

**DUNCAN ALEXANDER YOUNG, Ph. D.**

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Institute For Geophysics • Jackson School of Geosciences • The University of Texas at Austin  
Austin TX 78758  
United States of America  
Ph: +001 (512) 471 0485  
email: duncan@ig.utexas.edu

**Research Experience**

March 2005-: Investigating problems in glacial-lithospheric and ice-ocean coupling in Antarctica  
Oct. 2004-Feb. 2005: Participated in the UTIG AGASEA survey of the Thwaites Glacier Catchment, Antarctica  
1999-2004: Involved in U.S. Geological Survey planetary mapping program - radar based research in the Rusalka Plains of Venus with a focus on determining lowland resurfacing mechanisms; detailed investigation of Venus' deformation belts  
1997: Geological and geomorphic field mapping & aerial photogeology of Castle Hill Basin, Canterbury, New Zealand.

**Education**

2003: Ph.D, Geology, Southern Methodist University, Dallas TX, U. S. A.  
Dissertation: "*Geological evolution of Venus' Lowlands: A Study of Rusalka Plantia, Venus*"  
1998: B.Sc (Hons.) First Class in Geological Sciences, University of Canterbury, New Zealand  
Dissertation: "*Segmentation of the Craigieburn Faultzone, Castle Hill Basin, North Canterbury*"

**Work History**

2008- : Research Science Associate V, University of Texas Institute of Geophysics, Austin, TX,  
2005-2008 : Vetlesen Postdoctorate Fellow, University of Texas Institute of Geophysics, Austin, TX,  
2004-2005: Scientist, Thwaites Glacier Survey, University of Texas Institute of Geophysics, Austin, TX  
2003-2004: Postdoctorate Fellow, Department of Geological Sciences, University of Minnesota-Duluth, Duluth, MN,  
1998-2003: Teaching/Research Assistant, Department of Geological Sciences, Southern Methodist University, Dallas, TX,  
1998: Teaching Assistant, Department of Geological Sciences, University of Canterbury, New Zealand.

**Service**

Chair and co-Convener of AGU Fall 2007 session "Radar Sounding of Planetary Ices"; Chair of AGU Fall 2003 session "Faulting and Fault-Related Processes on Planetary Surfaces II Posters"  
Reviewer for the U.S.G.S. planetary mapping program, NASA Planetary Geology and Geophysics program, Cassini Data Analysis Program, Mars Data Analysis Program and the Journal of Geophysical Research, Annals of Glaciology, Geophysical Research Letters, Geology and IEEE Transactions on Geoscience and Remote Sensing

**Professional Memberships:**

American Geophysical Union (1999-);  
Sigma Xi (2002-)

### Workshops/Activities

August 2004: Participated in 16th JPL Annual Planetary Science Summer School, Pasadena CA  
 June 2004: Invited seminar "Strain localization and tectonic interactions within Venus' lowlands Constraints from mapping and altimetry", Lunar and Planetary Institute, Houston TX.  
 April 2004: Public presentation " *Mars! New insights from the Martian rovers Spirit and Opportunity* ", Marshall W. Alworth Planetarium, Duluth MN  
 1999: NASA PG & G Volcanism Workshop, Hawai'i, Hawaii; Jet Propulsion Laboratory Surface Coatings Workshop, Hilo, Hawaii.  
 1999-2002: President of the Southern Methodist University Geology Club

### Teaching Experience

1998-2002: Teaching Assistant for "Earth Systems Science", "The Solar System" and "Earth Materials I"; Southern Methodist University  
 1997-1998: Teaching Assistant for "Advanced Structural Geology" and "Introductory Geology"; University of Canterbury, New Zealand

**Citizenship:** New Zealand, United Kingdom

### SCIENTIFIC CONTRIBUTIONS

#### Peer reviewed Publications:

Carter, S. P., D. D. Blankenship, **D. A. Young**, J. W. Holt, Identifying the sources and distribution of subglacial water in radar sounding data: Application to Dome C, East Antarctica, accepted, *Journal of Glaciology*

Blankenship, D. D., **D. A. Young**, W. B. Moore, and J. C. Moore, in press, Radar imaging of Europa's subsurface properties and processes: the view from Earth, in *Europa*, edited by R. T. Pappalardo, W. B. McKinnon, and K. Khurana, The University of Arizona Press, Tucson, AZ.

Carter, S. P., D. D. Blankenship, **D. A. Young**, M. E. Peters, J. W. Holt, and M. J. Siegert, 2009, [Dynamic distributed drainage implied by the flow evolution of the 1996-1998 Adventure Trench subglacial outburst flood](#) , *Earth and Planetary Science Letters*. doi:10.1016/j.epsl.2009.03.019

Holt, J. W., A. Safaeinili, J. J. Plaut, J. W. Head, R. J. Phillips, R. Seu, S. D. Kempf, P. Choudhary, **D. A. Young**, N. E. Putzig, D. Biccari, and Y. Gim, 2008, [Radar sounding evidence for buried glaciers in the southern mid-latitudes of Mars](#), *Science*, 322, 1235-1238, doi:10.1126/science.1164246.

**Young, D. A.**, S. D. Kempf, D. D. Blankenship, J. W. Holt, and D. L. Morse, 2008, 9 (6), Q06006, [New Airborne Laser Altimetry over the Thwaites Glacier Catchment, West Antarctica](#), *Geochemistry, Geophysics, Geosystems*, doi:10.1029/2007GC001935

Diehl, T. M., J. W. Holt, D. D. Blankenship, **D. A. Young**, T. Jordan, and F. Ferraccioli, 2008, [First Airborne Gravity Results over the Thwaites Glacier Catchment, West Antarctica](#), *Geochemistry, Geophysics, Geosystems*, 9, Q04011, doi:10.1029/2007GC001878

J.L. Chen, C.R. Wilson, B.D. Tapley, D. Blankenship, and **D. Young.**, 2008, [Antarctic Regional Ice Loss Rates From GRACE](#), *Earth and Planetary Science Letters*, 266(1-2), p. 140-148, doi:10.1016/j.epsl.2007.10.057

Peters, M. E., D. D. Blankenship, S. P. Carter, **D. A. Young**, S. D. Kempf, and J. W. Holt, 2007, Along-track focusing of airborne radar sounding data from West Antarctica for improving basal reflection analysis and layer detection, *IEEE Transactions on Geoscience and Remote Sensing*, 45(9), 2725-2736, doi:10.1109/TGRS.2007.897416

Hansen V. L. and **Young, D. A.**, 2007, [Venus's evolution: A synthesis](#), in Cloos, M., Carlson, W.D., Gilbert, M.C., Liou, J.G., and Sorensen, S.S., eds., *Convergent Margin Terranes and Associated Regions: A Tribute to W.G. Ernst*: Geological Society of America Special Paper 419, p. 255-273, doi:10.1130/2006.2419(13).

Bingham, R. G., Siegert, M. J., **Young, D. A.** and Blankenship D. D. 2007, [Organised flow from the South Pole to the Filchner-Ronne ice shelf: an assessment of balance velocities in interior East Antarctica using radio-echo sounding data](#), *Journal of Geophysical Research*, 112(F03S27), doi:10.1029/2006JF000556.

Carter, S. P., Blankenship, D. D., Peters, M. E., **Young, D. A.**, Holt, J. W. and Morse, D. L. 2007, [Radar-based subglacial lake classification in Antarctica](#), *Geochemistry, Geophysics, Geosystems*, 8(Q03016), doi: 10.1029/2006GC001408.

Holt, J. W. and Blankenship, D. D. and Morse, D. L. and **Young, D. A.** and Peters, M. E. and Kempf, S. D. and Richter, T. and Vaughan, D. G. and Corr, H., 2006, [New boundary conditions for the West Antarctic ice sheet: subglacial topography of the Thwaites and Smith Glacier catchments](#), *Geophysical Research Letters*, v. 33, L09502, doi:10.1029/2005GL025561

Vaughan, D. G. and Corr, H. F. J. and Ferraccioli, F. and Frearson, N. and O'Hare, A. and Mach, D. and Holt, J. and Blankenship, D. and Morse, D. and **Young, D. A.**, 2006, [New boundary conditions for the West Antarctic ice sheet: subglacial topography beneath Pine Island Glacier](#), *Geophysical Research Letters*, v. 33, L09501, doi: 10.1029/2005GL025588

**Young, D. A.**, and V. L. Hansen, 2005, [Poludnista Dorsa, Venus: History and context of a deformation belt](#), *Journal of Geophysical Research*, 110, E03001, doi:10.1029/2004JE002280

**Young, D. A.**, and V. L. Hansen, [Geological Map of the Rusalka Planitia quadrangle \(V-25\), Venus](#), I-2783 in *Geological Investigations Series*, United States Geological Survey, Reston, VA, 2003. url:<http://pubs.usgs.gov/imap/i2783/>

DeShon, H. R., **Young, D. A.**, and Hansen, V. L., 2000, [Geological evolution of southern Rusalka Planitia, Venus](#), *Journal of Geophysical Research*, 105(E1), p. 6983-6995, doi:10.1029/1999JE001155

#### **Presentations:**

Young, D. A., Blankenship, D. D., Holt, J. W. and Kempf, S. D. (2007). Basal heterogeneity of Thwaites Glacier, Antarctica: Results from advanced ice penetrating radar data. Eos. Trans. AGU, 88(52):Abstract C51A-0077. San Francisco, CA

Young, D. A., Blankenship, D. D., (2007) Mapping West Antarctic subglacial processes using detailed basal morphology: Implications for Thwaites Glacier, based on knowledge gained from the Siple Coast, 2007 West Antarctic Ice Sheet Workshop, Sterling, VA

Young, D. A., Kempf, S. D., Blankenship, D. D., and Holt, J. W. (2007) Comprehensive surface elevations for Thwaites Glacier: Results from AGASEA airborne laser altimetry, 2007 West Antarctic Ice Sheet Workshop, Sterling, VA

Young, D. A., D. D. Blankenship, and J. W. Holt (2007) Subglacial roughness of the West Antarctic Ice Sheet, in *Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES X*, edited by A. K. Cooper and C. R. Raymond et al., USGS Open-File Report 2007-1047, Extended Abstract 056, 1-5, Santa Barbara, CA

Young, D. A., Blankenship, D. D., Holt, J. W., and Morse, D. L.. (2006) Grounding zone geometry of Thwaites, Pope and Smith Glacier, Amundsen Sea Embayment, 2006 West Antarctic Ice Sheet Workshop, Eatonville, WA

Young, D. A., Blankenship, D. D., and Peters, M. E. (2006). Sub-kilometer scale basal roughness of the Siple Coast Ice Streams, West Antarctic Ice Sheet. Eos. Trans. AGU, 87(52):Abstract C41A-0294. San Francisco, CA

- Young, D. A., Blankenship, D. D., Holt, J. W., Morse, D. L., Kempf, S. D., Vaughan, D.G. and Corr, H. G. (2006), An aerogeophysical comparison of a large tabular iceberg and the ice tongues and grounding zones of Thwaites Glacier and Smith Glacier, Amundsen Sea Embayment, West Antarctica, Abstract 0680, 2nd SCAR Open Science Conference, Hobart, Australia
- Young, D., Blankenship, D., Holt, J., Morse, D., Leuro, E., Kempf, S. and Peters, M., (2006) Surface state of Thwaites Glacier and implications for its stress state from airborne laser altimetry and radar sounding, Geophysical Research Abstracts, Vol. 8, 09866, 2006 EGU Meeting, Vienna, Austria
- Young, D. A., Blankenship, D. D., Morse, D. L., Vaughan, D. G. and Holt, J. W., (2005) Buoyancy Distribution Around Ice Sheet Grounding Zones in the Western Amundsen Sea Embayment, Antarctica: Results from the AGASEA Survey, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract C43A-04, San Francisco, CA
- Young, D. A., Blankenship, D. D., Holt, J. W., Morse, D. L., Peters, M. E., Kempf, S. D., and Vaughan, D. G. (2005) Geometric constraints on the Thwaites Glacier Catchment and Walgreen Coast of the West Antarctic Ice Sheet from AGASEA radar sounding and laser altimetry, 2005 West Antarctic Ice Sheet Workshop, Sterling, VA
- Young D. A., (2004) Constraints on Deformation Belts Evolution on Venus, Lunar and Planetary Science Meeting 35 #2129, Houston TX
- Hansen, V. L. and Young D. A., (2004) Plumes as a Mechanism for Equilibrium Resurfacing of Venus, Lunar and Planetary Science Meeting 35 #1627, Houston TX
- Young D. A., (2003) Geological Evolution of Venusian Deformation Belts : Examples from Poludnista Dorsa and Oya Dorsa and Implications, Eos Trans. AGU, 84(46), Fall Meet. Suppl., Abstract P41A-0396
- Young D. A., Bleamaster L. F. III and Hansen V. L. (2002) Volcanism in Contractional Deformation Belts on Venus: Evidence for Point Source Crustal Melting? Western Pacific Geophysics Meeting Abstract SE31C-10, Wellington, New Zealand
- Young D. A. (2002), 'Polygonal' Fabrics on Venus — Polygenetic, Positive and Primary?, Lunar and Planetary Science Meeting 33 #1172, Houston TX
- Hansen V. L., Young D. A., Lang N. P. and Bleamaster L. F. III (2002), The Plains of Aphrodite: Geohistory and Modes of Volcanic Resurfacing, Venus, Lunar and Planetary Science Meeting 33 #1121, Houston TX
- Young D. A. (2001), Regional Lineament Patterns in Rusalka Planitia, Lunar and Planetary Science Meeting 32 #1897, Houston TX
- Young D. A. and Hansen V. L. (2001), Rusalka Complete: Geology of a Venusian Planitia, Lunar and Planetary Science Meeting 32 #2131, Houston TX
- Young D.A. and Hansen V.L. (2001), Rusalka Planitia (V25) Review, USGS Annual Planetary Geologic Mappers Meeting, Albuquerque, NM
- Young D. A. and Hansen V. L. (2000), Initial Mapping of the Rusalka Planitia Quadrangle (V25), Venus, Lunar and Planetary Science Meeting 31 #1622, Houston TX
- Young D.A. and Hansen V.L. (2000), Rusalka Planitia quadrangle (V-25), Venus: Early results , in Abstracts of the Annual Planetary Geologic Mappers Meeting, United States Geological Survey Open file report 01-018.1 Parker T, Tanaka K. L. and Hirsch D. D. (eds.), Flagstaff, AZ
- Young, D. A., Bleamaster, L. F. III and Hansen V. L. (2000), The plains of Aphrodite: A sampling of volcanic resurfacing styles on Venus Eos Trans. AGU, 81(46), Fall Meet. Suppl., Abstract #P52A-05
- Ghent R. R., Bleamaster L. F. III, Young, D. A. and Hansen, V. L. (2000), Venusian crustal plateaus: surface signatures of ancient mantle plumes, Plumes-Lithosphere Interactions Conference, Strasbourg, France