). *Conference on Global Disaster Information Network*, Honolulu Hawaii Oct 11, 2000.

2001

- Cherkauer, K. A., Naveh, N., Burges, S. J., Kay, J. E., Handcock, R. N., Gillespie, A. R., and Booth, D. B., 2001. Regional Stream Temperature Estimation Using Thermal Infrared Remote Sensing Images From Terra - ASTER And Ground Measurements. *Eos Transactions American Geophysical Union*, 82(47), Fall Meeting Supplement, Abstract H21B-0295.
- Clark, D.H., Gillespie, A.R., Bierman, P.R., and Caffee, M.W., 2001. Glacial asynchrony in the Kunlun Shan, northwestern Tibet. *Geological Society of America, Abstracts with Program* 33 (6), 441.
- Gillespie, A. R., 2001. Glacial history in Darhad basin (INVITED). In Tomurhuu, D., and Takahara, H. (eds.), *Abstracts of 2001 International Workshop for the Baikal and Hovsgol Drilling Project in Ulaanbaatar*, Ulaanbaatar, Mongolia, Oct. 4-7, p. 16-17.
- Gillespie, A. R., Burke, R. M., and Bayasgalan, A., 2001. Neoglaciation in Central Asia. *Geological Society of America, Abstracts with Program* 33 (6), 442.

- Gillespie, A. R., Sabol, D.E., Gustafson, W., Abbott, E., and Kahle, A., 2001. Validation of ASTER Temperature/emissivity standard product. *Conference Proceedings for the International Geological and Remote Sensing Symposium (IGARSS)*, Sydney Australia, July 9-13.
- Handcock, R. N., Kay, J. E., Gillespie, A. R., Naveh, N., Cherkauer, K. A., Burges, S. J., Booth, D. B., 2001. Stream temperature estimation from thermal infrared images (abstract). *Eos Transactions American Geophysical Union* 82(47), Fall Meeting Supplement, Abstract H12B-0296.
- Kahle, A. B., Abbott, E., Abrams, M., Gillespie, A. R., Hook, S., Kieffer, H., Palluconi, F., Rowan, L., Schmugge, T., and Thome, K., 2001. ASTER validation and early science results. IWG Meeting, Fort Lauderdale, Florida.
- Kahle, A. B., and Gillespie, A. R., 2001. Applications of ASTER (INVITED). In Tomurhuu, D., and Takahara, H. (eds.), *Abstracts of 2001 International Workshop for the Baikal and Hovsgol Drilling Project in Ulaanbaatar*, Ulaanbaatar, Mongolia, Oct. 4-7.
- Kay, J., Handcock R., Gillespie, A., Naveh N., Konrad C., Burges S. and Booth D. 2001. Stream-temperature estimation from thermal infrared images. *Conference Proceedings for the International Geological and Remote Sensing Symposium (IGARSS)*, Sydney Australia, July 9-13.

2002

- Abtahi, A. A., Kahle, A. B., Abbott, E.A., Gillespie, A.R., Sabol, D. Yamada, G., Pieri, D., 2002. Emissivity changes in basalt cooling after eruption from Pu'u O'o, Kilauea, Hawaii. *Eos Transactions American Geophysical Union* 83(47), Fall Meeting Supplement, Abstract V71A-1263.
- Cherkauer, K. A., Burges, S. J., Handcock, R. N., Kay, J. E., and Gillespie, A. R., 2002. Remote Sensing of Water Temperatures in Four Pacific Northwest Rivers. *Scaling Workshop*, Tempe, AZ, October 17-19.
- Cherkauer, K. A., Handcock, R. N., Kay, J. E., Burges, S. J., Booth, D. and Gillespie, A. R., 2002. Understanding the regional controls on stream temperature. *Eos Transactions, American Geophysical Union*, 83(47), Fall Meeting Supplement, Abstract H61B-0763.
- Gillespie, A.R., Kahle, A., Sabol, D.E., Gustafson, W., and Abbott, E., 2002. Performance of the ASTER Temperature/Emissivity Separation Algorithm. *Conference Proceedings for the International Geoscience and Remote Sensing Symposium (IGARSS)*, Toronto, Canada, July 24-28.
- Gustafson, W. T., and Gillespie, A. R., 2002. Onboard processing of orbital hyperspectral thermal infrared images. *Institute of Electrical and Electronics Engineers (IEEE) Aerospace Conference Proceedings* 5, 5-2061, 5-2070, 9-16 March.
- Handcock, R. N., Cherkauer, K. A., Kay, J. E., Gillespie, A. R., Burges, S. J., and Booth, D. 2002. Spatial variability in radiant stream temperatures estimated from thermal infrared images. *Eos Transactions, American Geophysical Union*, 83(47), Fall Meeting Supplement, Abstract H72E-0896.
- Handcock, R. N., Kay, J. E. Cherkauer, K. A., Naveh, N. Gillespie, A. R., Burges, S. J., and Booth, D. 2002. Accuracy of stream temperature estimation from thermal infrared images. *Conference Proceedings for the International Geoscience and Remote Sensing Symposium (IGARSS)*, Toronto, Canada, July 24-28.
- Kahle, A. B., Abbott, E. A., Gillespie, A. R., Grove, C., Sabol, D. E., and Yamada, G., 2002. Thermal infrared spectral changes of basalt from Kilauea on the annual-decadal time scale. *Eos Transactions, American Geophysical Union*, 83(47), Fall Meeting Supplement.
- Kahle, A. B., Abrams, M. J., Gillespie, A. R., Pieri, D., and Ramsey, M., 2002. The U.S. ASTER Science Team activities. International Geoscience and Remote Sensing Symposium (IGARSS) '02, Toronto, Canada.
- McFadden, L., Eppes, M., Gillespie, A.G., 2002. Solar Insolation and physical weathering in deserts: revisiting an old idea. *Geological Society of America, Abstracts with Program* 33(7).
- Mushkin, A., Balick, L.K., Gillespie, A.R., 2002. Surface-temperature and emissivity recovery using the spaceborne multispectral thermal image (MTI). *Eos Transactions, American Geophysical Union*, 83(47), Fall Meeting Supplement, Abstract 83(47), P72A-0481.
- Perry, R. S., Dodsworth, J., Staley, J. T., and Gillespie, A., 2002. Molecular analyses of microbial communities in rock coatings and soils from Death Valley, California. *Astrobiology* 2, 539.
- Retzlaff, R., Gillespie, A., Weeks, R., and Haugerud, R., 2002. Parsing the Shade Fraction of a TM Image Using Lidar Data, Kitsap County, Washington (poster). *American Society of Photogrammetry and Remote Sensing Conference*, Seattle, WA, Fall.

2003

- Bacon, S. N., Bayasgalan, A., Gillespie, A., Burke, R., 2003. Paleoseismic displacement measurements from landforms subjected to periglacial processes: Observations along the Jarai Gol fault near the Tamynam Hills, Darhad depression, northern Mongolia. *XVI INQUA Congress, Programs with Abstracts*, Reno, July, p. 103.
- Burke, R. M., Gillespie, A., Bayasgalan, A., Sheinkman, V., Chadwick, O., 2003. Late Quaternary glaciation in northern Central Asia. *XVI INQUA Congress, Programs with Abstracts*, Reno, July, p. 156.
- Carson, R.J., A.R. Gillespie, and A. Bayasgalan, 2003, Late Quaternary geology along the Högiin Gol, northern Mongolia: *Proceedings of the Oregon Academy of Science* 39, p. 20-21.

- Cherkauer, K. A., Handcock, R. N., Kay, J. E., Kampf, S. K., Gillespie, A. R., and Burges, S. J., 2003. Thermal infrared remote sensing and its usefulness in determining regional stream temperatures. *Eos Transactions, American Geophysical Union*, 84(46), Fall Meeting Supplement, Abstract H22D-0965.
- Gillespie, A., Rupper, S., and Roe, G., 2003. Climatic interpretation from mountain glaciations in Central Asia. *Geological Society of America, Abstracts with Program* 35(6).
- Gillespie, A., Rupper, S., Roe, G., 2003. Climatic interpretation from mountain glaciers in Central Asia. *XVI INQUA Congress, Programs with Abstracts*, Reno, July, p. 170.
- Gustafson, W. T., Handcock, R. N., Gillespie, A. R., and Tonooka, H., 2003. An image-sharpening method to recover stream temperatures from ASTER Images. *Proc. International Society for Optical Engineering (SPIE) Workshop: Remote Sensing for Environmental Monitoring, GIS Applications, and Geology II*, Vol. 4886, Crete, Greece, Sept. 23-27, p 72-83, [doi:10.1117/12.462325](https://doi.org/10.1117/12.462325).
- Handcock, R. N., K. A. Cherkauer, J. E. Kay, S. K. Kampf, A. Gillespie, and S. J. Burges (2003), Uncertainty associated with the remote-sensing of stream temperatures at multiple spatial scales, *Eos Transactions, American Geophysical Union*, 84(46), Fall Meeting Supplement, Abstract H12F-08.
- Handcock, R.N., Gillespie, A.R. 2003. Issues of multi-scale spatial variability in remotely sensed data. Conference *Proceedings for the 53rd Annual Meeting of the Canadian Association of Geographers (CAG)*, Victoria, BC, Canada, May 27-31.
- Hibbitts, C. A., and Gillespie, A. R., 2003. The non-linear spectral effect of varnish coatings on the thermal emission of rocks. *Geological Society of America Abstracts with Programs* 35(6), 265.
- Kargel, J. S., Gillespie, A., Arzhannikova, N. V., Arzhannikov, S., Bayasgalan, A., Bishop, M. P., Hasnain, S. I., Kaeab, A., Sheinkman, V., Wessels, R., 2003. 100 years of glacier retreat in Central Asia. *XVI INQUA Congress, Programs with Abstracts*, Reno, July, p. 157.
- Kargel, J.S., Barnes, H., Bishop, M.P., Gillespie, A., Hamidullah, S., Hasnain, S., Kaeab, A., Neureiter, N., Shroder, J.F., Wessels, R., 2003. Multispectral Satellite Image Analysis of Himalayan Glaciers: Asymmetric Dynamics, Debris Cover, Lake Development, Flood Hazards, and Glacial Erosion, *International Symposium on Remote Sensing of the Environment*, Honolulu.
- Koppes, M.N., Gillespie, A.R., Burke, R.M., Thompson, S.C., Clark, D.H., 2003. Late Quaternary glaciation in northern Central Asia. *XVI INQUA Congress, Programs with Abstracts*, Reno, July, p. 156.
- Montgomery, D. R., Hallet, B., Liu, Y.-P., Finnegan, N., Anders, A., Gillespie, A., 2003. Ancient lakes upstream of the Tsangpo. *XVI INQUA Congress, Programs with Abstracts*, Reno, July, p. 170.
- Mushkin A., Kampf, S., and Gillespie, A. R. (2003). Estimating Relative Micro-topographic Surface Roughness Using Remotely Sensed Spectral Data. *Geological Society of America Abstracts with Programs* 35(6), 168.
- Perry, R. S., Dodsworth, J., Staley, J. T., Gillespie, A. R., 2003. Microbial ecology of rock coatings from the desert Southwest. NASA Astrobiology Institute Annual Meeting, Arizona State University, Tempe, AZ.
- 2004**
- Crouvi, O., Mushkin, A., Cohen, A., Amit, R., Enzel, Y., and Gillespie, A. 2004, GIS-based soil database incorporated with remotely-sensed data: preliminary results. Abstracts Volume, *Desert Surficial Processes and Landscape Dynamics on Military Lands: Scientific Advances, New Challenges, and Technology Transfer*, California State University Desert Studies Center, Zzyzyx, CA USA.
- Gillespie, A.R., and Hibbitts, C. A., 2004. Identifying desert pavements using thermal infrared spectroscopy. Abstracts Volume, *Desert Surficial Processes and Landscape Dynamics on Military Lands: Scientific Advances, New Challenges, and Technology Transfer*, California State University Desert Studies Center, Zzyzyx, California USA, p 11.
- Gillespie, A. R., Gustafson, W., Sabol, D., Mushkin, A., Kay, J., and Handcock, R., 2004. Reliability of ASTER emissivity images. *Proceedings of the 12th Annual Australasian Conference on Remote Sensing and Photogrammetry*, Freemantle, WA., Oct 18-22.
- Hibbitts, C. A., Gillespie, A. R., and Hansen, G. B., 2004. Identifying varnished rocks on Mars using thermal infrared spectroscopy, *Eos Transactions, American Geophysical Union*, 84(46), Fall Meeting Supplement, Abstract #P11A-0955.
- Montgomery, D. R., Gillespie, A., 2004. Formation of Valles Marineris and associated outflow channels by catastrophic dewatering of evaporite deposits. *Eos Transactions American Geophysical Union* 85(47), Fall Meeting Supplement, Abstract P13A-0986.
- Montgomery, D. R., Hallet, B., Yuping, L., Finnegan, N., Gillespie, A., Kuharic, M., Henck, A., Anders, A., and Greenberg, H., Evidence for repeated megafloods down the Tsangpo River Gorge, Southeastern Tibet, *Eos Transactions American Geophysical Union* 85(47), Fall Meeting Supplement, Abstract T34B-02.
- Mushkin, A., and Gillespie, A. R., 2004. Estimating sub-pixel surface roughness using remotely sensed stereo data. Abstracts Volume, *Desert Surficial Processes and Landscape Dynamics on Military Lands: Scientific Advances, New Challenges, and Technology Transfer*, California State University Desert Studies Center, Zzyzyx, California USA, p 22.
- Mushkin, A., Bayasgalan, A., and Gillespie, A., 2004. Constraints on lateral offsets along the Gobi-Altay fault system, southwestern Mongolia. *Geological Society of America, Abstracts with Program* 36(5), 138.

- Mushkin, A., Javkhlanbold, D., Bayasgalan, A., Gillespie, A., 2004. Large paleo landslides along the western part of the Gobi-Altay fault system in southwestern Mongolia. *Eos Transactions American Geophysical Union* 85(47), Fall Meeting Supplement, Abstract T11C-1280.
- Sabol, D.A., Caldwell, T., Gillespie, A. R., and McDonald, E., 2004. Remote sensing for mapping near-surface playa moisture. Abstracts Volume, *Desert Surficial Processes and Landscape Dynamics on Military Lands: Scientific Advances, New Challenges, and Technology Transfer*, California State University Desert Studies Center, Zzyzzyx, California USA, p 28.
- 2005**
- Gillespie, A. R., Bayasgalan, A., Kuharic, M. V., 2005. Sediment core from ice-dammed paleolake Darhad, Mongolia. Geological Society of America *Abstracts with Programs* 37(7), 543.
(recorded presentation: http://gsa.confex.com/gsa/2005AM/finalprogram/abstract_93034.htm)
- 2006**
- Balick, L. K., Gillespie, A. R., McCabe, M. F. and Mushkin, A., 2006. Forward modeling of linear mixing in thermal-IR ground leaving radiance spectra. *Proceedings of the International Society for Optical Engineering (SPIE) European Symposium on Optics and Photonics in Security and Defense*, Stockholm, Sweden, 11-14 Sept, [doi:10.1117/12.683816](https://doi.org/10.1117/12.683816), 11pp.
- Balick, L. K., Gillespie, A. R., McCabe, M. F., Mushkin, A., 2006. Forward modeling of linear mixing in thermal IR temperature retrieval. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 65-66.
- Cherkauer, K. A., Handcock, R. N., Kay, J. E., S. K. Kampf, S. K., S. J. Burges, S. J., and Gillespie A. R., 2006. An assessment of thermal infrared remote sensing and its usefulness in determining regional stream temperatures. *Eos Transactions American Geophysical Union* 87 (52), Fall Meeting Supplement, Abstract H33E-1560. San Francisco, December.
- Danilina, I., Mushkin, A., Gillespie, A. R., O'Neal, M. A., Abbott, E. A., Pietro, L. S., Balick, L. K., 2006. Roughness effects on sub-pixel radiative temperature dispersion in a kinetically isothermal surface (Poster). *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 31.
- Gillespie, A. R., Yehouda Enzel, Y., Mushkin, A., Abbott, E., Amit, R., and Crouvi, O., 2006. Precipitation response by Qom Playa, Iran. *Eos Transactions American Geophysical Union* 87(52), Fall Meeting Supplement, Abstract H53A-0603. San Francisco, December.
- Gustafson, W. T., Gillespie, A. R., Yamada, G., 2006. Revisions to the ASTER temperature/emissivity separation algorithm (Poster). *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 158-159.
- Jiménez-Muñoz, J. C., Sobrino, J. A., Gillespie, A. R., Sabol, D., Gustafson, W. T., Balick, L., 2006. Land surface temperature and emissivity retrieval from ASTER data over agricultural areas: Standard products and alternative methods. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 49.
- Kane, V. R., Gillespie, A. R., and Ceder, K. R., 2006. Spectral unmixing of remotely sensed forest images using an adaptive topographic shade correction algorithm. *Transactions Eos Transactions American Geophysical Union* 87(52), Fall Meeting Supplement, Abstract B41A-0162. San Francisco, December.
- McCord, T.B., Adams, J.B., Hansen, G.B., Combe, J-Ph., Bellucci, G., Jaumann, R., Neukum, G., Poulet, F., and Gillespie, A. R., 2006. Mars surface compositional units from the Mars Express High Resolution Stereo Camera. 37th Lunar and Planetary Science Conference, Abstract 1757.
- Mushkin, A., Gillespie, A. R., O'Neal, M. A., Danilina, I., Abbott, E. A., S. Pietro, L. S., Balick, L. K., 2006. Thermal infrared cavity radiation compensation using sub-pixel roughness estimates from ASTER stereo images (Poster). *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 68.
- O'Neal, M. A., Gillespie, A. R., 2006. Parsing Shade (Poster). *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 93.
- Sabol, D. E., Gillespie, A. R., Danilina, I., McDonald, E., 2006. Differential thermal inertia of geological surfaces (Poster). *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 59.
- Sobrino, J. A., Cuenca, J., Sòria, G., Jiménez-Muñoz, J. C., Gómez, M., Zaragoza-Ivorra, M. M., Romaguera, M., Julien, Y., Shen, Q., Sepulcre, G., Morales, L., Gillespie, A. R., Balick, L., Peres, L. Libonati, R., Nerry, F. Fortier, M., 2006. Thermal remote sensing in the framework of the SEN2FLEX Project: Field measurements, airborne data and applications. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing II (RAQRS II)*, University of Valencia, Spain, Sept. 25-29, p. 177-178.
- Smith, M. R., Montgomery, D. R., Gillespie, A. R., Wood, S. E., and Greenberg, H. M., 2006. Photographic evidence for exhumation of light-toned deposits from the walls of Valles Marineris: Ancient sedimentary rocks on mars? *Martian*

Sulfates as Recorders of Atmospheric-Fluid-Rock Interactions Conference, Lunar and Planetary Science Institute, Houston, Texas Oct 22-24, Abstract 7024.

2007

- Arvidson, R. E., Adams, D., Bandfield, J., Barge, L., Barnes, J., Boynton, W., Christensen, P., Friedson, J., Gillespie, A., Golombek, M. P., Guinn, J., Guinness, E., Kass, D. M., Kirk, R., Knudsen, A., Malin, M., McEwen, A., Mellon, M., Michaels, T., Mushkin, A., Mustard, J. F., Paige, D., Parker, T.J., Pelkey, S. M., Poulet, F., Rafkin, S., Rice, J., Seelos, K., Smith, M. D., Smith, P. H., Spencer, D., Stein, T., Tamppari, L., Tyler, D., 2007. Overview of Mars exploration program, 2007 Phoenix Mission landing site selection. 7th International Conference on Mars, Abstract 3095.
- Balick, L., McCabe, M., Clodius, W., Jeffery, C., Theiler, J., Gillespie, A., Mushkin, A., and Danilina, I., 2007. Model and Measurements of Linear Mixing in Thermal IR Ground Leaving Radiance Spectra. *Proceedings of the SPIE ERS07 Conference* VOL, Florence, Italy, 17-21 Sept.
- Gillespie, A.R., 2007. Synchrony and asynchrony in glacierization. *Geological Society of America Abstracts with Programs* 39(6).
- Montgomery, D. R., Som, S. M., Schreiber, B. C., Jackson, M. P., Gillespie, A. R., Adams, J. B., 2007. Continental-Scale Salt Tectonics on Mars and the Origin of Valles Marineris and Associated Outflow Channels, *Eos Transactions, American Geophysical Union*, 88(52), Fall Meeting Supplement, Abstract P13B-1291.
- Mushkin, A., and Gillespie, A.R., 2007. Slip rates of the Gov'i-Altai fault system, Mongolia. Conference on the 50th anniversary of the 1957 M8 Gov'i-Altai earthquake, Ulaan Baatar, Mongolia, July 25-28.
- Mushkin, A., Gillespie, A.R., and Montgomery, D.R., 2007. A new conceptual model for slope-streak formation on Mars. *Geological Society of America Abstracts with Programs* 39(6).
- Smith, M. R., Gillespie, A. R., and Montgomery, D. R., 2007. The Effect of Crater Obliteration on Inferred Surface Ages on Mars. *Eos Transactions, American Geophysical Union*, 88(52), Fall Meeting Supplement, Abstract P23D-08
- Su, Z., Timmermans, W.J., Dost, R., Bianchi, R., Gómez, J.A., House, A., Hajnsek, I., Menenti, M., Magliulo, V., Haarbrink, R., Bosveld, F., Vekerdy, Z., Sobrino, J.A., van der Tol, C., Timmermans, J., van Laake, P., van der Kwast, H., Claassen, E., Stolk, A., Jia, L., Moors, E., Hartogensis, O., Gillespie, A.R., 2007. EAGLE 2006 – Multi-purpose, multi-angle and multi-sensor in-situ and airborne campaigns over grassland and forest. AGRISAR-EAGLE Combined Final Meeting, ESTEC Noordwijk, 15-16 October.

2008

- Amit, R., Enzel, Y., Simhai, O., Matmon, A., Haviv, I., Gillespie, A., 2008. Pedogenesis In Response to Quaternary-Scale Aridification of the Negev Desert, Israel (abstract 335-5). *Geological Society of America National Meeting*, Houston, October, paper 47292.
- Crouvi, O., Gillespie, A. R., Amit, R., and Enzel, Y., 2008. Remote sensing of desert loess and dune fields aids revealing proximal loess sources. *Eos Transactions, American Geophysical Union*, 89(53), Fall Meeting Supplement, Abstract H33A-0986.
- Gillespie, A. R., 2008. Pleistocene glaciation in the Gobi Desert, DONALD J. EASTERBROOK DISTINGUISHED SCIENTIST AWARD (Abstract 178-7). *Geological Society of America National Meeting*, Houston, October, paper 47292.
- Gillespie, A. R., and Pieri, D. C., 2008. Paleo ice-cap surfaces and extents (Abstract). *Eos Transactions, American Geophysical Union*, 89(53), Fall Meeting Supplement, Abstract H33A-0989.
- Gillespie, A. R., Adams, J. B., Jackson, M. P., and Montgomery, D. R., and Dooley, T. P., 2008. Catastrophic karst-like subsidence of Hebes Chasma, Mars (Abstract 195-8). *Geological Society of America National Meeting*, Houston, October, Paper 47763.
- Gillespie, A. R., Batbaatar, J., and Feathers, J. F., 2008. First direct dating of MIS-2 paleolake sediments from Darhad Basin, Mongolia (Abstract 146-11). *Geological Society of America National Meeting*, Houston, October, paper 47824.
- Gillespie, A. R., 2010. Effects of sub-pixel heterogeneity on remotely sensed hyperspectral thermal infrared measurements. University and Industry Technical Interchange (UITI2010) Review Meeting, Office of Nonproliferation and Verification Research and Development, National Nuclear Security Administration (NNSA), U. S. Department of Energy, Park City, Utah, Dec 3.
- Krivonogov, S., Kazansky, A., Matasova, G., Dolgorsuren, Kh., Bezrukova, E., Gillespie, A., Bayasgalan, A., Narantsetseg, T., Oyunchimeg, Ts. Tomurhuu, D., 2008. Environmental records from the 92-m core, the Darhad Basin, northern Mongolia. The XIV Glaciological Symposium on Glaciology from International Geophysical Year to International Polar Year, Glaciological Association, Institute of Geography RAS and Institute of Geography of Siberian Branch of RAS, Irkutsk, 3-11 September.
- Mushkin, A., Gillespie, A. R., Montgomery, D., Schreiber, C., and Arvidson, R. E., 2008. New observational constraints on the nature of slope streaks on Mars. *Lunar and Planetary Science Conference*, League City, TX, March, Abstract 2388.
- Mushkin, A., Gillespie, A. R., Amit, R., 2008. Constraining the age of desert alluvial surfaces according to their geomorphic roughness as measured from space (Abstract 335-5). *Geological Society of America National Meeting*, Houston, October, paper 47294.

- Pieri, D., Gillespie, A., Kargel, J., and Ramsey, M., 2008. Geomorphology From Earth Orbit—Can it be Done? *Eos Transactions, American Geophysical Union*, 89(53), Fall Meeting Supplement, Abstract H33A-0982.
- Smith, M., Mushkin, A., and Gillespie, A. R., 2008, Quantitative characterization of surface roughness at proposed MSL landing sites (POSTER). 3rd MSL Landing Site Workshop, Monrovia CA, 15-17 Sept.
- Smith, M. R., Mushkin, A., Gillespie, A. R., Gilson, L., and Golombek, M. P., 2008. Rock Abundances at MSL Candidate Landing Sites using HRSC Stereo and HiRISE Images. *Eos Transactions, American Geophysical Union*, 89(53), Fall Meeting Supplement, Abstract P41B-1364.
- Su, Z., Timmermans, W. J., Dost, R. Bianchi, R., Gómez, J. A., House, A., Hajnsek, I., Menenti, M., Magliulo, V., Esposito, M., Haarbrink, R., Bosveld, F., Rothe, R., Baltink, H. K., Vekerdy, Z., Sobrino, J. A., van der Tol, C., Timmermans, J., van Laake, P., Salama, S., van der Kwast, H., Claassen, E., Stolk, A., Jia, L., Moors, E., Hartogensis, O., Gillespie, A. R., 2008. EAGLE 2006 – Multi-purpose, multi-angle and multi-sensor in-situ and airborne campaigns over grassland and forest. *Geophysical Research Abstracts*, Vol. 10, EGU2008-A-11535, 2008, SRef-ID: 1607-7962/gra/EGU2008-A-11535, EGU General Assembly.
- Wiedmer, M., Montgomery, D. R., Gillespie, A. R., and Greenberg, H., 2008. Evidence for late Pleistocene megafloods in Southcentral Alaska, U.S.A (abstract 178-4). *Geological Society of America National Meeting*, Houston, October, paper 47294.

2009

- Amit, R., Enzel, Y., Crouvi, O., Simhai, O., Matmon, A., Porat, N., McDonald, E., Gillespie, A., 2009. Farouk El-Baz Award for Desert Research: How old is the Negev loess and causes for its sudden appearance in the late middle Pleistocene. *Geological Society of America Abstracts with Program*, 41 (7), abstract 160548, Portland, October.
- Batbaatar, J., Feathers, J. K., and Alan R. Gillespie A. R., 2009. IRSL feldspar dates for paleolake sediments from Darhad Basin, Mongolia. *Geological Society of America Abstracts with Program*, abstract 161115, Portland, October.
- Crouvi, O., Enzel, Y., Amit, R., Gillespie, A., 2009. The primary role of active large sand seas in forming warm-desert loess sequences. *Eos Transactions, American Geophysical Union*, 90(52), Fall Meeting Supplement, Abstract PP24B-03.
- Crouvi, O., Gillespie, A. R., Amit, R., and Enzel, Y., 2009. Remote sensing of desert loess and dune fields aids revealing proximal loess sources. 6th EARSeL SIG IS Workshop "Imaging Spectroscopy: Innovative Tool for Scientific and Commercial Environmental Applications," Tel-Aviv, 16-19 March.
- Gillespie, A. R., 2009. Hyperspectral thermal infrared imaging. University and Industry Technical Interchange (UITI2009) Review Meeting, Office of Nonproliferation and Verification Research and Development, National Nuclear Security Administration (NNSA), U. S. Department of Energy, Park City, Utah, Dec.
- Mushkin, A., Gillespie, A. R., Abbott, E. A., Smith, M., Avalia, J., Brudsky, E. E., 2009. Vegetation effects on sub-pixel roughness measurements from NASA's Terra/ASTER stereo images. *Eos Transactions, American Geophysical Union*, 90(52), Fall Meeting Supplement, Abstract U33B-0071.
- Perrault, J., and Gillespie, A. R., 2009. Remote sensing of volcano stream temperatures prior to eruptive phases. *Geological Society of America National Meeting Abstracts with Program*, 41 (7), abstract 164048, Portland, October.
- Smith, M. R., Gillespie, A. R., Montgomery, D. R., and Batbaatar, J., 2009. Evolution of the Thaumasia volcano-tectonic province, Mars, through crater-fault relationships. *Eos Transactions, American Geophysical Union*, 90(52), Fall Meeting Supplement, Abstract V23E-2170.

2010

- Abbott, E. A., and Gillespie, A. R., 2010. Thermal Infrared Imaging of Weathering Changes of Mauna Ulu Basalts, Big Island, Hawaii. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p. 50-51.
- Crouvi, O., Amit, R., Enzel, Y., and Gillespie, A. R., 2010. The role of active sand seas in the formation of desert loess (Poster). *European Geosciences Union General Assembly*, Vienna, 2-7 May, p. 8443.
- Crouvi, O., Enzel, Y., Amit, R., and Gillespie, A. R., 2010. Intensive winds during the glacial periods increased sand-dune activity and loess deposition. *Eos Transactions, American Geophysical Union*, xx(xx), Fall Meeting Supplement, Abstract PP13A-1490.
- Danilina, I., Gillespie, A. R., Balick, L. K., Mushkin, A., Smith, M. R., and Blumberg, D., 2010. Compensation for sub-pixel roughness effects in thermal-infrared images. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p. 64.
- Gillespie, A. R., 2010. West coast glaciations, USA. INVITED. *Geological Society of America Abstracts with Program* 42 (5), 363. Paper 145-9, Denver, November 1.
- Gillespie, A. R., 2010. MIS3/4 and MIS2 asynchronism in northern Central Asia. *Geological Society of America Abstracts with Program* 42 (5), 74. Paper 22-9, Denver, October 31.
- Gillespie, A., Abbott, E., Gilson, L., Hulley, G., Jiménez-Muñoz, J.-C., and Sobrino, J. A., 2010. Incomplete separation between temperature and emissivity in ASTER standard products AST08 and AST05. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p 34-35.

- Gillespie, A. R., 2010. Effects of sub-pixel heterogeneity on remotely sensed hyperspectral thermal infrared measurements. University and Industry Technical Interchange (UITI2010) Review Meeting, Office of Nonproliferation and Verification Research and Development, National Nuclear Security Administration (NNSA), U. S. Department of Energy, Knoxville, Tennessee, Dec 8.
- Jiménez-Muñoz, J.-C., Sobrino, J. A., and Gillespie, A. R., 2010. Noise in emissivity images obtained from Temperature and Emissivity Separation (TES) algorithm: A case study of airborne imagery and implications for ASTER. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p 57.
- Smith., M. R., Bandfield, J., and Gillespie, A..R., 2010. A felsic and hydrated mineral suite in Syrtis Major: A geologic history. *Eos Transactions, American Geophysical Union*, xx(xx), Fall Meeting Supplement, Abstract P53C-1530.
- Smith., M. R., Gillespie, A..R., and Balick, L. K., 2010. Testing In-Scene Atmospheric Corrections of Hyperspectral Thermal Data from Nadir- and Oblique-Looking Geometries. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing III (RAQRS III)*, University of Valencia, Spain, Sept. 27-Oct. 1, p 75-76.
- 2011**
- Crouvi, O., Enzel, Y., Amit, R., Gillespie, A. R., 2011. Intensified winds in the low-mid latitudes during glacial times: The abrasion of coarse silt in sand seas and the loess accretion at desert margins downwind (ABSTRACT 190). XVIII International Quaternary Association Congress (INQUA), Bern, Switzerland, 20-27 July.
- Gillespie, A. R., 2011. Unusual patterns of glaciation in northern Central Asia (POSTER 1732). XVIII International Quaternary Association Congress (INQUA), Bern, Switzerland, 20-27 July.
- Gillespie, A. R., 2011. Glaciations of California, USA (POSTER 1727). XVIII International Quaternary Association Congress (INQUA), Bern, Switzerland, 20-27 July.
- Hallet, B., Eppes, M.C., Mackenzie-Helnwein, P., Warren, K., McFadden, L., Gillespie, A., Putkonen, J., Swami, S., and Shi, J., 2011. Solar-induced weathering of rocks: integrating instrumental and numerical studies. Abstract EP53A-01, presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Mushkin, A., Gillespie, A. R., Feathers, J. K., and Bayasgalan, A., 2011. New constraints on late Quaternary slip rates along the Gobi-Altay fault in SW Mongolia. Abstract 49-8, GSA Annual Meeting in Minneapolis, 9-12 October.
- Som, S. M., Hagadorn, J. W., Thelen, W. A., Gillespie, A. R., Catling, D. C., Buick, R., 2011. High-resolution X-ray imaging of amygdules for measuring bubble size distribution in ancient lava flows. Abstract V23F-2630 *poster* presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- 2012**
- Batbaatar, J., Gillespie, A. R., Schreiber, B. C., 2012. Tectonics and environment at the western end of the Baikal Rift: Paleolake sediment record from Darhad Basin, Northern Mongolia, Abstract. Cordilleran Section Geological Society of America, 108th Annual Meeting, 29–31 March, Mexico.
- Jigjidsuren, B., and Gillespie, A. R., 2012. Equilibrium-line altitudes in cold hyperarid settings. Abstract C43E-06, presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec
- Ramsey, M., and Gillespie, A., 2012. Is emissivity immutable? Abstract V21B-2765 *Poster*, presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec
- 2013**
- Amit, R., Enzel, Y., Crouvi, O., Mushkin, A., Jigjidsuren, B., Alan Gillespie, A., 2013. The role of active sand seas in forming desert loess sequences with implications to the Chinese Loess Plateau.. 8th International Conference on Geomorphology of the International Association of Geomorphologists (IAG), Paris, 27-31 August.
- Bataatar, J., Gillespie, A. R., 2013. Spatial pattern of equilibrium-line altitude in Central Asia. Abstract 225441, GSA Abstracts with Programs Vol. 45, No. 7, Annual Meeting in Denver, 27-30 October.
- Crouvi, O., Schepanski, K., Amit, R., Enzel, Y., Gillespie, A.R., 2013. Which arid soil types are major sources of dust in the Sahara? Contribution 141, IUSS Division 1 conference, Soils in Space and Time, Ulm University, Germany, 30 Sept.–1 Oct.
- Crouvi, O., Schepanski, K., Amit, R., Gillespie, A.R., and Enzel, Y., 2013. Multiple dust sources in the Sahara: The importance of sand dunes. Conference on Ocean Gateways Past and Present: Significance for Ocean Circulation and Terrestrial Climates, Israel Institute for Advanced Studies (IAS) at the Hebrew University of Jerusalem Edmond J. Safra campus, 5-7 May.
- Crouvi, O., Schepanski, K., Amit, R., Gillespie, A.R., and Enzel, Y., 2013. Multiple dust sources in the Sahara: The importance of sand dunes. European Geosciences Union, Abstract EGU2013-8326, CL4.2/AS3.15/GM5.2, Aeolian Processes and landforms, Vienna, 7–12 April.
- Gillespie, A, Hulley, G.C., Abbott, E., 2013. Accuracy assessment of Terra/ASTER standard land-surface temperature and spectral emissivity products. Abstract GC41A-0997 presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 3–7 Dec
- Gillespie, A. R., 2013 Thermal imaging for input to terrestrial and planetary thermal models. Abstract P52A-01 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3–7 Dec

J. Batbaatar and A. R. Gillespie, 2013. Reconstructing paleoclimate from glacial deposits in Mongolia. International conference on climate change in arid semi-arid region, Mongolian University of Science and Technology, Ulaanbaatar, Mongolia, Sept. 15.

Ramsey, M. S., and Gillespie, A. R., 2013. The failure of the immutable emissivity assumption. 44th Lunar and Planetary Science Conference, The Woodlands, TX, March.

2014

Crouvi, O., Schepanski, K., Amit, R., Gillespie, A.R., and Enzel, Y., 2014. Dust emission from different soil types and geomorphic units in the Sahara – implications for modeling dust emission and transport. Geophysical Research Abstracts 16, EGU2014-3286 (General Assembly, Vienna, 27 April – 02 May).

Gillespie, A. R., Hulley, G., Abbott, E.A., 2014. Validation of Terra/ASTER standard land-surface temperature and spectral emissivity products. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing IV (RAQRS IV)*, University of Valencia, Spain, 22–6 Sept., p xx-xx.

Mushkin, Amit, Gillespie, A.R., and Kane, V., 2014. Vegetation mapping with NASA's Terra/ASTER stereo images. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing IV (RAQRS IV)*, University of Valencia, Spain, 22–26 Sept., p xx-xx.

Wang, G.J., Gillespie, A. R., and Liang, S.H., 2014. Effect of Qinghai-Tibet (Qingzhang) Railroad on Vegetation Abundance. *Abstract Book, Conference on Recent Advances in Quantitative Remote Sensing IV (RAQRS IV)*, University of Valencia, Spain, 22–26 Sept., p xx-xx.

Miscellaneous Presentations and Short Courses

1974

Gillespie, A. R., 1974. Computer processing of ERTS images (INVITED). *Proceedings of the Utah Remote Sensing User's Symposium*, University of Utah, Salt Lake City, UT, May 16, 1974.

1975

Abrams, M. J., and Gillespie, A. R., 1975. Evaluation of digital image classification and enhancement techniques applied to geologic problems. *Proceedings of the 41st Annual Meeting of the American Society of Photogrammetry Annual Meeting*, Washington, D.C., March 9-15.

1977

Soha, J. M., Gillespie, A. R., and Abrams, M. J., 1977. Color image filtering and enhancement. *Proceedings of the 43rd Annual Meeting of the American Society of Photogrammetry*, Washington, D.C., Feb.

1983

Abrams, M. J., Kahle, A. B., Gillespie, A. R., Conel, J. E., and Lang, H. R., 1983. Geologic utility of Landsat-4 TM data: Death Valley, California. Landsat-4 Scientific Characterization Early Results Symposium, Goddard Space Flight Center, Feb. 22-24, 1983.

Gillespie, A. R., Kahle, A. B., and Palluconi, F. D., 1983. Multichannel thermal infrared image analysis. In Hopkins, P. F. (ed.), *Proceedings of the Conference on Techniques for Extraction of Information from Remotely Sensed Images*, Society of Photographic Scientists and the American Society of Photogrammetry. Rochester Institute of Technology, NY, Aug. 16-19.

1984

Gillespie, A. R., and Rock, B. N., 1984. Results from the JPL Airborne Imaging Spectrometer. Remote Sensing of Arid Lands Workshop, University of Nevada Reno, Reno NV, March.

1985

Gillespie, A. R., 1985. AIS data form a basis for relative dating of granitic alluvial fans. Airborne Imaging Spectrometer Data Analysis Workshop, Jet Propulsion Lab, Pasadena, CA, April 8-10.

Gillespie, A. R., 1985. Remote sensing with multispectral thermal infrared data. Annual Meeting of the Society of California Archeology, San Diego, CA, March 28.

Gillespie, A. R., 1985. Protolith discrimination using multichannel thermal infrared images. NASA/JPL Ophiolites Workshop, Washington, D.C., May.

Gillespie, A. R., 1985. Relative dating of alluvial surfaces using remote sensing (invited). Keynote lecture, Archaeological Survey Association Annual Meeting, University of Redlands, Redlands, CA, June 29.

1987

Gillespie, A. R., 1987. Relative dating and discrimination of soils. Remote Sensing of Arid Lands Workshop, White Mountain Research Station, UCLA, Bishop, CA, March.

1988

Gillespie, A. R., 1988. Petroglyphs at Swansea, California: A prehistoric solar calendar (invited). World Cultures in Ancient America Conference, U.C.S.F., San Francisco, June 1-6.

1989

Gillespie, A. R., 1989. Quaternary tectonic evolution of Owens Valley. White Mountain Research Station Annual Symposium, Bishop, CA, Sept.

- Kahle, A.B., M.J. Abrams, D.C. Pieri, A. Gillespie, A. Abbott, and J. Crisp, 1989, Recent Hawaiian volcanic activity. NASA Crustal Dynamics and Geology Principal Investigators Meeting, April 11-14, JPL.
- 1990**
- Gillespie, A. R., 1990. Paleomonsoons in the Sierra Nevada? Special Conference on Monsoons and Paleomonsoons, Quaternary Research Center, University of Washington, Seattle, WA, April, 1990.
- 1991**
- Gillespie, A.R., 1991. Remote sensing and soil geomorphology. Quaternary Research Center Seminar Series, *Remote Sensing in Quaternary Research*, University of Washington, Seattle, WA, January, 1991.
- 1993**
- Gillespie, A. R., Chadwick, O. A., Harden, J., Mayer, L., and McFadden, L., Wells, S., 1993. Paleoclimate reconstruction from remote sensing of bajadas, western North America. PACLIM Workshop, Pacific Grove, CA, 4-7 April, 1993.
- 1994**
- Bierman, P. R., and Gillespie, A. R., 1994. Geomorphic Applications of in-situ produced cosmogenic isotopes. Short Course, University of Vermont, Sept.
- Bierman, P. R., and Gillespie, A. R., 1994. Geomorphic Applications of in-situ produced cosmogenic isotopes. Short Course, *Geological Society of America, Abstracts with Program*, P-24, Seattle.
- Gillespie, A. R., 1994. Geologic applications of remote sensing (INVITED). Short Course, University of Vermont, Sept.
- Gillespie, A. R., 1994. Precision of Terrestrial Exposure Ages and Erosion Rates Estimated from Analysis of Cosmogenic Isotopes Produced *In Situ*. *Special Conference on Surface-Exposure Dating of Quaternary Landforms: Promise and Limitations*, Quaternary Research Center, University of Washington, Seattle, April.
- Gillespie, A. R., and Clark, D. H., 1994. The Holocene glaciation of the Sierra Nevada. White Mountain Research Station Lecture Series, Bishop, CA, 14 April.
- 1995**
- Bierman, P. R., and A. R. Gillespie, A. R., 1995. Geomorphic Applications of in-situ produced cosmogenic isotopes. Short Course. *Geological Society of America, Annual Meeting*, New Orleans, Nov.
- Polansky, J., Gillespie, A. R., and Hoskinson, T., 1995. Calendrical precision at equinox sites: Apparent roles for both ritual and science. Utah Rock Art Research Association, Aug.
- 1997**
- Bierman, P. R., and A. R. Gillespie, A. R., 1997. Geomorphic Applications of in-situ produced cosmogenic isotopes. Short Course, *Geological Society of America, Annual Meeting*, Salt Lake City, Oct.
- Gillespie, A. R., 1997. Fire-progress prediction (INVITED). Technical report submitted to Dr. Thomas McCord, Univ. Hawaii.
- Gillespie, A. R., 1997. Remote Sensing in Death Valley (INVITED). Field trip for Dr. Terry Cook.
- 1998**
- Gillespie, A. R., 1998. G. K. Gilbert Award presented to John B. Adams (INVITED). *Geology Today*, March.
- 1999**
- Gillespie, A. R., 1999. Thirty Years of Remote Sensing in Death Valley: What have we learned? (INVITED) Las Vegas, NV, April.
- Gillespie, A. R., 1999. Field methods of infrared imaging (INVITED). "Weathering of Basalts on Earth and Mars," (C. Weitz, D. Evans, Jet Propulsion Laboratory) August 14-18, Hilo, Hawaii.
- Gillespie, A. R., 1999. Astronomical petroglyphs in the western Great Basin (INVITED). Amateur Archaeologists of, Reno, NV, 14 Oct.
- Gillespie, A. R., 1999. In-scene atmospheric compensation in hyperspectral TIR images (Invited). Los Alamos National Lab., 8 November.
- Petroy, S. B., Gallerey, W., and Gillespie, A. R., 1999. Spectral and spatial analysis of the ASTER/TES algorithm for application to the VIIRS EDR – Land surface temperature. AER Algorithm IPT Memorandum, February 23.
- 2000**
- Gillespie, A. R., 2000. Heliometric dating of the solar petroglyphs in the Alabama Hills, California (Invited). *Annual Meeting of the International Society for the Study of American Cultures*, Columbus, GA, Oct.
- Gillespie, A. R., 2000. Quaternary history of Owens Valley, California, *Impacts of Climate Change on Landscapes of the eastern Sierra Nevada and Western Great Basin*, U.S.G.S. Earth Surface Dynamics Program, co-sponsored by U. S. Forest Service, Desert Research Institute, Bureau of Land Management, Bishop Office, and U. C. White Mountain Research Station, Bishop, CA. 29 Sept.
- Sabol, D., Buck, P., and Gillespie, A. R., 2000. Direct detection of archaeological sites with remote sensing. Final Project Report Strategic Environmental Research and Development Program (SERDP) Project CSA-1142, Army Research Office Grant Number DAAD-19-99-1-0261, April 12, 35 pp.
- 2001**
- Gillespie, A. R., 2001. Alpine glaciation in Mongolia (INVITED). Israel Geological Congress, Eilat, 20 March.

- Gillespie, A. R., 2001. Weathering of depositional surfaces viewed by remote sensing (INVITED). Department of Geology, The Hebrew University, Givat Ram, 27 March.
- Gillespie, A. R., 2001. Relative dating of fans and lava flows with remote sensing (INVITED). Whitman College, Walla Walla, April 12.
- Gillespie, A. R., 2001. A summer solstice petroglyph complex, eastern California (INVITED). Whitman College, Walla Walla, April 12.
- Gillespie, A. R., 2001. Stephen C. Porter — In appreciation. *Quaternary Research* 55, 1.
- 2002**
- Gillespie, A. R., Gustafson, W., Sabol, D., Kahle, A., and Abbott, E., 2002. Temperature/emissivity separation. *Proceedings of the International Conference on Advances in Infrastructure for e-Business, e-Education, e-Science, and e-Medicine on the Internet*, Scuola Superiore G Reiss Romoli (SSGRR-2002S), L'Aquila, Italy, 29 August.
- Gillespie, A., 2002. Glaciation in Central Asia (Invited). Lehigh University, Bethlehem, PA, Nov.
- Gillespie, A., 2002. TES status update. 24th Joint ASTER Science Team meeting, Palm Springs, California, 4 December
- Gillespie, A., 2002. ASTER TES follow-on activity. 24th Joint ASTER Science Team meeting, Palm Springs, California, 4 December.
- 2003**
- Mushkin, A., Gillespie, A., Balick, L., 2003. Temperature/emissivity separation with MTI. MTI Workshop, Santa Fe, June.
- Gillespie, A., 2003. Glaciation in Central Asia (INVITED). University of California, Riverside, March.
- 2004**
- Sabol, D.E., Gillespie, A.R., Mushkin, A., Karl Hibbitts, C., 2004, Remote Sensing for Characterization of Desert Surfaces. Desert Trafficability Workshop, Bearfight Institute, Winthrop, WA, Jan.
- Gillespie, A. R., 2004. *ARO review Las Vegas, NV*
- 2006**
- Adams, J., Gillespie, A.R., Montgomery, D., Haugerud, R., 2006. Integration and Implications of natural history on life in the Methow Valley. Methow Conservancy 2006 Conservation Courses: Taking a Deeper Look. Reading the Land: Regional Geology. Winthrop/Twisp, Washington. March 13 – April 24.
- Adams, J., Gillespie, A.R., Montgomery, D., Haugerud, R., 2006. Field Trip. Methow Conservancy 2006 Conservation Courses: Taking a Deeper Look. Reading the Land: Regional Geology. Winthrop/Twisp, Washington. March 13 – April 24.
- Gillespie, A. R., 2006. Report on RAQRS II. 30th ASTER Joint US/Japanese Science Team Meeting, Pasadena California, December.
- 2007**
- Gillespie, A.R., 2007. Outburst flood monitoring. Geology Working Group, 31st Joint ASTER Science Team meeting, Tepia Convention Center, Aoyoma, Tokyo, 6 June.
- Gillespie, A.R., 2007. Paleoclimate in Central Asia. Geology Working Group, 31st Joint ASTER Science Team meeting, Tepia Convention Center, Aoyoma, Tokyo, 6 June.
- Gillespie, A.R., 2007. Update on validation program for TES. Temperature/Emissivity Working Group, 31st Joint ASTER Science Team meeting, Tepia Convention Center, Aoyoma, Tokyo, 6 June.
- Gillespie, A.R., 2007. Monitoring catastrophic outburst floods from satellite (INVITED). ASTER Workshop, Tepia Convention Center, Aoyoma, Tokyo, 8 June.
- Gillespie, A.R., 2007. Patterns of late Quaternary glaciation in Central Asia. International Quaternary Association (INQUA)(INVITED KEYNOTE). Cairns, Australia, 1 August.
- 2008**
- Adams, J., Gillespie, A., Jackson, M., and Montgomery, D., 2008. Allochthonous Flow and Diapirism in Hebes Chasma, Mars. Applied Geodynamics Laboratory, Fri 17 Oct., University of Texas at Austin, TX
- Dooley, T., Jackson, M., Adams, J., Gillespie, A., and Montgomery, D., 2008. Vanishing Rock in the Deepest Martian Canyon: Modeling the Collapse of Hebes Chasma. Applied Geodynamics Laboratory, Fri 17 Oct., University of Texas at Austin, TX.
- Gillespie, A. R., 2008. A potential problem. Geology Working Group, 34th Joint ASTER Science Team meeting, Sheraton, Pasadena, California, 9 December.
- Gillespie, A. R., 2008. Karstic subsidence of the giant canyons of Mars. Geological Survey of Israel, Jerusalem, 19 June, invited.
- Gillespie, A. R., and Elsa. A. Abbott, 2008. New findings on emissivity spectra accuracy. Temperature/Emissivity Working Group, 34th Joint ASTER Science Team meeting, Sheraton, Pasadena, California, 10 December.
- Pieri, D. C., and Gillespie, A. R., 2008. Paleo ice-cap surfaces and extent. Geology Working Group, 34th Joint ASTER Science Team meeting, Sheraton, Pasadena, California, 9 December.
- 2009**
- Gillespie, A. R., 2009. Salt karst in the Martian Highlands? (Invited). University of New Mexico, Caswell Silver Distinguished Lecturer, 07 Oct.

- Gillespie, A. R., 2009. Glaciation and paleoclimate in arid Central Asia (Invited). University of New Mexico, Caswell Silver Distinguished Lecturer, 08 Oct.
- Gillespie, A. R., 2009. Very large outburst floods (Invited). GLOCOPH, Haifa, Israel, 25 October.
- Gillespie, A. R., 2009. Spatial heterogeneity in Central Asian paleoclimate (Invited). GLOCOPH, Jerusalem, Israel, 28 October
- Gillespie, A. R., 2009. Glaciation in Central Asia (Invited). Humboldt State University, Arcata, California, 16 November.
- Gillespie, A. R., Abbott, E. A., and Gilson, L., 2009. Residual atmospheric effects in AST005. Temperature-Emissivity Working Group, 36th Joint ASTER Science Team meeting, Westin on Market, San Francisco, California, 10 December.
- Gillespie, A. R., Abbott, E. A., and Gilson, L., 2009. Errors in AST005: due to calibration or atmospheric correction? Radiometric Calibration ACT TIR Working Group, 36th Joint ASTER Science Team meeting, Westin on Market, San Francisco, California, 11 December.
- Mushkin, A., and Gillespie, A., R., 2009. ASTER 3B/3N for relative dating of alluvial surfaces. Geology Working Group, 36th Joint ASTER Science Team meeting, Westin on Market, San Francisco, California, 9 December.
- Mushkin, A., Gillespie, A., R., and Danilina, I., 2009. ASTER 3B/3N for correcting emissivity products. Temperature-Emissivity Working Group, 36th Joint ASTER Science Team meeting, Westin on Market, San Francisco, California, 10 December.
- Mushkin, A., and Gillespie, A., R., 2009. Stand age estimation at Cedar River/Gifford Pinchot (Washington) via ASTER 3B/3N surface roughness estimation. Ecosystem Working Group, 36th Joint ASTER Science Team meeting, Westin on Market, San Francisco, California, 10 December.
- 2010**
- Gillespie, A. R., 2010. Acceptance for the Khubilai Khaan Award, Mongolian Academy of Sciences (invited). Ulaanbaatar, 29 June.
- Gillespie, A. R., 2010. Spectral constraints on the composition of low-albedo slope streaks in the Olympus Mons Aureole, Planetaryum Seminar, Oct 27, University of Washington.
- Ploskey, Z., Gillespie, A., Stone, J., Clark, D., 2010. Glacial chronology of Convict Creek, eastern Sierra Nevada, CA. Graduate Student Research Symposium, Department of Earth and Space Sciences, University of Washington, Seattle, April.
- Wiedmer, M., Montgomery, D. R., Gillespie, A. R., and Greenberg, H., 2010. Flushing Lake Atna: Late Quaternary Megafloods in South-Central Alaska. The Water Center, College of Forest Resources, University of Washington, January 12, <http://water.washington.edu/Outreach/Events/Tuesday/W10/wiedmer.html>
- 2011**
- Batbaatar, J., and Gillespie, A. R., 2011. Ice ablation in arid climates (Invited). Chinese Academy of Sciences, Xining, Qinghai, China. 12 September.
- Gillespie, A. R., 2011. Glaciation in the Tien Shan (invited). ICDP planning meeting, Bishkek, Kyrgyzstan, June.13.
- Gillespie, A. R., 2011. Quaternary glaciation in northern Central Asia (invited). University of Tomsk, July.
- Gillespie, A. R., 2011. Paleoclimatoglogical expedition to NE Tibetan Plateau (Qinghai Plateau) (Invited). Chinese Academy of Sciences, Xining, Qinghai, China. 12 September.
- Wiedmer, M., and Gillespie, A. R., 2011. Megafloods from glacial Lake Atna (invited). University of Tomsk, July.
- Gillespie, A. R., 2011. Glaciation at the three corners of the Tibetan Plateau (Xizang, Qinghai and Gansu) (invited). Tibetan Institute, Chinese Academy of Sciences, Beijing, 11 Sept.
- Gillespie, A. R., 2011. Glaciation in the Gobi Desert (invited). Institute of Earth Environment, Chinese Academy of Sciences, 12 Sept.
- Gillespie, A. R., 2011. Glaciation in the northeastern Tibetan Plateau (invited). Qinghai Institute of Salt Lakes, Chinese Academy of Sciences, 13 Sept.
- Gillespie, A. R., 2011. Glaciation in arid Central Asia (invited). Lanzhou University, China, 28 Sept.
- Gillespie, A. R., 2011. Manuscript preparation and editorial policy for the journal (invited). *Quaternary Research* (invited). Lanzhou University, China, 29 Sept.
- 2012**
- Gillespie, A. R., Abbott, E. A., and Danilina, I., 2012. Is the TIR emissivity of Earth-surface materials a significant function of kinetic temperature? 41st US – Japanese Joint Science Team Meeting, Tokyo, Temperature–Emissivity Working Group, June 13
- Amit, R., Enzel, Y., Crouvi, O., Mushkin, A., Jigjidsuren, B., and Gillespie, A., 2012. The role of active sand seas in forming warm-desert loess sequences and implications to the CLP. Quaternary Research Center Conference and Fieldtrip on Loess, University of Washington, May 16.
- Yehouda Enzel:, Y., Crouvi, O., Amit, R., and Alan Gillespie, A. R., 2012. Intensive winds during glacial times increased sand dunes activity and loess deposition at margins low-latitude warm deserts (invited). Quaternary Research Center Conference and Fieldtrip on Loess, University of Washington, May 21.
- Gillespie, A. R., 2012. Loess in Washington – organization of the field trip. Quaternary Research Center Conference and Field trip on Loess, University of Washington, May 16.

- Gillespie, A. R., 2012. Glacigenic loess near the terminus of the Cordilleran Ice Sheet on the Waterville Plateau. Quaternary Research Center Conference and Field trip on Loess, University of Washington, May 20.
- Gillespie, A. R., 2012. The climatic significance of Tibetan glaciations (invited). Keynote lecture, International Symposium on the uplift of the Qinghai-Tibetan Plateau and its Societal and Environmental Impacts: In celebration of Professor Li Jijun's 80th birthday and his academic career, theories and achievements, Lanzhou University, China, October 10.
- Gillespie, A. R., 2012. Writing scientific papers (Invited). Graduate lecture, Lanzhou University, China, October 11.
- Gillespie, A. R., 2012. University study in the United States and Europe (invited). Graduate lecture, Lanzhou University, China, October 11.
- Gillespie, A. R., 2012. Darhad Glaciations, Mongolia (invited). Kanazawa University, Japan, 26 November.
- Gillespie, A. R., 2012. Yenisei Megafloods from Darhad Basin, Mongolia (invited). Kanazawa University, Japan, 26 November.
- Gillespie, A. R., and Batbaatar, .2012. Sediment cores DBC1 and DBC2, Paleolake Darhad, Mongolia (invited). Kanazawa University, Japan, 26 November.
- Gillespie, A. R., and Abbott, E. A., 2012. Update: Is TIR reflectivity of Earth-surface materials a significant function of kinetic temperature? 42nd US – Japanese Joint Science Team Meeting, Pasadena, Temperature–Emissivity Working Group, December 12.
- Ramsey, M., and Gillespie, A. R., 2012. Is emissivity immutable? Report on an AGU presentation. 42nd US – Japanese Joint Science Team Meeting, Pasadena, Temperature–Emissivity Working Group, December 12.
- 2013**
- Gillespie, A. R., 2013. Geology and the Pacific Northwest (Invited). Methow Conservancy, 4 February, Twisp, Washington.
- J. Batbaatar and Gillespie, A. R., 2013. Glaciation in the Gobi Desert. 43rd US – Japanese Joint Science Team Meeting, Tokyo, Geology Working Group, June 11.
- Gillespie, A. R., Abbott, E. A., and Hulley, G., 2013. 7 Apr 14 43rd US – Japanese Joint Science Team Meeting, Tokyo, Temperature–Emissivity Working Group, June 11.
- 2014**
- Batbaatar, J., & Gillespie, A.R., 2014. Local LGM in the hyperarid Gobi of Mongolia (INVITED). Geology Dept. seminar, Humboldt State University, Arcata CA 7 April.
- Gillespie, A. R., 2014. Ancient glaciation in the Methow (Invited). Methow Valley Information Center, 27 April, Twisp, Washington.
- Gillespie, A. R., 2014. How do the giant canyons on Mars form? (INVITED). Geology Dept. seminar, Humboldt State University, Arcata CA 7 April.
- Gillespie, A. R., Abbott, E. A., and Hulley, G., 2014. AST05 validation experiment. . 44th US – Japanese Joint Science Team Meeting, Tokyo, Temperature–Emissivity Working Group, March 11.
- Pieri, D., and Gillespie, A. R., 2014. Reconciliation of Dragoneye 10—100 cm resolution TIR data with distribution of ground temperatures under a volcanic plume at Turrialba3/22/2014a. 44th US – Japanese Joint Science Team Meeting, Tokyo, Geology Working Group, March 11.