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Curriculum Vitae of John W. Goodge

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RESEARCH INTERESTS

Continental tectonics, metamorphic petrology, structural geology, isotope geochemistry and thermochronology. Continental growth during convergent-margin and collisional orogenesis. Active research in the Transantarctic Mountains of Antarctica, and the subglacial geology of East Antarctica.

EDUCATION

University of California, Los Angeles; 1987, Ph.D. in Geology
University of Montana, Missoula; 1983, M.S. in Geology
Carleton College, Northfield, Minnesota; 1980, B.A. (Distinction) in Geology

AWARDS

Outstanding Teaching Award, University of Minnesota Center for Educational Innovation, 2019
Chancellor's Award for Distinguished Research, UMD, 2013-14
Exceptional Reviewer**,** Geological Society of America, 2008
Fellow of the Geological Society of America, 2005
Mortar Board Teaching Award, SMU, 1998
Golden Mustang Award for Teaching and Scholarship, SMU, 1997
Congressional Antarctic Service Medal, 1986
Outstanding Mention, Geological Society of America Research Grant, 1985
Graduate Fellow, University of California, Los Angeles, 1983-87
Elected to Sigma Xi, Carleton College, 1980
Distinction on Senior Thesis, Carleton College, 1980
Lawrence McKinley Gould Scholarship in Geology, Carleton College, 1978-80

PROFESSIONAL EXPERIENCE

Planetary Science Institute, Tucson, Arizona, Senior Scientist, 2022-present
University of Minnesota, Duluth, Department of Earth & Environmental Sciences; Associate Professor, 2002-2004; Professor, 2004-2022; Emeritus Professor, 2022-present
Australian National University, Research School of Earth Sciences, Canberra; School Visitor, 2000-2015
Southern Methodist University, Department of Geological Sciences; Adjunct Assistant Professor and Research Associate, 1987-1994; Assistant Professor, 1994-1998; Associate Professor, 1998-2002
University of California, Los Angeles, Department of Earth and Space Sciences; Research Associate and Teaching Assistant, 1983-1987
U. S. Geological Survey, Menlo Park; Geologist, 1982-83 (summers)
University of Montana, Dept. of Geology; Research Associate and Teaching Assistant, 1981-83
U. S. Geological Survey, Menlo Park; Geologic Field Assistant, 1980-81
Indiana University, Department of Geology; Associate Instructor (summer Field Geology course, northern Rocky Mountains), 1980
Carleton College, Department of Geology; Teaching Assistant, 1978-80

PROFESSIONAL ASSOCIATIONS (past and present)

American Association for the Advancement of Science; American Geophysical Union; Geochemical Society; Geological Society of America; International Association of Structural/Tectonic Geologists; National Association of Geoscience Teachers; Sigma Gamma Epsilon (Honor Society of Earth Sciences); Sigma Xi

EDITORIAL EXPERIENCE

Associate Editor, *Geochemistry, Geophysics, Geosystems (G^3)*, American Geophysical Union, 2018-2021
Publications Committee, Geological Society of America, term from 2012-2014
Co-Editor, *Lithosphere*, Geological Society of America, 2011-2015
Exceptional Reviewer, *Geological Society of America Bulletin*, 2008
Editorial Board of *Geology*, Geological Society of America, 1989-91
Journal Reviewer: *American Mineralogist, Antarctic Science, Earth Materials Research, Geochemistry, Geophysics, Geosystems (G^3), Geochimica et Cosmochimica Acta, Geology, Geological Society of America Bulletin, Geological Society of America Books, Geosphere, Journal of the Geological Society (London), Journal of Geology, Journal of Metamorphic Geology, Journal of Petrology, Journal of Sedimentary Petrology, Journal of Structural Geology, Lithos, Lithosphere, Nature, Nature Communications Earth & Environment, New Zealand Journal of Geology and Geophysics, Philosophical Transactions of the Royal Society, Precambrian Research, Science, Tectonics, Terra Antartica, Terra Nova, The Cryosphere*

PROFESSIONAL SERVICE

National Research Council (National Academy of Sciences), invited presentation to Committee on Antarctic Solid Earth Science, Polar Research Board; 2014
National Research Council (National Academy of Sciences), invited participant and advisor to Committee on Future Science Opportunities in the Antarctic and Southern Ocean, Polar Research Board; 2011
Chilean National Science and Technology Commission (CONICYT) program review panel, Team Project (Anillos) program; 2011
NSF proposal review panel for Antarctic Geology and Geophysics, NSF Office of Polar Programs; 2011
External Assessor of research at The Australian National University, Canberra, evaluation of research quality in the Research School of Earth Sciences at ANU; 2009-2010
Chilean National Science and Technology Commission (CONICYT) proposal review panel, 3rd National Team Project competition; Chilean and Antarctic Earth Sciences, 2009
NSF proposal review panel for Ice Sheet History and Dynamics, International Polar Year initiative; NSF Office of Polar Programs, 2006
Steering Committee, U.S. Polar Rock Repository (NSF-funded facility at Ohio State University); 2003-2011
Visiting Faculty, Colorado College, Keck Geology Consortium Research Project "Precambrian Geology of central Colorado"; 1996
NSF Antarctic Geology & Geophysics Working Group (advisory panel), NSF Office of Polar Programs; member, 1993-98; Chair, 1996-98
NSF-USGS Antarctic GIS (Geographic Information System) Advisory Panel, NSF Office of Polar Programs and USGS Office of International Programs; 1994
IGCP Project 376 participant: "Pre-Pangea Analysis of Middle Proterozoic and Paleozoic Interaction of Laurentia and Gondwana"; 1994-96
IGCP Project 288 participant: "Gondwanaland Sutures and Foldbelts"; Contributor to "Geodynamic Map of Gondwana", Transantarctic Mountains sector, Antarctica; 1992-94

Proposal Reviewer:
Australian Antarctic Science Program
Australian Research Council
Chilean National Commission for Scientific and Technological Research (CONICYT)
Israel Science Foundation
Italian Anarctic Research Program
U.K. Natural Environment Research Council
U.S. National Science Foundation
Division of Earth Sciences (Tectonics, Petrology & Geochemistry, and Geophysics programs); Division of Polar Programs (Antarctic Earth Sciences, Antarctic Glaciology, Antarctic Integrated Systems Science, Antarctic Instrumentation and Research Facilities, and Arctic Natural Systems programs); Major Research Infrastructure Program; and Division of International Programs

SYMPOSIA & SHORT COURSES CONVENED

NSF-sponsored workshop, *RAID Science Planning Workshop*; convened with Jeff Severinghaus (Scripps/UC-San Diego); La Jolla, California, February 2017

NSF-sponsored Ice Drilling Program Office workshop, *Subglacial Access Drilling Workshop*; convened with Jill Mikucki (U Tennessee) and Ross Powell (N Illinois U); Herndon, Virginia, May 2016

AGU Town Hall meetings, *Scientific Drilling in the Polar Regions*; convened with Mary Albert (Dartmouth); American Geophysical Union annual meeting; San Francisco, 2014, 2015, 2016, 2017, 2018

NSF workshop, *Antarctic Geologic Drilling*; member of organizing committee, convened by Julia Wellner (U Houston); Houston, 2013

GSA professional workshop, *What's Your Problem; What's Your Point*; convened with Nancy Riggs (N. Arizona U.) and Ronadh Cox (Williams College); for early-career geoscientists on preparing and publishing scientific papers; Geological Society of America annual meetings, 2013, 2014

SERC symposium, *Teaching Mineralogy, Petrology and Geochemistry in the 21st Century*, Minneapolis; post-conference field teaching forum convened with Karl Wirth (Macalester College)

Geological Society of America North-Central Section Meeting Symposium, *Deep Earth Science: Prospects for a Deep Underground National Lab*; convened with Dean Peterson (NRRI); Minneapolis, 2005

NSF workshop, *REVEAL: REmote Views and Exploration of Antarctic Lithosphere: Tools for Mapping the Last Continental Frontier*; member of organizing committee, convened by Carol Finn (USGS) and Terry Wilson (Ohio State University); Denver, 2002

LIRA (Lithospheric Investigations of the Ross Sea Area) international workshop convenor, *Ross Orogen: Crustal Structure and Plate Tectonic Significance*; sponsored by Scientific Committee on Antarctic Research; Southern Methodist University, Dallas, 1994

Geological Society of America Cordilleran Section Meeting Symposium, *Petrologic and Tectonic Evolution of Cordilleran Low-Temperature, High-Pressure Metamorphic Terranes*; convened with Brian Patrick (UC-Santa Barbara); 1992

Geological Society of America Annual Meeting Theme Session, *Active Margin of Antarctica—Proterozoic to Recent*; convened with David Kimbrough (San Diego State University), Bruce Luyendyk (UC-Santa Barbara), and Scott Borg (NSF); 1991

GRANTS **Total of major awards (since 1989): $14,031,006**

Current:

Lead PI: NSF Division of Polar Programs, Antarctic Instrumentation & Support; *Collaborative Research: Development of a Rapid Access Ice Drilling (RAID) platform for research in Antarctica: Phase 2 supplement*; 2021-23; UMD award $1,262,609; collaborative project with J. Severinghaus (Scripps Inst. of Oceanography).

Past:

Lead PI: NSF Division of Polar Programs, Antarctic Instrumentation & Support; *Collaborative Research: Development of a Rapid Access Ice Drilling (RAID) platform for research in Antarctica: Phase 2*; 2014-20; UMD award $9,146,498; collaborative project with J. Severinghaus (Scripps Inst. of Oceanography).

PI: NSF Division of Polar Programs, Antarctic Earth Sciences; *Age and composition of the East Antarctic shield by isotopic analysis of granite and glacial till*; 2010-14; $523,759.

PI: Office of Vice President for Research, University of Minnesota, Research Infrastructure Reinvestment Program; *Reinvestment in capabilities of scanning electron microscopy and x-ray diffraction infrastructure at the UMD Research Instrumentation Laboratory*; 2014-15; $136,610 [includes a 50% match from department and college funds within the Swenson College of Science and Engineering].

Lead PI: NSF Office of Polar Programs, Antarctic Instrumentation & Support; *Collaborative Research: Development of a Rapid Access Ice Drilling (RAID) platform for research in Antarctica*; 2012-14; UMD award $1,301,630; collaborative project with J. Severinghaus (Scripps Institution of Oceanography).

PI: NSF Major Research Instrumentation Program; *Acquisition of a low-vacuum scanning electron microscope for teaching and research at the University of Minnesota-Duluth*; 2007-09; $400,934.

Co-PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Collaborative Research: Integrated study of East Antarctic ice sheet tills (ISET): Tracers of ice flow and proxies of the ice-covered continental shield*; supplement to collaborative project with K. Licht (IUPUI) and L. Farmer (University of Colorado); 2008-09; UMD award $18,837.

PI: University of Minnesota Grant-in-Aid of Research, Artistry and Scholarship Program; *Tectonic assembly of the southern Superior Province in northern Minnesota*; 2007-09; $25,971.

Co-PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Collaborative Research: Integrated study of East Antarctic ice sheet tills (ISET): Tracers of ice flow and proxies of the ice-covered continental shield*; collaborative project with K. Licht (IUPUI) and L. Farmer (University of Colorado); 2005-08; UMD award $140,077.

Co-PI: University of Minnesota, Technology-Enhanced Learning (TEL) Grant Program; *GEOWALL development at UMD*; collaborative with N. Wattrus (UMD); 2004-05; $6,000.

PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Glacial proxies of East Antarctic shield basement in Wilkes Land, Antarctica*; 2004-07; $120,372.

Co-PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Collaborative Research: Geophysical Mapping of the East Antarctic Shield Adjacent to the Transantarctic Mountains*; 2003-05; UMD award $99,586; collaborative project with C. Finn (USGS); total award of $231,434 plus aircraft logistical support from NSF and collaboration with researchers from BGR in Germany.

PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Structure and sedimentology of the Beardmore Group, Antarctica: Latest Neoproterozoic to early Paleozoic tectonic evolution of the East Antarctic margin*; 1998-2001; supplement for $13,400.

PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Structure and sedimentology of the Beardmore Group, Antarctica: Latest Neoproterozoic to early Paleozoic tectonic evolution of the East Antarctic margin*; 1998-2001, $270,000.

PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *SHRIMP U-Pb geochronology of Transantarctic Mountains basement*; 2000-01, $80,000.

PI: SMU President's Partners Program; Geology lab equipment proposal: *Acquisition of a GeoScan Enabler*; 1999, $900.

PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Antarctic Working Group for Geology and Geophysics 1996-98* [advisory panel support]; 1996-99, $24,576.

PI: NSF Office of Polar Programs, Antarctic Geology & Geophysics; *Comparative petrologic, structural and geochronometric study of high-grade metamorphic rocks in the Transantarctic Mountains*; 1993-97; $141,720.

PI: NSF Earth Sciences, Tectonics Program; *Pre-Middle Jurassic accretion-related metamorphism in the southern Klamath Mountains, northern California: Phase II*; 1992-96, $120,000.

PI: NSF Polar Earth Sciences; *Conference Support for 1994 International LIRA Workshop: Ross Orogen—Crustal Structure and Plate Tectonic Significance*; 1994-95, $17,396.

Co-PI: NSF Earth Sciences, Instrumentation & Facilities Program; *Upgrade of electron microprobe analytical facility: Acquisition of an EDS system* [50% matching funds from Southern Methodist University]; 1990-93, $35,554.

PI: NSF Polar Earth Sciences; *Petrogenesis and crustal structure of metamorphic rocks in the central Transantarctic Mountains: an integrated petrologic, structural and geochronologic study*; 1989-92, $266,648.

PI: NSF Earth Sciences, Tectonics Program; *Pre-Middle Jurassic accretion-related metamorphism in the south-central Klamath Mountains, northern California*; 1990-91, $98,775.

NSF Polar Earth Sciences; Travel Award to attend *5th Antarctic Earth Science Symposium*, Cambridge; 1987, $1,300.

SMU President's Partners Program; Geology lab equipment proposal: *Acquisition of a projection macroscope*; 1996-97, $2,500.

SMU University Research Council; *Pilot Geologic Study of Precambrian North American Crustal Assembly in the Rocky Mountains of northern Colorado*; 1994, $3,500.

SMU University Research Council; *Participation in International Geological Correlation Project 376 ("Pre-Pangea Laurentian-Gondwanan Connections"), Argentina*; 1994, $3,500.

SMU Institute for the Study of Earth and Man; *Petrologic investigations of metamorphic rocks from accretionary complexes in northern California, and high-grade metamorphic terrains of Antarctica*; 1987-88, $3,800.

BIBLIOGRAPHY

I. Refereed Journal Publications:

1) Cox, S. C., Smith Lyttle, B., and the SCAR GeoMAP Action Group (**Goodge, J.W.**, co-author), 2023, A continent-wide detailed geological dataset of Antarctica - GeoMAP v.2022-08: *Nature Scientific Data*, 10, 250, doi.org/10.1038/s41597-023-02152-9.

2) Fitzgerald, P. G., and **Goodge, J. W.,** 2022, Exhumation and tectonic history of inaccessible subglacial interior East Antarctica from thermochronology on glacial erratics: *Nature Communications*, 13, 6217, doi.org/10.1038/s41467-022-33791-y.

3) **Goodge, J.W.**, Severinghaus, J.P., Johnson, J., Tosi, D., and Bay, R.B., 2021, Deep ice drilling, bedrock coring and dust logging with the Rapid Access Ice Drill (RAID) at Minna Bluff, Antarctica: *Annals of Glaciology*, 62(85-86), 324-339, doi.org/10.1017/aog.2021.13.

4) Brown, D. A., Morrissey, L. J., **Goodge, J. W.,** Hand, M., 2021, Absence of evidence for Palaeoproterozoic eclogite-facies metamorphism in East Antarctica: no record of subduction orogenesis during Nuna development: *Scientific Reports*, 11, article 6717, doi.org/10.1038/s41598-021-86184-4.

5) Brown, D. A., Hand, M., Morrissey, L., & **Goodge, J.**, 2020, Cambrian eclogite-facies metamorphism in the central Transantarctic Mountains, East Antarctica: extending the record of early Palaeozoic high-pressure metamorphism along the eastern Gondwanan margin: *Lithos*, 366-367, 1-19, doi.org/10.1016/j.lithos.2020.105571.

6) **Goodge, J. W.**, 2020, Geological and tectonic evolution of the Transantarctic Mountains, from ancient craton to recent enigma: *Gondwana Research* [Invited GR Focus Review article], 80, 50-122, doi.org/10.1016/j.gr.2019.11.001.

7) **Goodge, J.W.,** 2018, Crustal heat production and estimate of terrestrial heat flow in central East Antarctica, with implications for thermal input to the East Antarctic ice sheet: *The Cryosphere* (Research Article), 12, 491-504, doi.org/10.5194/tc-12-491-2018.

8) **Goodge, J.W.,** 2017, Crustal heat production and estimate of terrestrial heat flow in central East Antarctica, with implications for thermal input to the East Antarctic ice sheet: *The Cryosphere*

(Discussion Paper), doi:doi.org/10.5194/tc-2017-134.

9) **Goodge, J.W.,** Fanning, C.M., Fisher, C.M., and Vervoort, J.D., 2017, Proterozoic crustal evolution of central East Antarctica: Age and isotopic evidence from glacial igneous clasts, and links with Australia and Laurentia: *Precambrian Research*, 299, 151-176, doi:dx.doi.org/10.1016/j.precamres.2017.07.026.

10) Nielson, D.L., Delahunty, D., **Goodge, J.W.,** and Severinghaus, J.P., 2017, Facility for testing ice drills: *Scientific Drilling*, 22, 29–33, doi:10.5194/sd-22-29-2017.

11) **Goodge, J. W.,** and Fanning, C. M., 2016, Mesoarchean and Paleoproterozoic history of the Nimrod Complex, central Transantarctic Mountains, Antarctica: Stratigraphic revisions and relation to the Mawson Continent in East Gondwana: *Precambrian Research*, 285, 242-271, doi:10.1016/j.precamres.2016.09.001.

12) **Goodge, J.W.**, & Severinghaus, J.P., 2016, Rapid Access Ice Drill: a new tool for exploration of the deep Antarctic ice sheets and subglacial geology: *J. Glaciology*, 62(236), 1049-1064, doi.org/10.1017/jog.2016.97.

13) **Goodge, J. W.,** Fanning, C. M., Norman, M., and Bennett, V. C., 2012, Temporal, Isotopic and Spatial Relations of Early Paleozoic Gondwana-Margin Arc Magmatism, Central Transantarctic Mountains, Antarctica: *J. Petrology*, 53 (10): 2027-2065; doi:10.1093/petrology/egs043.

14) **Goodge, J. W.,** Fanning, C. M., Brecke, D. M., Licht, K. J., and Palmer, E. F., 2010, Continuation of the Laurentian Grenville province in western East Antarctica: *Journal of Geology*, 118, 601–619, doi:10.1086/656385.

15) **Goodge, J. W.,** and C. A. Finn, 2010, Glimpses of East Antarctica: Aeromagnetic and satellite magnetic view from the central Transantarctic Mountains of East Antarctica: *Journal of Geophysical Research*, 115, B09103, doi:10.1029/2009JB006890.

16) Myrow, P. M., N. C. Hughes, **J. W. Goodge**, M. Fanning, I. S. Williams, S.-C. Peng, S. K. Tangri, O. N. Barghava, S. K. Parcha, J. A. DiPietro, K. R. Pogue, 2010, Extraordinary transport and mixing of sediment across Himalayan central Gondwanaland during the Cambrian–Ordovician: *Geological Society of America Bulletin*, 122, 1660-1670; doi:10.1130/B30123.1.

17) **Goodge**, **J.W.,** and C. M. Fanning, 2010, Composition and age of the East Antarctic shield in eastern Wilkes Land determined by proxy from Oligocene-Pleistocene glaciomarine sediment and Beacon Supergroup sandstones, Antarctica: *Geological Society of America Bulletin*, 122, 1135-1159; doi 10.1130/B30079.1.

18) **Goodge, J. W.,** Vervoort, J. D., Fanning, C. M., Brecke, D. M. Farmer, G. L., Williams, I. S., Myrow, P. M., DePaolo, D. J., 2008, A positive test of East Antarctica-Laurentia juxtaposition within the Rodinia supercontinent: *Science*, 321, 235-240; doi:10.1126/science.1159189.

19) **Goodge, J. W.**, and Vervoort, J. D., 2006, Origin of Mesoproterozoic A-type granites in Laurentia: Hf isotope evidence: *Earth and Planetary Science Letters*, 243, 711-731; doi: 10.1016/j.epsl.2006.01.040.

20) **Goodge, J. W.**, Williams, I.S., and Myrow, P., 2004, Provenance of Neoproterozoic and lower Paleozoic siliciclastic rocks of the central Ross Orogen, Antarctica: Detrital record of rift-, passive- and active-margin sedimentation: *Geological Society of America Bulletin*, 116, 1253-1279.

21) Myrow, P. M., Fischer, W., and **Goodge, J. W.,** 2002, Wave-modified turbidites: combined-flow shoreline and shelf deposits, Cambrian, Antarctica: *Journal of Sedimentary Research*, 72, 641-656.

22) Myrow, P. M., Pope, M. C., **Goodge, J. W.,** Fischer, W., and Palmer, A. R., 2002, Depositional history of pre-Devonian strata and timing of Ross Orogenic tectonism in the central Transantarctic Mountains, Antarctica: *Geological Society of America Bulletin*, 114, 1070-1088.

23) **Goodge, J. W.,** Myrow, P., Williams, I. S. and Bowring, S., 2002, Age and provenance of the Beardmore Group, Antarctica: Constraints on Rodinia supercontinent breakup: *Journal of Geology*, 110, 393-406.

24) **Goodge, J. W.,** Fanning, C. M., and Bennett, V. C., 2001, U-Pb evidence of ~1.7 Ga crustal tectonism during the Nimrod Orogeny in the Transantarctic Mountains, Antarctica: implications for Proterozoic plate reconstructions: *Precambrian Research*, 112/3-4, 261-288.

25) **Goodge, J. W.,** and Fanning, C. M., 1999, 2.5 billion years of punctuated Earth history as recorded in a single rock: *Geology*, 27, 1007-1010.

26) **Goodge, J. W.**, 1997, Latest Neoproterozoic basin inversion of the Beardmore Group, central Transantarctic Mountains, Antarctica: *Tectonics*, 16, 682-701.

27) Oliver, D. H., and **Goodge, J. W.**, 1996, Leucoxene fish as a micro-kinematic indicator: *Journal of Structural Geology*, 18, 1493-1497.

28) **Goodge, J. W.,** and Dallmeyer, R. D., 1996, Contrasting Thermal Evolution within the Ross Orogen: Evidence from Mineral $^{40}Ar/^{39}Ar$ Ages: *Journal of Geology,* 104, 435-458.

29) **Goodge, J. W.**, and Holdaway, M. J., 1995, Rock-buffered fluid evolution of metapelites in the Picuris Range of northern New Mexico: mineralogical and stable isotope evidence: *Journal of Petrology,* 36, 1229-1250.

30) Peacock, S. M., and **Goodge, J. W.**, 1995, Eclogite-facies metamorphism preserved in tectonic blocks from a lower crustal shear zone, central Transantarctic Mountains, Antarctica: *Lithos*, 36, 1-13.

31) **Goodge, J. W.,** 1995, Pre-Middle Jurassic accretionary metamorphism in the southern Klamath Mountains of northern California, USA: *Journal of Metamorphic Geology*, 13, 93-110.

32) **Goodge, J. W.**, Hansen, V. L., Peacock, S. M., Smith, B. K., and Walker, N. W., 1993, Kinematic evolution of the Miller Range shear zone, central Transantarctic Mountains: *Tectonics*, 12, 1460-1478.

33) Hansen, V. L., **Goodge, J. W.**, Keep, M., and Oliver, D. H., 1993, An asymmetric rifting model for the western margin of North America: *Geology*, 21, 1067-1070.

34) **Goodge, J. W.**, and Renne, P. R., 1993, Mid-Paleozoic olistoliths in eastern Hayfork terrane melange, Klamath Mountains: Implications for late Paleozoic-early Mesozoic Cordilleran forearc development: *Tectonics*, 12, 279-289.

35) **Goodge, J. W.**, Hansen, V. L., Walker, N. W., 1993, Neoproterozoic-Cambrian basement-involved orogenesis within the Antarctic margin of Gondwana: *Geology*, 21, 37-40.

36) **Goodge, J. W.**, and Dallmeyer, R. D., 1992, $^{40}Ar/^{39}Ar$ mineral age constraints on the Paleozoic tectonothermal evolution of high-grade basement rocks within the Ross orogen, central Transantarctic Mountains: *Journal of Geology*, 100, 91-106.

37) **Goodge, J. W.**, Borg, S. G., Bennett, V. C., and Smith, B. K., 1991, Evidence for major pre-Ordovician crustal shortening in West Antarctica: *Earth and Planetary Science Letters*, 102, 58-70.

38) Holdaway, M. J., and **Goodge, J. W.**, 1990, Rock pressure vs. fluid pressure as a controlling influence on mineral stability: An example from New Mexico: *American Mineralogist*, 75, 1043-1058.

39) **Goodge, J. W.**, 1990, Tectonic evolution of a coherent Late Triassic subduction complex, Stuart Fork terrane, Klamath Mountains, northern California: *Geological Society of America Bulletin*, 102, 86-101.

40) **Goodge, J. W.**, 1989b, Polyphase metamorphic evolution of a Late Triassic subduction complex, Klamath Mountains, northern California: *American Journal of Science*, 289, 874-943.

41) **Goodge, J. W.**, 1989a, Evolving early Mesozoic convergent margin deformation, central Klamath Mountains, northern California: *Tectonics*, 8, 845-864.

42) **Goodge, J. W.**, and Hansen, V. L., 1983, Petrology and structure of rocks in the southwest portion of the Okanogan dome, north-central Washington: *Northwest Geology*, 12, 13–24.

II. Refereed Book Chapters and Special Volumes:

1) **Goodge, J. W.**, 2021, The geology of the Transantarctic Mountains [Invited book chapter]: *in* Kleinschmidt, G., *Geology of the Antarctic Continent*, Gebrüder Borntraeger Verlagsbuchhandlung (Borntraeger Science Publishers), Stuttgart, pp. 132-217, 50 figures.

2) **Goodge, J. W.,** 2007, Metamorphism in the Ross Orogen and its bearing on Gondwana margin tectonics: *in* Cloos, M., Carlson, W. D., Gilbert, M. C., Liou, J. G., and Sorensen, S. S., eds., *Convergent Margin Tectonics and Associated Regions: A tribute to W. G. Ernst*, Geological Society of America Special Paper 419, p. 185-203.

3) **Goodge, J. W.,** 2007, Transantarctic Mountains: Geology, *in* Riffenburgh, B., ed., *Encyclopedia of the Antarctic*, New York, Routledge Press, 2, 1007-1012.

4) Finn, C. A., **Goodge, J. W.,** Damaske, D., Fanning, C. M., 2006, Scouting craton's edge in paleo-Pacific Gondwana, *in* Fütterer, D. K., Damaske, D., Kleinschmidt, G., Miller, H., Tessensohn, F., eds., *Antarctica — Contributions to Global Earth Sciences,* Proceedings of the 9th International Symposium on Antarctic Earth Sciences, Potsdam, Germany, Springer-Verlag, Berlin-Heidelberg-New York, p. 165-174.

5) **Goodge, J. W.,** Myrow, P., Phillips, D., Fanning, C.M., and Williams, I.S., 2004, Siliciclastic record of rapid denudation in response to convergent-margin orogenesis, Ross Orogen, Antarctica, *in* Bernet, M., and Spiegel, C., eds., *Detrital thermochronology—Provenance analysis, exhumation, and landscape evolution of mountain belts*: Boulder, Colorado, Geological Society of America Special Paper 378, p. 101–122.

6) **Goodge, J. W.,** 2002, From Rodinia to Gondwana: Supercontinent evolution in the Transantarctic Mountains (invited plenary paper): *in* Gamble, J., and Skinner, D. A., eds., *Antarctica at the Close of a*

Millenium, Wellington, Royal Society of New Zealand Bulletin 35, Proceedings of the 8th International Symposium on Antarctic Earth Science, p. 61-74.

7) **Goodge, J. W.**, and Fanning, C. M., 2002, Precambrian crustal history of the Nimrod Group, central Transantarctic Mountains: *in* Gamble, J., and Skinner, D. A., eds., *Antarctica at the Close of a Millenium,* Wellington, Royal Society of New Zealand Bulletin 35, Proceedings of the 8th International Symposium on Antarctic Earth Science, p. 43-50.

8) **Goodge, J. W.**, Hansen, V. L., and Peacock, S. M., 1992, Multiple petrotectonic events in high-grade metamorphic rocks of the Nimrod Group, central Transantarctic Mountains, Antarctica: *in* Yoshida, Y., Kaminuma, K., and Shiraishi, K., eds., *Recent Progress in Antarctic Earth Science*, Tokyo, Terra Scientific Publishing Company, p. 203-209.

9) Hacker, B., and **Goodge, J. W.**, 1990, Comparison of early Mesozoic high-pressure rocks in the Klamath Mountains and Sierra Nevada: *in* Harwood, D. S., and Miller, M. M., eds., *Paleozoic and Early Mesozoic Paleogeographic Relations; Sierra Nevada, Klamath Mountains, and Related Terranes*: Boulder, Colorado, Geological Society of America Special Paper 255, p. 277-295.

10) Hansen, V. L. and **Goodge, J. W.**, 1988, Metamorphism, structural petrology and regional evolution of the Okanogan complex, northeastern Washington: *in* Ernst, W. G., ed., *Metamorphism and Crustal Evolution of the Western United States*, Rubey Volume No. VII, Englewood Cliffs, N. J., Prentice-Hall, Inc., p. 231-270.

11) Howard, K. A., **Goodge, J. W.**, and John, B. E., 1982, Detached crystalline rocks of the Mohave, Buck and Bill Williams Mountains, western Arizona: *in* Frost, E. G., and Martin, D. L., eds., *Mesozoic-Cenozoic Tectonic Evolution of the Colorado River Region, California, Arizona and Nevada*, San Diego, Cordilleran Publishers, p. 377–392 [nominated in 1988 for U. S. Geological Survey Benchmark Award].

III. Other manuscripts in preparation or review:

1) **Goodge, J. W.,** C. M. Fanning, C. M. Fisher, J. D. Vervoort, and M. J. Buschette, in prep., U-Pb, O and Hf isotope evidence of duration, sources and crustal signatures during granite batholith magmatism in the Ross Orogen, Antarctica, to be submitted to *Lithos*.

IV. Geologic Maps:

1) Cox, S. C., Smith Lyttle, B., **Goodge, J. W.** (Contributor), and SCAR GeoMAP Action Group, 2022, ATA SCAR GeoMAP geology (v.2022-08): GNS Science, Lower Hutt, New Zealand, https://doi.org/10.21420/7SH7-6K05.

2) Howard, K. A., Nielson, J. E., Wilshire, H. G., Nakata, J. K., **Goodge, J. W.,** Reneau, S. L., John, B. E. and Hansen, V. L., 1999, Geologic map of the Mojave Mountains area, Mojave County, western Arizona: U. S. Geological Survey Miscellaneous Investigations Series, I-2308, 1:48,000 scale, 2 sheets.

3) Carr, M. D., Christiansen, R. L., Poole, F. G., and **Goodge, J. W.,** 1997, Bedrock geologic map of the El Paso Mountains in the Garlock and El Paso Peaks 7.5' quadrangles, Kern County, California: U.S. Geological Survey Miscellaneous Investigations Map I-2389, 1:24,000 with pamphlet.

4) **Goodge, J. W.** (Contributor), 1996, Geodynamic Map of Transantarctic Mountains, Antarctica: *in* Unrug, R. (ed.), Geodynamic Map of Gondwana Supercontinent Assembly, Bureau de Recherches Géologiques et Minières, IGCP Project 288: Gondwanaland Sutures and Foldbelts, 1:10,000,000.

5) **Goodge, J. W.,** and Hansen, V. L., 1994, Geologic map of the Omak Lake 15' quadrangle, Okanogan County, Washington: U.S. Geological Survey Geologic Quadrangle Map GQ-1726, 1:62,500, with text, figures, and tables in pamphlet. http://ngmdb.usgs.gov/ngm-bin/pdp/download.pl?q=15325_1226_99

6) **Goodge, J. W.,** Hansen, V. L., Peacock, S. M., Smith, B. K., and Walker, N. W., 1993, Geologic and kinematic map of the Nimrod Group, central Transantarctic Mountains, Antarctica: folded insert in *Tectonics*, v. 12, p. 1460-1478.

7) Howard, K. A., Nielson, J. E., Wilshire, H. G., Nakata, J. K., **Goodge, J. W.,** Reneau, S. L., John, B. E., and Hansen, V. L., 1990, Preliminary geologic map of the Mohave Mountains area, Mohave County, western Arizona: U.S. Geological Survey Open File Report 90-684, 1:48,000, 55 p.

V. Book reviews:

1) **Goodge, J. W.,** 2011, Book Review: *The Transantarctic Mountains: rocks, ice, meteorites and water,* by G. Faure and T. Mensing, Springer Verlag, Berlin, 2010, 804 pp., reviewed for *Antarctic Science* / Volume 23 / Issue 04, pp 413 – 414.

VI. Other reports, datasets and contributions:

1) Cox, S. C., Smith Lyttle, B., and the SCAR GeoMAP Action Group (**Goodge, J.W.**, co-author), 2023, The GeoMAP (v.2022-08) continent-wide detailed geological dataset of Antarctica. PANGAEA database archive, doi.org/10.1594/PANGAEA.951482.

2) **Goodge, John W**.; Fanning, C. Mark; Fisher, Chris M.; Vervoort, Jeff D. (2022) Transantarctic Mountains granitoid isotopic data: Data Repository for U of Minnesota (https://conservancy.umn.edu/handle/11299/227193), doi.org/10.13020/stzs-xd13.

3) Burton-Johnson, A., Dziadek, R., Martin, C., Halpin, J. A., Whitehouse, P. L., Ebbing, J., Martos, Y., Martin, A., Schroeder, D., Shen, W., Ritz, C., **Goodge, J.**, Van Liefferinge, B., Pattyn, F., Reading, A., Ferraccioli, F., 2020, Antarctic Geothermal Heat Flow: Future research directions: A White Paper written for the SERCE (Solid Earth Response and influence on Cryospheric Evolution) Scientific Research Program of the Scientific Committee on Antarctic Research (SCAR), 9 p.

4) A. Balter, L. H. Beem, **Goodge, J.,** S. Gulick, C. Gustafson, D. Harwood, J. Lamp, A. Leventer, A. Schevenell, M. R. Siegfried, P. Spector, J. Stone, S. Tulaczyk, S. Warny, P. Winberry, D. Winebrenner, D. Young, 2019, *Assessment of East Antarctic Ice Sheet sensitivity to warming and its potential for contributions to sea level rise*. Ice Drilling Program Subglacial Access Working Group Science Planning Workshop, Herndon, Virginia, USA, 1-18.

5) R. Ackert, **Goodge, J.,** N. Lifton, R. D Powell, P. Spector, J. Stone, D. Young, 2016, *Access Drilling Priorities in the Antarctic Continental Interior*. Subglacial Access Working Group Science Planning Workshop, Herndon, Virginia, USA, 1-6.

6) **Goodge, J. W.,** Report to Antarctic Support Associates, for *Antarctic Infrastructure Modernization for Science* (AIMS) project, August 2015.

7) Harvey, R., and **Goodge, J.,** 2015, Gneiss from the Nimrod Group; text for museum display at McMurdo Station, Antarctica.

8) Wellner, J. S., Anderson, J. B., DeConto, R., **Goodge, J. W.,** Harwood, D., and Williams, T., 2014, A Way Forward to Discover Antarctica's Past; report to the National Science Foundation, Office of Polar Programs, results of the Antarctic Geologic Drilling workshop, Houston, November 2013.

9) **Goodge, J. W.,** D. M. Brecke, C. M. Fanning, J. D. Vervoort, I. S. Williams, and P. Myrow, 2007, Pieces of Laurentia in East Antarctica: in A. K. Cooper, P. Barrett, H. Stagg, B. Storey, E. Stump,

and W. Wise (eds.), Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES X, USGS Open-File Report 2007-1047, Extended Abstract 055, 4 p.

10) **Goodge, J. W.,** 2007, Proxies of the East Antarctic shield: Composition and age of ice-covered basement from sedimentary and glacial provenance: in A. K. Cooper, P. Barrett, H. Stagg, B. Storey, E. Stump, and W. Wise (eds.), Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES X, USGS Open-File Report 2007-1047, Extended Abstract 132, 4 p.

11) Brecke, D.M., and **J.W. Goodge**, 2007, Provenance of glacially transported material near Nimrod Glacier, East Antarctica: Evidence of the ice-covered East Antarctic shield: in A. K. Cooper, P. Barrett, H. Stagg, B. Storey, E. Stump, and W. Wise (eds.), Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES X, USGS Open-File Report 2007-1047, Extended Abstract 125, 4 p.

12) Anderson, E. D., Finn, C. A., Damaske, D., Abraham, J. D., Goldmann, F., **Goodge, J. W.,** and Braddock, P., 2006, Aeromagnetic and gravity data over the central Transantarctic Mountains (CTAM), Antarctica: A website for the distribution of data and maps: U. S. Geological Survey Open-File Report OF06-1255, 21 p. [URL: http://pubs.usgs.gov/of/2006/1255/]

13) Finn, C. A., Anandakrishnan, S., **Goodge, J.,** Panter, K., Siddoway, C., 2003, Potential of airborne geophysical capabilities discussed: EOS, Transactions of the American Geophysical Union (meeting report), v. 84, p. 4.

14) **Goodge, J. W.,** Exposed basement geology of the Transantarctic Mountains; what we think we know; in Finn, C., Anandakrishnan, S., Goodge, J., Panter, K., Siddoway, C., and Wilson, T., 2002, REVEAL: REmote Views and Exploration of Antarctic Lithosphere Workshop: The future of Antarctic airborne geophysical capabilities, U. S. Geological Survey Open-File Report 03-065, p. 73-74.

15) Finn, C., Anandakrishnan, S., **Goodge, J.,** Panter, K., Siddoway, C., and Wilson, T., 2002, REVEAL: REmote Views and Exploration of Antarctic Lithosphere Workshop: The future of Antarctic airborne geophysical capabilities—Workshop Report and executive summary to the National Science Foundation, U. S. Geological Survey Open-File Report 03-065, 129 p.

16) Rowell, A. J., **Goodge, J. W.**, Encarnacion, J., and Paulsen, T., 1997, Group Report: Basement Rocks of the Central Transantarctic Mountains (TAM): Report prepared for the NSF Workshop on the Transantarctic Mountains, Ohio State University, 4 pp.

17) **Goodge, J. W.,** 1995, LIRA Workshop Report: Ross Orogen: Crustal Assembly and Plate Tectonic Significance: *Terra Antartica*, v. 2, no. 1, p. 71-77.

18) **Goodge, J. W.,** 1995, Workshop delves into research on Antarctic's Ross Orogen: *Eos*, v. 76, no. 21, p. 212.

19) **Goodge, J. W.**, Walker, N. W., and Bracchi, K. A., 1994, Geologic investigations in the Lanterman Metamorphic Complex, northern Victoria Land, Antarctica: *Antarctic Journal of the United States*, v. 29, no. 5, p. 26-27.

20) **Goodge, J. W.**, Hansen, V. L., Walker, N. W., 1991, Geologic relations of the upper Nimrod Glacier area, central Transantarctic Mountains: Evidence for multiple orogenic history: *Antarctic Journal of the United States*, v. 26, p. 4-6.

21) **Goodge, J. W.**, Hansen, V. L., Peacock, S. M., and Smith, B. K., 1990, Metamorphic rocks in the Geologists and Miller Ranges, Nimrod Glacier area, central Transantarctic Mountains: *Antarctic Journal of the United States*, v. 25, p. 35-36.

22) Borg, S. G., **Goodge, J. W.**, Bennett, V. C., DePaolo, D. J., and Smith, B. K., 1987, Geochemistry of granites and metamorphic rocks: central Transantarctic Mountains: *Antarctic Journal of the United States*, v. 22, p. 21-23.

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VII. Electronic media and teaching activities:

1) Wirth, K. R., **Goodge, J. W.,** Perkins, D., and Stokes, A., 2011, Teaching in the Field: Case Studies from Northern Minnesota, Field Trip Guide, SERC Cutting Edge Workshop on *Teaching Mineralogy, Petrology and Geochemistry in the 21st Century*, University of Minnesota, Minneapolis, MN.

2) Wirth, K.R., **Goodge, J.,** Perkins, D., and Stokes, A., 2011, An excursion to the classic bedrock localities of northeastern Minnesota with a focus on teaching and learning in the field, *in* Miller, J.D., Hudak, G.J., Wittkop, C., and McLaughlin, P.I., eds., *Archean to Anthropocene: Field Guides to the Geology of the Mid-continent of North America*: Geological Society of America Field Guide 24, Annual Meeting, Minneapolis, p. 483–503, doi:10.1130/2011.0024(24).

3) **Goodge, J. W.,** 2007, Electron probe micro-analyzer (EPMA), Geochemical Instrumentation and Analysis Techniques, Integrating Research and Education, Science Education and Resource Center (SERC) website [URL: serc.carleton.edu/research_education/geochemsheets/techniques/EPMA.html]

4) **Goodge, J. W.,** 2007, Back-scattered electron detector (BSE), Geochemical Instrumentation and Analysis Techniques, Integrating Research and Education, Science Education and Resource Center (SERC) website [URL: serc.carleton.edu/research_education/geochemsheets/bse.html]

5) **Goodge, J. W.,** 2007, Energy-dispersive x-ray analysis system (EDS), Geochemical Instrumentation and Analysis Techniques, Integrating Research and Education, Science Education and Resource Center (SERC) website [URL: serc.carleton.edu/research_education/geochemsheets/eds.html]

6) **Goodge, J. W.,** 2007, Element mapping, Geochemical Instrumentation and Analysis Techniques, Integrating Research and Education, Science Education and Resource Center (SERC) website [URL: serc.carleton.edu/research_education/geochemsheets/elementmapping.html]

7) Henry, D., and **Goodge, J. W.,** 2007, Wavelength-dispersive x-ray spectroscopy (WDS), Geochemical Instrumentation and Analysis Techniques, Integrating Research and Education, Science Education and Resource Center (SERC) website [URL: serc.carleton.edu/research_education/geochemsheets/wds.html]

8) **Goodge, J. W.,** 2003, What's in a mineral? Extending mineralogy with electron microprobe analysis (*on-line laboratory resource*): NSF-NAGT workshop *Teaching Petrology in the 21st Century*, convened at Montana State University, Bozeman; awarded *On the Cutting Edge Exemplary Teaching Activity* [URL: serc.carleton.edu/NAGTWorkshops/petrology/teaching_examples/24581.html]

9) **Goodge, J. W.,** 2003, What's in a mineral? Extending mineralogy with electron microprobe analysis (*laboratory exercise*): NSF-NAGT workshop *Teaching Petrology in the 21st Century*, convened at Montana State University, Bozeman.

10) **Goodge, J. W.,** and Hansen, V. L., with contributions from Teaching Assistants, 2003, Laboratory Exercises in Earth System Science: prepared for Department of Geological Sciences, UMD, includes 13 earth system science labs.

11) **Goodge, J. W.,** and Hansen, V. L., with contributions from Teaching Assistants, 1997, Laboratory Exercises in Earth System Science: prepared for Department of Geological Sciences, SMU, includes 11 earth science labs.

VIII. Blog posts:

1) Scientist-at-Work blog "Rocks, Ice and Science in Antarctica", *Scientist at Work: Notes from the Field* series in *The New York Times*, 2010-11:

On the Trail of Antarctica's Geological Secrets, Scientists begin research to build a better picture of the continent hidden beneath the polar ice cap of Antarctica, by John Goodge, December 7, 2010, https://scientistatwork.blogs.nytimes.com/2010/12/07/on-the-trail-of-antarcticas-geological-secrets/

Snowing in Antarctica, Waiting for transport at McMurdo station in Antarctica, scientists are at the mercy of the weather, by John Goodge, December 10, 2010, https://scientistatwork.blogs.nytimes.com/2010/12/10/snowing-in-antarctica/

Katabatic Winds of Antarctica, When katabatic winds blow down from the ridges, activity is limited in an Antarctic camp, by John Goodge, December 15, 2010, https://scientistatwork.blogs.nytimes.com/2010/12/15/katabatic-winds-of-antarctica/

Unraveling the History Beneath the Ice, To geologists, exposures of rocks in Antarctica are like a window through the edge of the ice sheet into the old continental crust below, by John Goodge, December 28, 2010, https://scientistatwork.blogs.nytimes.com/2010/12/28/unraveling-the-history-beneath-the-ice/

Rocks, Zircon Zapping and a Big Shrimp, Geologists preparing to leave Antarctica look ahead to a year of geochemical analysis, by John Goodge, January 7, 2011, https://scientistatwork.blogs.nytimes.com/2011/01/07/rocks-zircon-zapping-and-a-big-shrimp/

As Winter Nears, Leaving the Ice, As the summer research season winds down, two geologists depart Antarctica, a desolate place where no one is alone, by Jeff Vervoort and John Goodge, January 20, 2011, https://scientistatwork.blogs.nytimes.com/2011/01/20/as-winter-nears-leaving-the-ice/

Answering Questions About Antarctica, John Goodge, a professor of geological sciences at the University of Minnesota-Duluth, answers readers' questions about his expedition to Antarctica, by John Goodge, January 22, 2011, https://scientistatwork.blogs.nytimes.com/2011/01/22/answering-questions-about-antarctica/

Rocks, Ice and Science in Antarctica (slideshow), Geologists John Goodge and Jeff Vervoort brought home rocks — and photographs — from their research expedition in Antarctica, January 21, 2011, https://www.nytimes.com/slideshow/2011/01/21/science/20110121-antarctica.html/

2) Project blogs for the Rapid Access Ice Drill, 2016-2020 (www.rapidaccessicedrill.org/blog).

IX. Conference papers presented (student co-authors highlighted by *):

1) Fitzgerald, P. G., and **Goodge, J.W.**, 2023, What lies beneath continental ice sheets? Application of detrital thermochronology to reveal the thermal and tectonic history of interior central East Antarctica, Thermo2023, Riva del Garda, Italy.

2) **Goodge, J. W.**, 2022, Beyond ice coring — wide aperture exploration of the deep ice sheets (Invited Keynote address): IPICS Open Science Conference, October 2-9, Crans Montana, Switzerland.

3) Goodge, B. H.*, Bandli, B., Kourkoutis, L. F., and **Goodge, J. W.**, 2022, Electrons rock: multiscale analysis of subgrain deformation boundaries in Antarctic garnets; Microscopy and Microanalysis Annual Meeting, Portland, August 2022.

4) Fitzgerald, P. G., and **Goodge, J. W.**, 2021, Multi-method detrital-cobble thermochronology on glacial erratics: Deducing a cooling and exhumation history of interior East Antarctica from beneath an ice sheet: Thermo2020/21, 17th International Conference on Thermochronology, Santa Fe, September 2021.

5) Gunning, K.*, Gaschnig, R., Doe, M., and **Goodge, J. W.**, 2021, Resolving supercontinent models with multi-mineral provenance studies of Proterozoic sedimentary rocks in the southwest US and East Antarctica: Geological Society of America Annual Meeting, Portland, 2021.

6) **Goodge, J. W.,** 2021, "Geology of East Antarctic lithosphere", East Antarctic lithosphere meeting, International Lithosphere Program, Hobart, Tasmania, May 2021.

7) Severinghaus, J., and **Goodge, J.**, 2021, "A Gen-2 calibration borehole with the U.S. Rapid Access Ice Drill (RAID)?", Invited presentation at 2nd Generation IceCube Polar Science Workshop, Madison, Wisconsin, 2021.

8) Daniel, C. G., Indares, A., **Goodge, J. W.**, and Moecher, D. P., 2020, GEON 14 enigmas and advances in understanding the crustal evolution and paleogeography of early Mesoproterozoic North America: Geological Society of America Annual Meeting, Montreal, 2020.

9) Boor, E.*, Carpenter, L.*, Krauss, H.*, Wojtowicz, E.*, Brengman, L. A., **Goodge, J.**, Hansen, V., 2020, Origin of Neoarchean metasedimentary rocks near Pike Lake, Vermilion District, Northeast Minnesota: Geological Society of America, North-Central Section Meeting, Duluth, Minnesota, 2020.

10) Brown, D.A.*, Hand, M., Morrissey, L. J., Tamblyn, R.*, and **Goodge, J. W**., 2019, Cambrian eclogite-facies metamorphism in the central Transantarctic Mountains, East Antarctica: extending the record of early Palaeozoic high-pressure metamorphism along the eastern Gondwanan margin: in Glorie S, Wise T and Dutch R, 2019, SGTSG and SGSEG 2019 abstracts: Biennial meeting of the Specialist Group for Tectonics and Structural Geology and the Specialist Group in Solid Earth Geophysics, Convergence on the Coast, Geological Society of Australia, Port Lincoln, South Australia, Report Book 2019/00019, Department for Energy and Mining, South Australia, Adelaide.

11) Buddington, A. M., **Goodge, J. W.**, & Wang, D.*, 2019, Comparing Paleoproterozoic orthogneisses in northern Idaho with glacial igneous clasts of East Antarctica; evidence for linkage between northwest Laurentia and East Antarctica during Columbia supercontinent assembly: Geological Society of America Annual Meeting, Phoenix, 2019.

12) **Goodge, J.**, & Fanning, C. Mark, 2019, Origin and provenance signature of Mesoproterozoic A-type granites in Laurentia based on O-isotope compositions: Geological Society of America Annual Meeting, Phoenix, 2019.

13) Hansen, J. A.*, McMillan, N. J., Dutrow, B. L., Mount, C.*, Henry, D. J., & **Goodge, J. W.**, 2019, Provenance analysis of sediments related to the Cambrian Ross Orogen, Antarctica: Laser-induced breakdown spectroscopy analysis of detrital tourmaline: Geological Society of America Annual Meeting, Phoenix, 2019.

14) **Goodge, J.**, 2019, The 2.0-1.1 Ga piercing points connecting western Laurentia, East Antarctica and Australia in Columbia and Rodinia: Geological Society of America Annual Meeting, Phoenix, 2019.

15) **Goodge, J.W.,** 2019, Exploration of the subglacial interface and bedrock in East Antarctica using the Rapid Access Ice Drill: NSF-sponsored Subglacial Access Planning Workshop, Herndon, VA, Invited presentation.

16) **Goodge, J.W.** and Fitzgerald, P.G., 2019, Origin and exhumation history of central East Antarctic igneous crust obtained from glacial erratics and by subglacial access drilling: XIII International Symposium on Antarctic Earth Sciences, Incheon, Republic of Korea, Invited Keynote presentation.

17) **Goodge, J.W.,** 2019, Crustal heat production and terrestrial heat flow in central East Antarctica, with implications for thermal input to the East Antarctic ice sheet: XIII International Symposium on Antarctic Earth Sciences, Incheon, Republic of Korea.

18) **Goodge, J.W.,** 2019, Ross Orogen: One-hundred forty-five million years of Gondwana-margin convergent plate evolution: XIII International Symposium on Antarctic Earth Sciences, Incheon, Republic of Korea.

19) **Goodge, J.W.,** 2018, Multidisciplinary approaches to exploration of the subglacial geology in East Antarctica: Ninth Symposium on Polar Science (Invited Paper), Japanese Institute of Polar Research (NIPR), Tokyo, Japan.

20) Mount, C.*, McMillan, N. J., Dutrow, B. L., Henry, D. J., and **Goodge, J. W.,** 2018, Tourmaline as an indicator of the provenance of detrital sediments: Linkage between the calc-alkaline arc and forearc basin of the Ross Orogen, Transantarctic Mountains: Geological Society of American Annual Meeting, Indianapolis**.**

21) **Goodge, J. W.**, 2018, Development and promise of the Rapid Access Ice Drill for deep ice-sheet exploration: SCAR/IASC Open Science Conference (Invited Paper), POLAR2018, Davos, Switzerland.

22) Fanning, C. M., and **Goodge, J. W.,** 2018, U-Pb, O and Hf isotope evidence of duration, sources and crustal signatures during granite batholith magmatism in the Ross Orogen, Antarctica: 15th International Conference on Gondwana, International Association for Gondwana Research, Xi'an, China.

23) **Goodge, J.,** and Severinghaus, J., 2017, Current status of the RAID project: AGU Town Hall meeting on Scientific Drilling in the Polar Regions; M. Albert and J. Goodge, conveners, AGU annual meeting, New Orleans.

24) Severinghaus, J., **Goodge, J.,** and Bay, R., 2017, Progress toward a Rapid Access Ice Drill (RAID) for reconnaissance drilling of deep ice, bedrock, and borehole observatories on the Antarctic Plateau: Antarctic Earth Sciences Meeting, Bainbridge Island, Washington.

25) **Goodge, J. W.,** Vervoort, J. D., Fanning, C. M., Fisher, C. M., 2017, Relationship Between Central East Antarctica, Australia and Laurentia in the Columbia and Rodinia Supercontinents: Proterozoic Crustal Linkages from Age and Isotopic Compositions of Glacial Igneous Clasts: American Geophysical Union annual meeting, New Orleans.

26) **Goodge, J. W.,** Fanning, C. M., Fisher, C. M., Vervoort, J. D., 2017, Age and isotopic constraints for the Proterozoic evolution of central East Antarctica and relationship to Australia and Laurentia in the Columbia and Rodinia supercontinents: Geological Society of America Annual Meeting, Seattle.

27) Salerno*, R.A., **Goodge, J.W.,** Vervoort, J.D., 2017, The generation and rapid evolution of Neoarchean crust in the Vermilion Granitic Complex, Superior province of Northern Minnesota: Geological Society of America Annual Meeting, Seattle.

28) Salerno*, R. A., **Goodge, J. W.,** and Vervoort, J. D., 2017, Short-interval deposition, metamorphism, and intrusion in the Neoarchean Vermilion Granitic Complex, Superior province, Northern Minnesota, Institute of Lake Superior Geology annual meeting, Wawa, Ontario.

29) Hunt*, A., and **Goodge, J. W.,** 2017, Field and petrographic evidence of migmatite formation near Lake Kabetogama, Voyageurs National Park, northern Minnesota, Institute of Lake Superior Geology annual meeting, Wawa, Ontario.

30) Nielson, D. L., Delahunty, C., **Goodge, J. W.,** and Severinghaus, J. P., 2016, Rapid Access Ice Drill (RAID) for sampling of Antarctic bedrock; Arctic Technology Conference, St. Johns, Newfoundland**.**

31) **Goodge, J. W.,** 2016, Opportunities with the Rapid Access Ice Drill; Subglacial Access Drilling Workshop; co-sponsored by NSF and the Ice Drilling Program Office, Dartmouth; Herndon, VA.

32) **Goodge, J. W.**, 2015, Rapid Access Ice Drill: A new tool for exploration of the deep Antarctic ice sheets and subglacial geology, Continental Scientific Drilling Meeting, University of Minnesota, Minneapolis, sponsored by the Continental Scientific Drilling Coordination Office and LacCore.

33) **Goodge, J. W.,** Fanning, C. M., and Vervoort, J. D., 2015, Proterozoic crustal history of central East Antarctica, XII International Symposium on Antarctic Earth Science (ISAES 2015), Goa, India**.**

34) Fanning, C. M., and **Goodge, J. W.,** 2015, Role of the Nimrod Group, Central Transantarctic Mountains, in the Mawson Continent, XII International Symposium on Antarctic Earth Science (ISAES 2015), Goa, India.

35) **Goodge, J. W.,** and Severinghaus, J. P., 2014, Rapid Access Ice Drill: A New Tool for Exploration of the Deep Antarctic Ice Sheets and Subglacial Geology; annual meeting of the American Geophysical Union, San Francisco.

36) **Goodge, J. W.,** Fanning, C. M., Fisher, C. M., Vervoort, J. D., and Buschette*, M. J. (*UMD B.S. student*), 2014, U-Pb, O and Hf isotope evidence of duration, sources and crustal signatures during granite batholith magmatism in the Ross Orogen, Antarctica; annual meeting of the American Geophysical Union, San Francisco.

37) **Goodge, J. W.,** and Severinghaus, J. P., 2014, Rapid Access Ice Drill: A new tool for exploration of the deep Antarctic ice sheets and subglacial geology; annual meeting of the Geological Society of America, Vancouver.

38) **Goodge, J. W.,** Fanning, C. M., Fisher, C. M., Vervoort, J. D., and Buschette*, M. J. (*UMD B.S. student*), 2014, U-Pb, O and Hf isotope evidence of duration, sources and crustal signatures during granite batholith magmatism in the Ross Orogen, Antarctica; annual meeting of the Geological Society of America, Vancouver.

39) Cox, R., **Goodge, J.,** and Riggs, N., 2014, What's Your Problem, What's Your Point?; An Early Career Workshop on Writing Scholarly Papers; workshop at the 2014 annual meeting of the Geological Society of America, Vancouver.

40) **Goodge, J. W.,** 2014, Ice Drilling and Sub-glacial Coring (invited oral presentation); NSF/NASA workshop on Instrumentation for Polar Glaciology and Geophysics Research (IPGGR); Linthicum Heights, Maryland.

41) Fisher, C., Vervoort, J., Lewis, R. S., Gaschnig, R. M., **Goodge, J.,** Jansen, A. C., and Wang, D., 2014, A bimodal belt of ~1.86 to 2.66 Ga tonalitic gneisses in northwest Laurentia: U-Pb and Lu-Hf constraints on the evolution of North America; Joint Rocky Mountain/Cordilleran Section meeting, Bozeman, Montana.

42) Cox, R., **Goodge, J.,** and Riggs, N., 2013, What's Your Problem, What's Your Point?; An Early Career Workshop on Writing Scholarly Papers; workshop at the 2013 annual meeting of the Geological Society of America, Denver.

43) **Goodge, J. W.,** Fanning, C. M., Vervoort, C. M., and Fisher, C., 2013, Mesoproterozoic and Paleoproterozoic igneous crust of central East Antarctica: Age and origins revealed from glacial clasts; Goldschmidt meeting meeting of the Geochemical Society, Florence, Italy.

44) **Goodge, J.,** and Severinghaus, J., 2013, Progress toward a rapid access ice drill for deep drilling of basal ice sheets and sub-ice bedrock in Antarctica; 7th International Workshop on Ice Drilling Technology, University of Wisconsin, Madison.

45) **Goodge, J.,** and Severinghaus, J., 2013, Progress toward a rapid access ice drill for deep drilling of basal ice sheets and sub-ice bedrock in Antarctica; Antarctic Geologic Drilling Workshop, University of Houston, Houston.

46) Young, D. A., Blankenship, D. D., **Goodge, J. W.,** Finn, C. A., and Severinghaus, J. P., Aerogeophysical site selection for the Rapid Access Ice Drill project; Antarctic Geologic Drilling Workshop, University of Houston, Houston.

47) **Goodge, J. W.,** Fanning, C. M., Vervoort, C. M., and Fisher, C., 2013, Archean, Paleoproterozoic and Mesoproterozoic crust of central East Antarctica: New insights on subglacial geology strengthen Rodinia ties to western Laurentia; [**invited paper**] annual meeting of the Geological Society of America, Denver.

48) Fisher, C. M., Vervoort, J. D., Jansen, A. C., Lewis, R. S., Gasching, R. M., and **Goodge, J. W.,** 2013, Precambrian crystalline basement rocks of northwest Laurentia: constraining the formation and evolution of North America; annual meeting of the Geological Society of America, Denver.

49) Nissen*, C. I. (*UMD M.S. student*), Fanning, C. M., and **Goodge, J. W.,** 2013, New evidence of Proterozoic metamorphic events in East Antarctica from in-situ U-Pb age dating of monazite in metamorphic glacial clasts, central Transantarctic Mountains, Antarctica; annual meeting of the Geological Society of America, Denver.

50) **Goodge, J. W.,** Fanning, C. M., Vervoort, C. M., Fisher, C., and Nissen*, C. I. (*UMD M.S. student*), 2013, Archean, Paleoproterozoic and Mesoproterozoic crust of central East Antarctica: New insights on subglacial geology from proxy geologic materials; annual meeting of the American Geophysical Union, San Francisco.

51) **Goodge, J. W.,** 2012, Progress toward Rapid Access Ice Drilling, AGU Town Hall on Scientific Drilling in the Polar Regions, American Geophysical Union Annual Meeting, San Francisco.

52) **Goodge, J. W.,** Fanning, C. M., Vervoort, J. D., and Radakovich*, A. L. (*UMD M.S. student*), 2012, More SWEAT: Discovery of Mesoproterozoic and Paleoproterozoic igneous crust in East Antarctica strengthens the case for Laurentia-Antarctica connections in Rodinia, Geological Society of America Abstracts with Programs, v. 44, n. 7, p. 599, Annual Meeting, Charlotte.

53) **Goodge, J. W.,** 2012, Geology of the Transantarctic Mountains: Working models and future opportunities, **Invited Keynote Presentation**, 18th International Symposium on Polar Sciences, Korean Polar Research Institution, Jeju, Korea.

54) **Goodge, J. W.,** Fanning, C. M., Norman, M. D., and Bennett, V. C., 2011, Temporal, isotopic and spatial relations of early Paleozoic Gondwana-margin arc magmatism, central Transantarctic Mountains, Antarctica: Geological Society of America, Annual Meeting, Minneapolis.

55) **Goodge, J. W.**, 2011, Beneath the veil: Integration of geophysical imaging and proxy geologic sampling of ice-covered Antarctica", **keynote paper**, 11th International Symposium on Antarctic Earth Sciences, Edinburgh, Scotland.

56) **Goodge, J. W.,** 2011, Detrital zircons as a proxy of ice-covered Antarctic geology: Examples from ancient sediments, recent glacial deposits, and offshore realms, **keynote paper**, 11th International Symposium on Antarctic Earth Sciences, Edinburgh, Scotland.

57) **Goodge, J. W.,** 2011, Rapid Access Ice Drilling in search of old ice and old rocks, oral presentation in session *International exploration in East Antarctica: legacies and new opportunities*, 11th International Symposium on Antarctic Earth Sciences, Edinburgh, Scotland.

58) **Goodge, J. W.**, and Bandli, B. R., 2010, Intracrystalline deformation of garnet in a quartz matrix during high-strain shear: Geological Society of American Annual Meeting, Denver.

59) **Goodge, J. W.,** Fanning, C. M., and Vervoort, J. D., 2010, Proterozoic crustal evolution in Laurentia and East Antarctica as sampled by granite magmas: Geological Society of American Annual Meeting, Denver. [**invited talk** in symposium on Proterozoic tectonics of North America]

60) **Goodge, J. W.,** Fanning, C. M., Brecke*, D. M. (*UMD M.S. student*), Licht, K. J., and Palmer*, E. F. (*IUPUI M.S. student*), 2009, Continuation of the Laurentian Grenville Province in western East Antarctica: Geological Society of America, annual meeting, Portland.

61) Hudak, G. J., Miller, J. D. Jr, Peterson, D. M., **Goodge, J.,** Wattrus, N., Severson, M. J., And Larson, P., 2009, The Precambrian Research Center at the University of Minnesota Duluth: teaching the next generation of economically-oriented field geologists: Geological Society of America, annual meeting, Portland.

62) **Goodge, J. W.,** and C. M. Fanning, 2009, Discovery of Grenville-age and older Proterozoic crustal rocks along the palaeo-Pacific margin of East Antarctica: Implications for the ice-covered East Antarctic shield and geologic ties to western Laurentia; **invited paper** at the 2009 international Fermor meeting "Rodinia; Supercontinents, Superplumes and Scotland", sponsored by the Geological Society of London; Edinburgh, Scotland.

63) **Goodge, J. W.,** Vervoort, J. D., Fanning, C. M., Brecke*, D. M. (*UMD M.S. student*), Farmer, G. L., Williams, I. S., Myrow, P. M., DePaolo, D. J., 2007, Pieces of Laurentia in East Antarctica: American Geophysical Union meeting, San Francisco, California.

64) **Goodge, J. W.,** 2007, Detrital zircon record of crustal assembly and orogenic evolution along the paleo-Pacific margin of Antarctica [invited paper]; Ores & Orogenesis Symposium, Arizona Geological Society, September 24-30, Tucson, Arizona.

65) Mogk, D., Clark, C. E., Dutrow, B., **Goodge, J.,** Henry, D., Ketcham, R., Mueller, P., Swapp, S., Vervoort, J., and Wirth, K., 2007, Web resources for teaching geochemical instrumentation and analysis; Geological Society of America Annual Meeting (28–31 October 2007).

66) Myrow, P. M., Hughes, N., **Goodge, J.,** Fanning, C. M., and Williams, I., 2007, Scale and significance of transport of sediment in East Gondwanaland during the Cambrian; Geological Society of America Annual Meeting (28–31 October 2007).

67) **Goodge, J. W.,** Brecke*(*UMD M.S. student*), D. M., Fanning, C. M., Vervoort, J. D., Williams, I. S., and Myrow, P., 2007, Pieces of Laurentia in East Antarctica: *10th International Symposium on Antarctic Earth Sciences,* Santa Barbara, California.

68) **Goodge, J. W.,** 2007, Proxies of the East Antarctic shield: Composition and age of ice-covered basement from sedimentary and glacial provenance: *10th International Symposium on Antarctic Earth Sciences,* Santa Barbara, California.

69) Brecke*, D. M. (*UMD M.S. student*), and **J. W. Goodge**, 2007, Provenance of glacially transported material near Nimrod Glacier, East Antarctica: Evidence of the ice-covered East Antarctic shield, *10th International Symposium on Antarctic Earth Sciences,* Santa Barbara, California.

70) **Goodge, J. W.,** Fanning, C. M., Brosch*, K. M. (*UMD B.S. student*), and Curelli*, D. K. *(UMD B.S. student*), 2006, Composition and age of East Antarctic shield in Wilkes Land determined by proxy samples of Oligocene-Holocene glaciomarine sediment: Geological Society of America Annual Meeting, Philadelphia, Invited for Theme Session T138: "Using Detrital Zircon Geochronology to Answer Geologic Questions We Formerly Could Not Ask".

71) **Goodge, J. W.,** and Vervoort, J. D., 2005, Crustal origin of ~1.4 Ga Laurentian A-type granites from Hf isotope compositions, *Geological Society of America Abstracts with Programs*, v. 37, no. 7, presented in Theme Session 132: *Accretionary Orogens in Space and Time.*

72) **Goodge, J. W.,** and Vervoort, J. D., 2005, Hf isotope compositions of Laurentian anorogenic granites: 15th Goldschmidt Conference (The Geochemical Society), Moscow, Idaho.

73) **Goodge, J.,** Finn, C., Damaske, D., Abraham, J., Moeller, H.-D., Anderson, E., Roland, N., Goldmann, F., Braddock, P., and Rieser*, M. (*UMD M.S. student*), 2004, Aeromagnetic and gravity data reveal crustal structure and tectonic history of the central Transantarctic Mountains region, *Eos, Transactions of the American Geophysical Union*, v. 85, no. 47, T11A-1237.

74) **Goodge, J.,** Finn, C., Damaske, D., Abraham, J., Moeller, H.-D., Anderson, E., Roland, N., Goldmann, F., Braddock, P., and Rieser*, M. (*UMD M.S. student*), 2004, Crustal structure of Ross Orogen revealed by aeromagnetics and gravity, *Geological Society of America Abstracts with Programs*, v. 36, no. 5, p. 495.

75) Goodge, J., 2003, Plate-margin reactivation of ancient cratonic shields**:** *Geological Society of America Abstracts with Programs*, v. 35, no. 6, p. 557.

76) Finn, C., **Goodge, J.,** Damaske, D., and Roland, N., 2003, Aeromagnetic and gravity survey of shield basement along the central Ross margin of East Antarctica: 9th International Symposium on Antarctic Earth Sciences, Potsdam, Germany.

77) **Goodge, J.,** Myrow, P., Williams, I.S., Phillips, D., and Fanning, C.M., 2003, Rift- to active-margin sedimentation in Neoproterozoic and lower Paleozoic siliciclastic rocks of the central Ross Orogen, Antarctica: Detrital record of provenance and orogenic denudation rates: 9th International Symposium on Antarctic Earth Sciences, Potsdam, Germany.

78) **Goodge, J. W.**, Williams, I.S., Phillips, D., Myrow, P., and Fanning, C.M., 2002, Siliciclastic record of rapid denudation in response to convergent-margin orogenesis, Ross Orogen, Antarctica: *Geological Society of America Abstracts with Programs*, v. 34, no. 6, p. 484.

79) **Goodge, J. W.**, 2002, Nature of the East Antarctic shield in the Transantarctic Mountains: Invited keynote paper, NSF-sponsored workshop "REVEAL: REmote Views and Exploration of Antarctic Lithosphere: Tools for mapping the last continental frontier", Denver.

80) **Goodge, J. W.**, 2002, Neoproterozoic to early Paleozoic record of Rodinia breakup and Gondwana-margin convergence in East Antarctica [invited paper]: *in* Preiss, V. P., Geoscience 2002: Expanding Horizons; 16th Australian Geological Convention, Adelaide; no. 67, p. 120.

81) **Goodge, J. W.**, 2002, Nature of the East Antarctic shield along the Pacific margin of Antarctica [invited paper]: *in* Preiss, V. P., Geoscience 2002: Expanding Horizons; 16th Australian Geological Convention, Adelaide; no. 67, p. 229.

82) Williams, I., **Goodge, J.,** Myrow, P., Burke, K., and Kraus, J., 2002, Large scale sediment dispersal associated with the Late Neoproterozoic assembly of Gondwana: *in* Preiss, V. P., Geoscience 2002: Expanding Horizons; 16th Australian Geological Convention, Adelaide; no. 67, p. 238.

83) **Goodge, J. W.**, Fanning, C. M., Williams, I. S., and Myrow, P. M., 2001, Zircon age links between Proterozoic Laurentia and East Antarctica: comparison of ~1.7 and ~1.4 Ga signatures: *Geological Society of America Abstracts with Programs*, v. 33, no. 6, p. A-207.

84) Myrow, P. M., Fischer, W. (*Colorado College B.S. student*), and **Goodge, J.W.**, 2001, Wave-modified turbidites: record of combined flows in Cambrian deposits of Starshot Formation, Antarctica: *Geological Society of America Abstracts with Programs*, v. 33, no. 6, p. A-163.

85) **Goodge, J. W.**, and Fanning, C. M., 2001, Revised Precambrian crustal history of the Nimrod Group, central Transantarctic Mountains, Antarctica: EUG XI, European Union of Geosciences, Strasbourg, p. 376.

86) Miranda*, E. A. (*SMU B.S. student*), and **Goodge, J. W.**, 2000, Interaction of deformation and magmatism in the Idaho Springs-Ralston shear zone, Colorado: *Geological Society of America Abstracts with Programs*, v. 32, no. 7, p. 453.

87) **Goodge, J. W.**, Myrow, P. M., and Williams, I. S., 2000, Age and provenance of the Beardmore Group, Antarctica: Constraints on Rodinia supercontinent breakup: *Geological Society of America Abstracts with Programs*, v. 32, no. 7, p. 9.

88) Pope, M. C., Myrow, P. M., Fischer*, W. (*Colorado College B.S. student*), and **Goodge, J.W.**, 2000, Early Cambrian tectonically-induced drowning of the Shackleton carbonate platform, Transantarctic Mountains, Antarctica: *Geological Society of America Abstracts with Programs*, v. 32, no. 7, p. 225.

89) Deering*, S. K. (*SMU M.S. student*), and **Goodge, J. W.,** 1999, Structural history of the Beardmore Group: Central Transantarctic Mountains, Antarctica: *Geological Society of America Abstracts with Programs*, v. 31, no. 7, p. 118.

90) **Goodge, J. W.**, 1999, From Rodinia to Gondwana: Invited Plenary Address to *8th International Symposium of Antarctic Earth Sciences*, Wellington, New Zealand, p. 5-6.

91) **Goodge, J. W.**, and Fanning, C. M., 1999, 2.5 Billion Years of Punctuated Earth History as Recorded in a Single Rock from the Nimrod Group, Central Transantarctic Mountains: *8th International Symposium of Antarctic Earth Sciences, Wellington*, New Zealand, p.120.

92) **Goodge, J. W.**, Paulsen, T., Deering*, S. K. (*SMU M.S. student*), Encarnación, J., and Watkeys, M., 1999, Progressive(?) Deformation of Supracrustal Rocks in the Ross Orogen, Central Transantarctic Mountains: *In* Skinner, D.N.B., ed., *Proceedings of 8th International Symposium on Antarctic Earth Sciences*: Wellington, New Zealand, p. 121.

93) Myrow, P., and **Goodge, J. W.**, 1999, Reinterpretation of Depositional and Tectonic Setting of Neoproterozoic Strata, Transantarctic Mountains: *In* Skinner, D.N.B., ed., *Proceedings of 8th International Symposium on Antarctic Earth Sciences*: Wellington, New Zealand, p. 222.

94) **Goodge, J. W.** and Deering*, S. K. (*SMU B.S. student*), 1997, Radial fractures around mineral inclusions in garnet and epidote: Evidence of decompression during mid-crustal orogenesis: *Eos, Trans. Amer. Geophys. Union*, v. 78, no. 46, p. F787.

95) **Goodge, J. W.**, 1997, Neoproterozoic to early Paleozoic tectonics in the Beardmore Glacier area of the Ross Orogen: Transantarctic Mountains Workshop, Ohio State University, Columbus.

96) **Goodge, J. W.** and Siddoway, C. S., 1997, Mineral reactions and petrogenetic implications of Fe-Mn-andalusite, northern Wet Mountains, Colorado: *Geological Society of America Abstracts with Programs*, v. 29, p. 11.

97) Kohl*, J. A. (*SMU B.S. student*), **Goodge, J. W.**, and Hansen, V. L., 1997, Kinematic evolution and crustal conditions of the Idaho Springs-Ralston Shear Zone, Colorado: *Geological Society of America Abstracts with Programs*, v. 29, p. 18. [Jennifer Kohl received a Best Student Paper Award for her oral presentation]

98) **Goodge, J. W.** and Walker, N. W., 1996, Basin-inversion model for latest Neoproterozoic deformation of the Beardmore Group, central Transantarctic Mountains, Antarctica: *Geological Society of America Abstracts with Programs*, v. 28, no. 7, p. 61.

99) **Goodge, J. W.,** Walker, N. W., and Dallmeyer, R. D., 1995, Thermal and kinematic history of the Ross orogen, Antarctica: *Geological Society of America Abstracts with Programs*, v. 27, no. 6, p. 126.

100) **Goodge, J. W.**, and Dallmeyer, R. D., 1995, Contrasting basement kinematics and cooling histories within the Ross orogen, Antarctica: *7th International Symposium on Antarctic Earth Sciences*, Siena, Italy.

101) **Goodge, J. W.**, Bracchi*, K. A. (*SMU M.S. student*), and Walker, N. W., 1994, Evidence of oblique displacement during Ross orogenesis in northern Victoria Land, Antarctica: *Geological Society of America Abstracts with Programs*, v. 26, no. 7, p. 49.

102) Walker, N. W., and **Goodge, J. W.**, 1994, Tectonic significance of 650-1100 Ma detrital zircons from the Neoproterozoic Goldie Formation, Beardmore Group, central Transantarctic Mountains, Antarctica: *Geological Society of America Abstracts with Programs*, v. 26, no. 7, p. 49.

103) Hansen, V. L., Keep*, M. (*SMU Ph.D. student*), Oliver*, D. H. (*SMU Ph.D. student*), and **Goodge, J. W.**, 1993, Asymmetric rifting of the western margin of North America: *Geological Society of America Abstracts with Programs*, v. 25, p. 171.

104) **Goodge, J. W.**, and Peacock, S. M., 1993, P-T-t history of high-pressure tectonites in the Transantarctic Mountains: Evidence of oblique collisional events: *Geological Society of America Abstracts with Programs*, v. 25, p. 425.

105) **Goodge, J. W.**, Hansen, V. L., and Walker, N. W., 1993, Tectonics of Precambrian basement along the Pacific margin of Antarctica and relation to western North America: *Geological Society of America Abstracts with Programs*, v. 25, p. 11-12.

106) **Goodge, J. W.**, 1992, Cogenetic Permo-Triassic melange and blueschist terranes of the central Cordillera, California and Oregon: *Geological Society of America Abstracts with Programs*, v. 24, p. 27.

107) **Goodge, J. W.**, and Renne, P. R., 1991, Mid-Paleozoic petrotectonic signature of accretionary belts in the southern Klamath Mountains, California: *Geological Society of America Abstracts with Programs*, v. 23, p. 480.

108) Hansen, V. L., and **Goodge, J. W.**, 1991, High strain rates in the Miller Range shear zone, Transantarctic Mountains: Evidence of deep-crustal plate boundary deformation: *Geological Society of America Abstracts with Programs*, v. 23, p. 304.

109) Walker, N. W., and **Goodge, J. W.**, 1991, Significance of Late Archean - Early Proterozoic U-Pb ages of individual Nimrod Group detrital zircons and Cambrian plutonism in the Miller Range, Transantarctic Mountains: *Geological Society of America Abstracts with Programs*, v. 23, p. 306.

110) **Goodge, J. W.**, Hansen, V. L., and Peacock, S. M., 1991, Petrotectonic history of high-grade metamorphic rocks in the central Transantarctic Mountains, Antarctica, and implications for Proterozoic crustal evolution: *6th International Symposium on Antarctic Earth Sciences*, Saitama, Japan, p. 172.

111) **Goodge, J. W.**, 1991, Precambrian crustal evolution of the East Antarctic craton in the Transantarctic Mountains: *Eos, Trans. Amer. Geophys. Union*, v. 72, p. 298.

112) **Goodge, J. W.**, and Dallmeyer, R. D., 1990, Early Paleozoic uplift of high-grade metamorphic rocks in the central Transantarctic Mountains: $^{40}Ar/^{39}Ar$ evidence: *Geological Society of America Abstracts with Programs*, v. 22, no. 7, p. 144.

113) **Goodge, J. W.**, Hansen, V. L., Peacock, S. M., and Smith, B. K., 1990, Deep-crustal ductile deformation within the central Transantarctic Mountains: *Eos, Trans. Amer. Geophys. Union*, v. 71, p. 643.

114) **Goodge, J. W.**, Borg, S. G., Smith, B. K., and Bennett, V. C., 1989, Structural, thermobarometric, and isotopic evidence of pre-Ordovician crustal shortening in the central Transantarctic Mountains: *Eos, Trans. Amer. Geophys. Union*, v. 70, p. 1362.

115) **Goodge, J. W.**, and Holdaway, M. J., 1989, Isotopic evidence of inhibited fluid flow in quartzite and pelitic schist, Picuris Range, New Mexico: *Geological Society of America Abstracts with Programs*, v. 21, no. 5, p. 85.

116) **Goodge, J. W.**, and Hacker, B. R., 1989, Margin-parallel variation in lower Mesozoic North American Cordilleran subduction complexes: *Geological Society of America Abstracts with Programs*, v. 21, no. 5, p. 85.

117) Holdaway, M. J., Geving*, R. L. (*SMU M.S. student*), **Goodge, J. W.**, Dickerson, R. P., and Dutrow, B. L., 1987, The case for retrograde chlorite in staurolite-garnet-two-mica schist: *Geological Society of America Abstracts with Programs*, v. 19, p. 705.

118) **Goodge, J. W.**, and Borg, S. G., 1987, Metamorphism and crustal structure in the Miller Range, Central Transantarctic Mountains: *5th International Symposium on Antarctic Earth Sciences*, Cambridge, England, p. 53.

119) **Goodge, J. W.**, 1987, Polyphase metamorphism of early Mesozoic oceanic rocks in the central Klamath Mountains, California: *Geological Society of America Abstracts with Programs*, v. 19, no. 6, p. 382.

120) **Goodge, J. W.**, 1986, Relations of the Stuart Fork and North Fork terranes in the central Klamath Mountains, northern California: *Geological Society of America Abstracts with Programs*, v. 18, p. 109.

121) **Goodge, J. W.**, 1985, Widespread blueschist assemblages in the Stuart Fork terrane, central Klamath Mountains, northern California: *Geological Society of America Abstracts with Programs*, v. 17, p. 357.

122) **Goodge, J. W.**, 1983, Reorientation of folds by progressive mylonitization, Okanogan dome, north-central Washington: *Geological Society of America Abstracts with Programs*, v. 15, p. 323.

123) **Goodge, J. W.**, 1980, Migmatites from the Vermilion Granitic Complex, northern Minnesota: in Meyers, P. E. (ed.), *26th Annual Institute on Lake Superior Geology*, p. 13–14.

IX. Theses:

Goodge, J. W., 1987, Polyphase metamorphic evolution of the Stuart Fork terrane, a late Triassic subduction complex in the Klamath Mountains, northern California: unpubl. Ph.D. dissertation, University of California, Los Angeles, 228 p.

Goodge, J. W., 1983, Fold reorientation and quartz microfabric in Okanogan dome mylonite zone, Washington: Kinematic and tectonic implications: unpubl. M.S. thesis, University of Montana, Missoula, 65 p.

Goodge, J. W., 1980, Migmatites from the Vermilion Granitic Complex, Minnesota: unpubl. B.A. thesis, Carleton College, Northfield, Minnesota, 110 p.

ANTARCTIC FIELD RESEARCH EXPERIENCE

I have completed 15 deep-field seasons in Antarctica in tent camps in the central Transantarctic Mountains and northern Victoria Land, and all in remote settings great distances from the main US base at McMurdo. I have a cumulative deep-field experience of greater than 110 weeks in the field. Each of my field seasons has involved ground and air travel over areas characterized by high relief, high altitude, crevasses, steep slopes of mixed snow/ice/rock, avalanches, blue ice, and ice-cored moraines. I have extensive experience with helicopters (UH-1N, Bell 212, A-Star), small fixed-wing aircraft (Dornier, Twin Otter), and large fixed-wing aircraft (LC-130), all in deep-field operations for put-ins, pull-outs, and close support operations. I am experienced with gale-force katabatic winds, whiteouts, long-distance snowmobile and sled travel (thousands of km), crevasse navigation, field repair of snowmobiles under harsh conditions, treatment of frostbite, and an aircraft mishap requiring rescue. I have introduced 19 new student and professional scientists to Antarctic deep-field projects, plus 14 more personnel on drilling project field trials. Past field colleagues include Jared Abraham, Eric Anderson, Bryan Banks, Ryan Bay, Vickie Bennett, Scott Borg, Kim Bracchi, Devon Brecke, Detlef Damaske, Don DePaolo, Sarah Deering, Tanya Dreyer, Mark Fanning, Carol Finn, Woodward Fischer, Felix Goldmann, Vicki Hansen, Jay Johnson, Kathy Licht, Jim Mattinson, Paul Myrow, Emerson Palmer, Simon Peacock, Mike

Pope, Michael Rieser, Mike Roberts, Jeff Severinghaus, Brad Smith, Dylan Taylor, Delia Tosi, Jeff Vervoort, and Nick Walker.

SYMPOSIA AND WORKSHOPS ATTENDED

2019 13th International Symposium on Antarctic Earth Sciences, Incheon, Republic of South Korea; 3 oral papers given, including one invited Keynote presentation
2019 NSF-sponsored Subglacial Access Planning Workshop, Herndon, Virginia; invited paper presented
2018 Ninth Symposium on Polar Science, Japanese Institute of Polar Research, Tokyo, Japan; invited paper presented
2018 SCAR/IASC Open Science Conference, *POLAR2018*, Davos, Switzerland; invited paper presented
2017 Rapid Access Ice Drill (RAID) Science Planning workshop, La Jolla; co-convener and presenter
2016 Subglacial Access Drilling Workshop, co-sponsored by NSF and the Ice Drilling Program Office, Dartmouth; Herndon, VA; co-convener and presenter
2015 Continental Scientific Drilling Meeting, sponsored by the Continental Scientific Drilling Coordination Office and LacCore, University of Minnesota, Minneapolis; invited paper presented
2014 Instrumentation for Polar Glaciology and Geophysics Research (IPGGR); Linthicum Heights, Maryland; invited paper presented
2013 7th International Ice Drilling Workshop, Madison; paper presented
2013 Antarctic Geologic Drilling Workshop, Houston (co-organizer); invited paper presented
2012 18th International Symposium on Polar Sciences, Korean Polar Research Institution, Jeju, Republic of South Korea; invited Keynote presentation
2011 SERC symposium, "Teaching Mineralogy, Petrology and Geochemistry in the 21st Century"; Minneapolis; co-led session "Using the SEM to Enhance Learning" with Rachel Beane (Bowdoin College); co-led post-conference field trip with Karl Wirth (Macalester College)
2011 11th International Symposium on Antarctic Earth Sciences, Edinburgh, Scotland; 3 oral papers given, including two invited Keynote presentations.
2009 Geological Society of London Fermor conference "Rodinia; Supercontinents, Superplumes and Scotland"; Edinburgh, Scotland, September 2009; invited paper presented
2007 Ores and Orogenesis Symposium, Arizona Geological Society, Tuscon, Arizona; invited Keynote paper presented
2007 10th International Symposium on Antarctic Earth Sciences, Santa Barbara, California; 3 papers presented
2006 NSF-sponsored workshop "Transantarctic Mountains: New Opportunities for Multi-disciplinary Research", Columbus, Ohio State University, invited discipline group leader
2005 15th Goldschmidt Conference (The Geochemical Society), Moscow, Idaho; paper presented
2004 50th Institute on Lake Superior Geology, Duluth
2003 9th International Symposium on Antarctic Earth Sciences, Potsdam, Germany; 2 papers presented
2003 NAGT-NSF workshop "Teaching Petrology in the 21st Century"; Montana State University, Bozeman, teaching module presented
2002 NSF workshop "REVEAL: REmote Views and Exploration of Antarctic Lithosphere: Tools for mapping the last continental frontier" (co-convener); Denver.
2002 16th Australian Geological Convention, Adelaide; 2 invited papers presented.
1999 8th International Symposium on Antarctic Earth Sciences, Wellington, New Zealand; 4 papers presented, including invited Plenary Address, *From Rodinia to Gondwana*
1995 7th International Symposium on Antarctic Earth Sciences, Siena, Italy; paper presented
1994 Antarctic GIS Workshop; U. S. Geological Survey, Reston, Virginia; paper presented
1993 Workshop on the Assembly of Gondwana; University of North Carolina, Chapel Hill; paper presented
1992 GSA Penrose Conference "Precambrian tectonics and the dawn of the Phanerozoic", Death Valley, California; paper presented
1991 GSA Short Course "Thermochronology: Applications to Tectonics, Petrology and Stratigraphy"
1991 6th International Symposium on Antarctic Earth Sciences, Saitama, Japan; paper presented
1990 GSA Penrose Conference "Tectonic evolution of transpressional margins", Bellingham, Washington; poster presented
1990 GSA Short Course "Metamorphic Pressure-Temperature-Time Paths"
1989 Workshop on the Antarctic International Lithosphere Project (ANTALITH), National Academy of Sciences, Washington, D.C.

1988 GSA Penrose Conference "Paleozoic-early Mesozoic paleogeographic relations between the Klamath Mountains, northern Sierra and North America", Redding, California; paper presented
1987 5th International Symposium on Antarctic Earth Sciences, Cambridge, U.K.; paper presented
1984 GSA Penrose Conference "Structural style and deformation fabrics of accretionary complexes", Eureka, California

INVITED SCIENTIFIC PRESENTATIONS

2019 Invited Keynote presentation; XIII International Symposium on Antarctic Earth Sciences, Incheon, Republic of Korea
2018 Invited Keynote presentation; Ninth Symposium on Polar Science, Japanese Institute of Polar Research, Tokyo, Japan
2018 SCAR/IASC Open Science Conference, *POLAR2018*, Davos, Switzerland; invited paper presented
2017 NSF workshop, *RAID Science Planning Workshop*; La Jolla, California; invited paper presented
2016 *Subglacial Access Drilling Workshop*, co-sponsored by NSF and the Ice Drilling Program Office, Dartmouth; Herndon, Virginia; invited paper presented
2015 *Continental Scientific Drilling Meeting*, sponsored by the Continental Scientific Drilling Coordination Office and LacCore, University of Minnesota, Minneapolis; invited paper presented
2014 NASA/NSF workshop, *Instrumentation for Polar Glaciology and Geophysics Research*; Linthicum Heights, Maryland; invited paper presented
2013 *Antarctic Geologic Drilling Workshop*, Houston; invited paper presented
2013 Geological Society of America, Annual Meeting Theme Session T157 *Regional to Global Perspectives on the Formation, Assembly, and Tectonic Evolution of Western North America from the Neoarchean through the Mesoproterozoic*; invited paper presented
2012 Invited Keynote presentation, 18th International Symposium on Polar Sciences, Korean Polar Research Institution, Jeju, South Korea
2012 AGU Town Hall on *Scientific Drilling in the Polar Regions*, American Geophysical Union Annual Meeting, San Francisco, invited paper presented
2011 Invited Keynote presentations (2), 11th International Symposium on Antarctic Earth Sciences, Edinburgh, Scotland
2009 Geological Society of London Fermor conference, *Rodinia; Supercontinents, Superplumes and Scotland*; Edinburgh, Scotland, invited paper presented
2007 Invited Keynote paper; *Ores and Orogenesis Symposium*, Arizona Geological Society, Tuscon, Arizona
2002 16th Australian Geological Convention, Adelaide, Australia; two invited papers presented
1999 Invited Plenary Address; 8th International Symposium on Antarctic Earth Sciences, Wellington, New Zealand

INVITED TALKS (general public lectures indicated by †)

Australian Antarctic Division, and CRC Antarctic Climate & Ecosystems, Hobart, 2015
Australian National University, Canberra
  Research School of Earth Sciences, 1998
  Research School of Earth Sciences, 2000
  Research School of Earth Sciences, 2015
Caltech, Division of Geological and Planetary Science, 1987
Carleton College, Northfield Minnesota, Department of Geology, 2011, 2016
Colorado College, Department of Geology, 1996
Cornell University, School of Applied & Engineering Physics, 2019
Curtin University, Department of Applied Geology, Perth, 2015
Dallas-Ft. Worth Area Hard Rock Club, 1987
Dallas Museum of Natural History, 1999 †
Da Vinci Science Collegium, Dallas, 2001 †
Directorate for Geosciences, National Science Foundation, Arlington, VA, 2014
Durham University (UK), Department of Geography, 2016
Geological Society of Australia, Tasmania Division, Hobart, 2015
Geological Society of Minnesota, Minneapolis, 2020
Indiana University-Purdue, Indianapolis, 2004
Macquarie University, Dept. of Geology, Sydney, Australia, 2000

McMurdo Station, Antarctica, Public science lectures, 1998, 2017, 2020 †
Mesabi Range Geological Society, 2004 †
Minnesota Geological Society, 2020 †
Mobil Research & Development Corp., Dallas, 1993
National Academy of Sciences, Polar Research Board, 2011
National Center for Earth-surface Dynamics, Sip of Science series, Minneapolis, 2014 †
North Dakota State University, Fargo, Department of Geological Sciences, 2006
Ohio State University, Dept. of Geology and Byrd Polar Research Center, 1990
Southern Methodist University
    Godbey Lecture Series, 1996 †
    Chapter of Sigma Xi, 1993
    Dept. of Geological Sciences, 1987
St. Thomas University, St. Paul, MN, Dept. of Geology, 2004
Syracuse University, Syracuse, NY
    Dept. of Earth Sciences, 2013
    Dept. of Geological Sciences, 2004
University of Copenhagen, Centre for Ice and Climate, 2016
University of Georgia, Dept. of Geology, 1989
University of Kansas, Dept. of Geology, 2003
University of Minnesota-Duluth
    Sustainability Forum, 2014 †
    Swenson College of Science & Engineering, College Colloquium, 2014 †
    Department of Geological Sciences, 2013
    Department of Geological Sciences, 2006
    Department of Geological Sciences, 2003
University of Minnesota, Twin Cities, Department of Geology & Geophysics, 2011
University of Minnesota, Twin Cities, Department of Geology & Geophysics, 2006
University of Missouri, Dept. of Geological Sciences, 1993
University of New Mexico, Dept. of Earth & Planetary Sciences, 1989
University of North Carolina, Chapel Hill, Department of Geology, 1993
University of Texas at Arlington, Department of Geology, 1994
University of Texas at Dallas
    Geosciences Program, 1993
    Geosciences Program, 1990
University of Western Australia, Center for Exploration Targeting, Perth, 2015
University of Western Australia, Institute of Advanced Studies, Perth, 2015 †
Washington State University, School of Earth and Environmental Sciences, 2012
Washington University, St. Louis, Dept. of Earth & Planetary Sciences, 1993
Western Washington University, Dept. of Geology, 2015

UNIVERSITY AND COMMUNITY SERVICE

UMD:

UEA Organizing Committee, 2021
Department Merit Review Committee, 2018-19
Chair, faculty search committee (Mineralogy), 2014-15
Graduate Education Council (system), 2011-2014
Director of Graduate Studies, Geological Sciences, 2010-13
Faculty Advisor, UMD Geology Club and SGE Chapter
Faculty Director, Research Instrumentation Lab, SCSE
University (system), Search Committee for Director of new Science and Technology Interdisciplinary Research Institute, 2007-08
University (system), Provost's Task Force on Science and Technology Interdisciplinary Research Institute, 2006-07
College Board Validity Study, 2005
Educational Policy Committee, 2004
Single-Semester Leave Committee, 2004
University Honors Program (instructor and Advisory Committee), 2003-2006
Faculty Advisor in CSE, 2002-present

SMU:

University Research Council, 2001-2004
Education Search Committee (Science and Math Teacher Preparation), 2000-2001
University Educational Programs Committee, 1999-2001
Goldwater Scholarship committee, 1998-2002
Faculty Mentoring Program, 1996-2002
Coordinator, Undergraduate Program in Geological Sciences, 1995-2001
Director, Dallas Regional Science and Engineering Fair, 1995-2000
Dedman College Undergraduate Council, SMU, 1995-98
Faculty Director, Electron Microprobe Laboratory, 1994-2002
Science Judge, U.S. DOE High School Science Bowl, Texas State Finals, 1994-95
Research Computing Steering Committee, 1994-95

Science talks at many elementary and secondary schools, and community organizations.

CONTRIBUTIONS TO DEPARTMENTAL FACILITIES AND SUPPORT

UMD:

Upgrade to Research Instrumentation Lab, OVPR-sponsored Research Infrastructure Reinvestment Program; **upgrades to SEM and XRD**; submitted with Bryan Bandli; obtained $68K in matching funds for total project award of $137,000; 2014
Development, planning and completion of Departmental **Computer Lab upgrade and renovations**, paid for with student Tech Fees; new large-screen monitor, movable white boards, AV lecturn, computer stations; 2013
Development, planning and completion of new **Research Instrumentation Lab** (RIL), with funds provided by the University and Swenson College of Science and Engineering; estimated infrastructure investment of $825,000; 2010
Coordination, hiring and supervision of **RIL Lab Manager** position, 2008
Development, funding, acquisition, planning and installation of new **Scanning Electron Microscopy (SEM) Lab,** with equipment funds that I obtained from the NSF and additional support from SCSE; estimated infrastructure benefit of $500,000; 2007
Development, design, funding and completion of new Departmental **Microscopy Lab**, funded by alumni donations and matching funds from UMD and SCSE; estimated infrastructure benefit of $175,000. For this project, I conceived of the idea, appealed directly to department alumni and emeritus faculty, and I oversaw design, development and implementation. Due to its remarkable teaching effectiveness through use of active learning, the concept of this lab has been reproduced at several other institutions, including UT-Austin, U. Montana, UM-Twin Cities, Indiana University-Bloomington, and University of North Carolina-Chapel Hill; completed 2006.
Coordinated, designed and oversaw completion of renovations of **Instructional Labs** for Geological Sciences; labs used for introductory geology classes, petrology, structural geology and geomorphology; 2004-05
Content & maintenance of Department web site, 2003-2008
Department Research Space Committee, 2003

SMU:

Acquired GeoScan Enabler (device for digital scanning of petrographic thin sections); ~$900 with grant from SMU President's Partners Program, 1999
Acquired **WDS automation upgrade** for electron microprobe lab; ~$63,000, matching support from SMU and NSF, 1996
Acquired projection macroscope for thin section study in instruction; ~$6,000, with grant from SMU President's Partners Program and matching funds from Dedman College, 1996
Coordinated planning and implementation of departmental Ethernet network, 1996
Coordinated development of departmental instructional Computer Lab, 1994
Acquired **EDS upgrade** for electron microprobe lab; ~$75,000, matching support from SMU and NSF, 1992

TEACHING

UMD:

GEOL 1040	Freshman Seminar: Natural Disasters & Civilization
GEOL 1052	Freshman Seminar: Natural Disasters & Civilization (Honors)
GEOL 1058	Freshman Seminar: Global Environmental Change (Honors)
GEOL 1110	Geology & Earth Systems
GEOL 2120	Earth's Dynamic Interior
GEOL 2300	Basic Mineralogy and Petrology
GEOL 2312	Petrology
GEOL 3540	Geologic Field Methods
GEOL 4480	Tectonics
GEOL 4500	Field Geology
GEOL 5310	Advanced Petrology
GEOL 8100	Graduate Seminar: Metamorphism of Basalts
GEOL 8100	Graduate Seminar: Archean Earth
GEOL 8200	Professional Issues in Geological Sciences

SMU:

GEOL 1301	Introduction to Physical Geology (retired course)
GEOL 1301	Earth Systems
GEOL 3451	Earth Materials I (mineralogy, crystallography, optical mineralogy)
GEOL 3452	Earth Materials II (petrology, field methods and mapping)
GEOL 3242	Geology Field Studies
GEOL 4321	Internship in Geology (professional experience for undergraduates)
CF 3317	Global Perspectives on Environmental Issues
Seminar	Supercontinent tectonics and the development of Gondwanaland
Seminar	Cordilleran tectonic evolution (with V. Hansen)
Seminar	Metamorphism and mountain belts
Seminar	Crust-mantle interactions
GEOL 7257	Graduate Field Studies

Field geologic mapping classes taught:

UMD, Geologic Field Methods, Minnesota
UMD, Precambrian summer geology field course, Minnesota
SMU, southern Rocky Mountains, Colorado and New Mexico
SMU, Arbuckle Mountains, Oklahoma
UCLA, summer geology field course, eastern California
UCLA, southern California Transverse Ranges, California
Indiana University, summer geology field course, SW Montana

GRADUATE ADVISING

Thesis Advisor (UMD):

Ross Salerno (M.S. 2017), *Petrology and geochronology of high-grade metamorphic rocks and migmatites in the Quetico Province, northern Minnesota*

Chelsea Nissen (M.S. 2014), *New evidence of Proterozoic metamorphic events in East Antarctica from thermobarometry and in-situ U-Pb age dating of monazite in metamorphic glacial clasts, central Transantarctic Mountains, Antarctica*

Jennifer Goldner (M.S. 2013), *Structure and metamorphism along the Burntside Lake Shear Zone near Ely, Minnesota*

Amy Radakovich (M.S. 2013), *Metamorphic petrology of glacial clasts from the Byrd Glacier drainage: Implications for the crustal history of East Antarctica*

Christopher White (M.S. 2010; co-advisor), *Petrology, petrogenesis, and metallogenesis of the South Kawishiwi Intrusion in the Nokomis Deposit area, Duluth Complex, northeastern Minnesota*

Shelby Frost (M.S. 2010), *Effects of contact metamorphism by the Duluth Complex on Proterozoic footwall rocks in northeastern Minnesota*

Devon Brecke (M.S. 2007), *Provenance of glacially transported material near Nimrod Glacier, East Antarctica: Evidence of the ice-covered East Antarctic shield*
Michael Rieser (M.S. 2005), *Deformation and metamorphism of tectonites exposed in the New York and Clark Mountains, eastern California: A case for Proterozoic mid-crustal shortening in the Mojave Province*

Thesis Committees (UMD):
Claire Rabine (M.S. candidate)
Amber Roberts (M.S. candidate)
Ben Brooker (M.S. candidate)
Adam Leu (M.S. candidate)
Michael Doyle (M.S. 2016)
Sarah Sauer (M.S. 2015)
Jon Dyess (Ph.D. 2014)
Alex Steiner (M.S. 2014)
Chris Goscinak (M.S. 2013)
Aaron Slonecker (M.S. 2013)
Melanie Graupner (M.S. 2013)
Brian Goldner (M.S. 2011)
Daniel Costello (M.S. 2010)
Emerald Erickson (M.S. 2008)
Sally Goodman (M.S. 2008)
Susan Karberg (M.S. 2008)
Roger Bannister (M.S. 2006)
Paul Albers (M.S. 2006)
Nick Lang (Ph.D. 2006)
Kelly McDaniel (M.S. 2005)
Greg Joslin (M.S. 2004)

External PhD Examining Committees:
Katarina Bjorkman (University of Western Australia); 2017
Bryan Bandli (University of Idaho); 2013
Heejin Jeon (Australian National University); 2012
Seth Kruckenberg (University of Minnesota, Twin Cities); 2009
Glenn Phillips (University of Melbourne, Australia); 2006
David Maidment (Australian National University); 2005
Chris Jackson (University of Natal, South Africa); 2002

SMU:
Duncan Young (Ph.D. 2003, thesis committee)
Les Bleamaster (Ph.D. 2003, thesis committee)
Sarah Deering (M.S. 2002; thesis advisor). *Structural Style and Geometry of the Beardmore Group, Antarctica*
Rebecca Ghent (Ph.D. 1999, thesis committee)
Brian Banks (M.S. 2000, thesis committee)
Vladimir Liakhovitch (Ph.D. 1998, thesis committee)
Jason McKenna (M.S. 1997; Ph.D., 2000, thesis committee)
Douglas Oliver (Ph.D. 1996, thesis committee)
Myra Keep (Ph.D. 1994, thesis committee)

UNDERGRADUATE THESIS AND RESEARCH SUPERVISION

UMD: SMU:

Elizabeth Boor (B.S., 2019-20)
Logan Carpenter (B.S., 2019-20)
Heidi Krauss (B.S., 2019-20)
Emily Wojtowicz (B.S., 2019-20)
Ann Hunt (B.S., UROP 2017)
Michael Buschette (B.S., UROP 2013)
Sara Chlebecek (B.S., UROP 2011)
Angela Hawkins (B.S., 2011-12)
Robert Kryzer (B.S., 2011-12)
Blake Lemcke (B.S., UROP 2007)
Katie Brosch (B.S. 2005)
Diane Curelli (B.S. 2005)
Lucas Stolp (B.S., UROP 2003)
Elena Miranda (B.S. 2000)
Sarah Deering (B.S. 1998)
Jennifer Kohl (B. S. 1997)

UNDERGRADUATE INTERNSHIPS (coordinated SMU program 2000)
Christy Black (B.A.), The Nature Conservancy, Texas Chapter, 2002
Katherine Inskeep (B.S.), Moyes & Co. (international energy and finance advisor), 2001