David W. Rodgers
Curriculum Vitae

Professor Emeritus of Geosciences
Idaho State University
Pocatello, Idaho, 83209 USA

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Professional Expertise

Geology Teaching, Research, Mapping. University Administration.

Education

Ph.D. (1987) Geology, Stanford University, Stanford, CA USA
B.A. (1981) Geology, Carleton College, Northfield, MN USA

Employment Record

Assistant, Associate, and Professor of Geosciences, ISU	1985-2022
Associate Vice President for Research	2019-2022
Associate Director, Center for Advanced Energy Studies	2019-2022
Site Leader, NSF EPSCoR RII Track-2 (MILES) grant, ISU	2013-2018
Associate Dean, College of Science & Engineering, ISU	2010-2018
Chair, Department of Geosciences, ISU	1993-2001; 2008-2010
Director of Geology Field Camp, ISU	1985-2000
Visiting Scientist, Victoria University of Wellington, New Zealand	Spring 2004
Faculty Fellow, Idaho National Laboratory	Fall 2003
Geologist, United States Geological Survey	Summers 1981, 1986, 1988
Consulting geologist	Summers 1989, 1991, 1992, 2007, 2012, 2019, 2020, 2022

Professional Recognition

Fulbright Scholar, University of Central Asia, Republic of Tajikistan, 2018-2019
Fulbright Scholar, Sultan Qaboos University, Sultanate of Oman, 1994-1995
Master Teacher, Idaho State University, 1997 and 2000

Geologic Mapping Experience

Research: From 1982-2010, I worked 1-10 weeks each summer making geologic maps at scales of 1:10,000 - 1:24,000. Primary expertise is in structural geology and regional tectonic evolution. Significant experience in the western US including the Cordilleran miogeocline, intermediate-silicic plutonic and volcanic rocks, metamorphic core complexes, Neogene sedimentary basins, and Quaternary faults. Mapped alone and with small teams, frequently with ISU graduate students and faculty. Authored or co-authored 10 geologic maps and 25+ mapping-based papers.

Geology Field Camp: Taught geologic mapping to 600+ students over 33 years as Director (1985-2000) and instructor (2001-2018) of Idaho State University's geology field camp.

Gold exploration: As a self-employed contractor, I completed three 1-4 week mapping projects associated with epithermal and skarn mineralization in faulted rocks. Mapped at scales of 1:600, 1:3,000, and 1:25,000.

Consulting Services

2022 - *Tectonic setting of Volcanic Hazards in the Eastern Snake River Plain:* contract presentation for Battelle Energy Alliance. Activities: Served as "Resource Expert" for a Volcanic Hazard Analysis Committee Level 3 Study associated with the Idaho National Laboratory, including preparation and delivery of a PPT presentation and participation in several days of conference discussion.

2020 - *Geologic Mapping and Structural Analysis of the North Pit Region, Mackay Mining District* (eastern Idaho): contract report for Konnex Resources Inc (Phoenix Copper Limited). Activities: Working in a polymetallic skarn deposit, completed a 1:600 geologic map, studied drill core, analyzed drilling logs and assays, drew interpretative cross sections to guide future drilling, and proposed a paragenetic model. https://phoenixcopperlimited.com/reports

2019 - *Fault Patterns Adjacent to the Eastern Snake River Plain:* contract presentation for Battelle Energy Alliance. Activities: Served as "Resource Expert" for a Senior Seismic Hazard Analysis Committee Level 3 Study associated with the Idaho National Laboratory, including preparation and delivery of a PPT presentation and participation in several days of conference discussion.

2012 - *Structural Geology of Buckhorn North* and *Tectonic Evolution of the Buckhorn Region* (NE Washington): two contract reports for Kinross Gold Corporation. Activities: Working in a gold-bearing skarn deposit, completed a 1:3,000 geologic map, drew interpretative cross sections, completed a structural analysis of mineralized, outcrop-scale joints and faults, and critiqued existing literature to characterize the tectonic history.

2007 - *Geology of the Antelope Property, southern Snake Mountains, Nevada*: contract report for Firstgold Corporation. Activities: Working in marine Paleozoic rocks cut by multiple thrust faults, completed a 1:25,000 geologic map of two 7.5' quadrangles. Report includes cross-sections and a description of stratigraphy, structure, and potential signs of gold mineralization.

Research Experience

Disciplinary expertise: Nature and timing of orogenesis. Primary research methods include field mapping, kinematic analysis, geochronology, and geodynamic modeling.

Retroarc fold and thrust belts (Sevier thrust belt)
- Kinematics of the Sevier thrust belt: structural analysis and thermochronology
- Effects of plutonism and metamorphism on fold and thrust kinematics
- Patterns of folds and thrusts revealed by unconformity maps

Extensional terrains (Basin & Range)
- Ages, amounts, and rates of extension in the northeastern Basin and Range province
- Low angle normal fault geometry and kinematics
- Influence of normal fault geometries on geothermal fluid migration

Large Igneous Provinces (Snake River Plain)
- Age and rate of subsidence accommodated by flexure and faulting
- Transition from Basin-Range normal faults to volcanic rifts of the Snake River Plain
- Shallow subsurface architecture as determined by wireline logging
- Deep subsurface architecture as determined from petrogenesis, isostasy, and geophysics
- Tectono-magmatic evolution

Active Collisional Margins (Sultanate of Oman, New Zealand)
- Late Cenozoic uplift of the Oman Mountains via forebulge development
- Kinematics of the 1855 earthquake on the oblique-slip Wairarapa Fault, New Zealand

Peer-reviewed Papers & Geologic Maps: 40 total

Blackford, N.R., Long, S.P., Stout, A., **Rodgers, D.W.**, Cooper, C.M., Kramer, K., Di Fiori, R.V., and Soignard, E., 2021, Late Cretaceous upeer-crustal thermal structure of the Sevier hinterland: implications for the geodynamics of the Nevadaplano: Geosphere 18(1) p. 183-210, https://doi.org/10.1130/GES02386.1

Keeley, J.A., and **Rodgers, D.W.**, 2015, Testing the Bannock detachment breakaway: Negative results support moderate- to high-angle splay system and domino-style falut block rotation along

the Valley fault, southern Portneuf Range, southeastern Idaho, U.S.A.: Rocky Mountain Geology, v. 50, p. 119-151. doi: 10:2113/gsrocky.50.2.119.

Anders, M.H., **Rodgers, D.W.**, Hemming, S.R., Saltzman, J., DiVenere, V.J., Hagstrum, J.T., Embree, G.F., and Walter, R.C., 2014, A fixed sublithospheric source for the late Neogene track of the Yellowstone hotspot: Implications of the Heise and Picabo volcanic fields, Journal of Geophysical Research Solid Earth, v. 119, n. 4, p. 2871–2906, doi 10.1002/2013JB010483

Thackray, G.D., **Rodgers, D.W.**, and Streutker, D., 2013, Holocene scarp on the Sawtooth fault, central Idaho, USA, documneted through lidar topographic analysis: Geology, doi:10:1130/G34095.1.

Vogl, J.J., Foster, D.A., Fanning, C.M., Kent, K.A., **Rodgers, D.W.**, and Diedesch, T., 2012, Timing of extension in the Pioneer metamorphic core complex with implictions for the spatial-temporal pattern of Cenozoic extension and exhumation in the northenr U.S. Coredillera: Tectonics, v. 31, doi 10.1029/2011TC002981.

Diedesch, T.F., **Rodgers, D.W.**, Link, P.K., 2012, Geologic Map of Portions of the Phi Kappa Mountain, Hyndman Peak, and Grays Peak Quadrangles, Blaine and Custer Counties, Idaho: Idaho Geological Survey Technical Report T-12-4, scale 1:24,000.

Keeley, J.A., **Rodgers, D.W.**, Link, P.K., and Cooley, S., 2011, Geologic map of the Thatcher Hill Quadrangle and portions of the Treasureton and Cottonwood Creek Quadrangles, Franklin, Bannock and Caribou Countines, Idaho: Idaho Geological Survey Technical Report 11-2, scale 1:24,000.

Thackray, G.D., **Rodgers, D.W.**, and Drabick, A., 2011, Neogene drainage development of Marsh and Portneuf Valleys, eastern Idaho, *in* Lee, J., and Evans, J.P., eds., Geologic field trips to the Basin and Range, Rocky Mountains, Snake River Plain, and Terranes of the U.S. Cordillera: Geological Society of America Field Guide 21, p. 89-101. Doi:10:1130/2011.0021(04).

Price, K.B., and **Rodgers, D.W.**, 2010, Geologic map of the north end of the Big Hole Mountains, Madison and Teton Countes, Idaho: Idaho Geological Survey Technical Report 10-2, scale 1:24,000.

Stewart, E.D., Link, P.K., and **Rodgers, D.W.**, 2010, Geologic map of the Allan Mountain Quandrangle, Lemhi County, Idaho, and Ravalli County, Montana: Idaho Geological Survey Technical Report 10-1, scale 1:24,000.

Aly, M.H., **Rodgers, D.W.**, Thackray, G.D., and Hughes, S.S., 2009, Recent tectonic and volcanic activity in the Eastern Snake River Plain and Island Park region inferred from SAR Interferometry: Journal of Volcanology and Geothermal Research, v. 188, p. 297-304. Doi: 10.1016/j.jvolgeores.2009.05.015.

McCurry, M., and **Rodgers, D.W.,** 2009, Mass transfer along the Yellowstone hot spot track I: Petrologic constraints on the volume of mantle-derived magma: Journal of Volcanology and Geothermal Research, v. 188, p. 86-98. Doi: 10.1016/j.jvolgeores.2009.04.001

Rodgers, D.W., and McCurry, M., 2009, Mass transfer along the Yellowstone hot spot track II: Kinematic constraints on the volume of mantle-derived magma: Journal of Volcanology and Geothermal Research v. 188, p. 99-107. Doi: 10.1016/j.jvolgeores.2009.05.014.

Aly, M.H., **Rodgers, D.W.**, and Thackray, G.D., 2009, Differential SAR Interferometry to investigate surface deformation of the eastern Snake River Plain, Idaho, USA: Journal of Geology, v. 117, p. 103-108. Doi: 10.1086/595504

Holmes, A.A.J., **Rodgers, D.W.**, and Hughes, S.S., 2008, Kinematic analysis of fractures in the Great Rift, Idaho: implications for subsurface dike geometry, crustal extension, and magma dynamics: Journal of Geophysical Research, 113, B04202, doi:10.1029/2006JB004782, 15p.

Chadwick, D.J., Payne, S.J., Van Hove, T., and **Rodgers, D.W**., 2007, Contemporary tectonic motion of the eastern Snake River Plain: A campaign global positioning system study, Tectonics, 26, TC6005, doi:10.1029/2005TC001914.

Rodgers, D. W., and Little, T.A., 2006, World's largest coseismic strike-slip offset: The 1855 rupture of the Wairarapa Fault, New Zealand, and implications for displacement/length scaling of continental earthquakes, J. Geophys. Res., v. 111, B12408, doi:10.1029/2005JB004065.

Rodgers, D.W., Long, S.P., McQuarrie, N., Burgel, W.D., and Hersely, C., 2006, Geologic map of the Inkom 7.5' Quadrangle, Bannock County, Idaho: Idaho Geological Survey Technical Report 06-2, scale 1:24,000. Two sheets.

Huerta, A.D., and **Rodgers, D.W.,** 2006, Constraining rates of thrusting and erosion: insights from kinematic thermal modeling: Geology, v. 34, p. 541-544.

Payne, S.J., Zollweg, J.E., and **Rodgers, D.W.**, 2004, Stress triggering of conjugate normal faulting – late aftershocks of the 1983 Ms 7.3 Borah Peak, Idaho earthquake: Bulletin of the Seismological Society of America, v. 94, p. 828-844.

Helm-Clark, C.M., Smith, R.P., **Rodgers, D.W.**, and Knutson, C.F., 2004, Neutron log measurement of moisture in unsaturated basalt -- progress and problems: Vadose Zone Journal, v. 3, p. 485-492.

Helm-Clark, C.M., **Rodgers, D.W.**, and Smith, R.P., 2004, Borehole geophysical techniques to define stratigraphy, alteration, and aquifers in basalt: Journal of Applied Geophysics, v. 55, p. 3-38.

Long, S.P., Link, P.K., Janecke, S.U., and **Rodgers, D.W.**, 2004, Geologic Map of the Henderson Creek Quadrangle, Oneida County, Idaho: Idaho Geological Survey Technical Report 04-3, 1:24,000.

Kuntz, M.A., Geslin, J.K., Mark, L.E., Hodges, M.K.V., Kauffman, M.E., Champion, D.E., Lanphere, M.R., **Rodgers, D.W.**, Anders, M.H., Link, P.K., and Boyack, D.L., 2003, Geologic map of the northern and central parts of the Idaho National Engineering and Environmental Laboratory, eastern Idaho: Idaho Geological Survey Geologic Map 35: scale 1:50,000.

Rodgers, D.W., and Gunatilaka, A., 2003, Bajada formation by monsoonal erosion of a subaerial forebulge, Sultanate of Oman: Sedimentary Geology, v. 154, p. 127-146.

Rodgers, D.W., Ore, H.T., Bobo, R., McQuarrie, N., and Zentner, N., 2002, Extension and subsidence of the eastern Snake River Plain, *in* Bonnichsen, B., White, C., and McCurry, M.O, Tectonic and magmatic evolution of the Snake River Plain volcanic province: Idaho Geology Survey Bulletin 30., p. 121-160.

Riesterer, J.K., Link, P.K., and **Rodgers, D.W.**, 2000, Geologic map of the Bonneville Peak quadrangle, Bannock County, Idaho: Idaho Geological Survey Technical Report 00-05, scale 1:24,000

Rodgers, D.W., and Othberg, K.L., 1999, Geologic Map of the Pocatello South Quadrangle, Bannock and Power Counties, Idaho: Idaho Geological Survey Geologic Map 26.

Kellogg, K. S., **Rodgers, D.W.,** Hladky, F.R., Kiessling, M.A., and Riesterer, J.W., 1999, The Putnam thrust plate, Idaho—dismemberment and tilting by Tertiary normal faults: *in* Hughes, S.S. and Thackray,G.D, eds., Geology of eastern Idaho and surrounding regions: Idaho Museum of Natural History Special Publication., p. 97-114.

McQuarrie, N., and **Rodgers, D.W.**, 1998, Subsidence of a volcanic basin by flexure and lower crustal flow -- the eastern Snake River Plain, Idaho: Tectonics, v. 17, p. 203-220.

Huerta, A.D., and **Rodgers, D.W.**, 1996, Kinematic and dynamic analyses of a low-angle strike slip fault; the Lake Creek fault of south-central Idaho: Journal of Structural Geology, v. 18, p. 585-593.

Rodgers, D.W., Link, P.K., and Huerta, A.D., 1995, Structural framework of mineral deposits hosted by Paleozoic rocks in the northeastern part of the Hailey 1°x2° Quadrangle, south-central Idaho: U.S. Geological Survey Bulletin 2064-B, 18p.

Kellogg, K.S., Harlan, S.S., Mehnert, H.H., Snee, L.W., Pierce, K.L., Hackett, W.R., and **Rodgers, D.W.**, 1994, Major 10.2 Ma rhyolitic volcanism in the eastern Snake River Plain, Idaho --

Isotopic age and stratigraphic setting of the Arbon Valley Tuff Member of the Starlight Formation: U.S. Geological Survey Open-File Report 94-1304, 18p.

Anders, M.H., Spiegelman, M., **Rodgers, D.W.**, and Hagstrum, J.T., 1993, The growth of fault-bounded tilt blocks: Tectonics, v. 12, p. 1451-1459.

Rodgers, D.W., and Janecke, S.U., 1992, Tertiary paleogeographic maps of the western Idaho-Wyoming-Montana thrust belt; *in* Link, P.K., Kuntz, M., and Platt, L.B., eds., Geology of southeastern Idaho: Geological Society of America Memoir 179, p. 83-94.

Rodgers, D.W., and Anders, M.H., 1990, Neogene evolution of Birch Creek Valley near Lone Pine, Idaho: in Roberts, S. (ed), Geologic field tours of western Wyoming and adjacent parts of Idaho, Montana, and Utah: Geological Survey of Wyoming Public Information Circular 29, p. 27-40.

Rodgers, D.W., Hackett, W.R., and Ore, H.T., 1990, Extension of the Owyhee Plateau, eastern Snake River Plain, and Yellowstone Plateau: Geology, v. 18, p. 1138-1141.

Rodgers, D.W., 1989, Geologic map of the Deep Creek Range Wilderness Study Areas, Tooele and Juab Counties, Utah: U.S. Geological Survey Miscellaneous Field Studies Map 2099, scale 1:50,000.

Rodgers, D.W., 1987, Thermal and structural evolution of the southern Deep Creek Range, west central Utah and east central Nevada: Ph.D. dissertation, Stanford University, Stanford, CA, 149p.

Burgel, W.D., **Rodgers, D.W.**, and Link, P.K., 1987, Mesozoic and Cenozoic structures of the Pocatello region, southeastern Idaho: in Miller, W.R. (ed), The Thrust Belt Revisted, Wyoming Geological Association Guidebook, Thirty-eighth Field Conference, p. 91-100.

Miller, E.L., Holdsworth, B.K., Whiteford, W.B., and **Rodgers, D.W.**, 1984, Stratigraphy and structure of the Schoonover sequence, northeastern Nevada: Implications for Paleozoic plate-margin tectonics: Geological Society of America Bulletin, v. 95, p. 1063-1076.

Conference abstracts: lead- or co-author of ~70 oral and poster presentations

Grants Received: 41 total

2018: Fulbright Scholar Award: Using earth science instruction to promote the development of mountain societies in Central Asia: $51,550 awarded to D.W. Rodgers from the U.S. Department of State.

2013: EPSCoR RII Track 1: Managing Idaho's Landscapes for Ecosystem Services (MILES): $20,000,000 awarded to the State of Idaho from the National Science Foundation (5 years). (Rodgers is Site Leader for Idaho State University, directs $4,029,000)

2012: Student investigation of ESRP volcanic rocks: $25,587 awarded to D.W. Rodgers from the U.S. Geological Survey, Idaho Falls office.

2011: Student investigation of ESRP volcanic rocks: $24,000 awarded to D.W. Rodgers from the U.S. Geological Survey, Idaho Falls office.

2010: Student investigation of ESRP volcanic rocks: $42,689 awarded to D.W. Rodgers from the U.S. Geological Survey, Idaho Falls office.

2010: Geologic mapping in the Rattlesnake Hills, Wyoming: $15,463 awarded to D.W. Rodgers and M. McCurry from Evolving Gold Corp.

2010: Geologic map of the western Wildhorse Detachment fault, south-central Idaho: $15,915 awarded to D.W. Rodgers from the U.S. Geological Survey EDMAP Program.

2009: Collaborative Research: Mid-crustal strain during extension: a field-based investigation of rheological transitions, doming, and vertical coupling: $40,111 awarded to D.W. Rodgers and P.K. Link from the National Science Foundation.

2008: Geologic Map of the southern Portneuf Range, southeastern Idaho: $14,131 awarded to D.W. Rodgers from the U.S Geological Survey EDMAP Program.

2008: Subsurface Geology Field Trip: $25,177 awarded to Rodgers, D.W., McCurry, M., and Welhan, J.A, from the Inland Northwest Research Alliance for the Spring 2008 field trip.
2007: Subsurface Architecture Core Course: $15,263 awarded to Rodgers, D.W., by the Inland Northwest Research Alliance.
2007: Subsurface Geology Field Trip: $24,343 awarded to McCurry, M., Welhan, J.A, and Rodgers, D.W., by the Inland Northwest Research Alliance.
2006: Subsurface Geology Field Trip: $24,388 awarded to McCurry, M., Rodgers, D.W., and Welhan, J., from the Inland Northwest Research Alliance.
2004: Extension of: Synthetic aperature radar analysis of multi-scale geologic and anvironmental processes in Idaho and the Intermountain West (2 yrs): $377,445 awarded to Thackray, G.D., Glenn, N., Rodgers, D.W., and Hughes, S.S., from the NASA Idaho Space Grant Consortium.
2003: Analysis of slip associated with the 1855 failure of the Wairarapa fault, North Island, New Zealand: $4,985 awarded to Rodgers, D.W. from the ISU Faculty Research Committee
2003: Analysis of slip associated with the 1855 failure of the Wairarapa fault, North Island, New Zealand: $3,875 awarded to Little, T.A., and Rodgers, D.W. from the Royal Society of New Zealand.
2003: Faculty Fellowship to study geothermal energy sources in Nevada: $19,667 awarded to Rodgers, D.W. from the Idaho National Engineering and Environmental Laboratory and the Inland Northwest Research Alliance.
2003: Geologic map of the Henderson Creek Quadrangle, Idaho: $13,499 awarded to Rodgers, D.W. and Link, P.K., from the U.S. Geological Survey EDMAP program.
2002: Subsurface Architecture Field Trip. $12,926 awarded to McCurry, M., and Rodgers, D.W., by the Inland Northwest Research Alliance.
2002: Geologic Map of Tertiary Volcanic Rocks in the Northern Bighole Mountains, Idaho. $10,000 awarded to Rodgers, D.W., and Link, P.K., by the US Geological Survey EDMAP program
2001: Synthetic aperature radar analysis of multi-scale geologic and anvironmental processes in Idaho and the Intermountain West. $575,000 awarded to Thackray, G.D., Glenn, N., Rodgers, D.W., and Hughes, S.S., from the NASA Idaho Space Grant Consortium.
2000: Presentation of Research results in the Sultanate of Oman. $1,300 awarded to D.W. Rodgers from the ISU Faculty Research Committee.
2000: Analysis of stratigraphic architecture at INEEL with implications for the subsurface transport of fluids. $155,814 awarded to D.W. Rodgers from the Inland Northwest Research Alliance.
2000: Evaluation of multi-scale time-space patterns of crustal deformation, volcanism, climate change, and land-use in Idaho using combined spaceborne remote sensing and ground-truthing techniques. $35,000 awarded to Hughes, S.S., Glenn, N., Thackray, G.D., and Rodgers D.W. from NASA EPSCoR in Idaho.
1999: Geometry, timing, and thermal evolution of the Paris thrust sheet, Idaho-Wyomng thrust belt: $51,000 awarded to D.W. Rodgers from the Petroleum Research Foundation, American Chemical Society
1998: Radiometric dating of volcanic rocks in southern Idaho: $3,970 awarded to D.W. Rodgers from the Idaho State University Faculty Research Committee.
1998: Geologic Map of the Lava Hot Springs Quadrangle, Idaho: $7,500 awarded to Paul Link and David Rodgers from the U.S. Geological Survey EDMAP program
1998: Ash Grove Cement Project: $24,151 awarded to D.W. Rodgers from the Ash Grove Cement Company.
1997: Advanced Application of Geoscience Information Systems technology through cooperative teaching in the Geoscience Departments of BSU and ISU: $65,743 awarded to Welhan, J., Rodgers, D.W., Snyder, W.S., and Spinosa, C., from the Idaho State Board of Education Technology Incentive Program.

1997: J.J. Malone Fellowship in Arab and Islamic Studies: ~$12,000 awarded to D.W. Rodgers from the National Council for U.S.-Arab Relations (Fellowship later cancelled by sponsor due to organizational problems]

1997: Geologic Mapping in the Pocatello, Idaho 1:100,000 sheet - the Bonneville Peak 7.5' Quadrangle: : $8,750 awarded to awarded to P.K. Link and D.W. Rodgers from the U.S. Geological Survey EDMAP Program.

1996: Crustal downwarping adjacent to the eastern Snake River Plain, Idaho: $10,980 awarded to D.W. Rodgers from the NASA Idaho Space Grant Consortium.

1996: Geologic Mapping in the Pocatello, Idaho 1:100,000 sheet - the Inkom 7.5' Quadrangle: $9,950 awarded to D.W. Rodgers from the U.S. Geological Survey EDMAP Program.

1994: Fulbright Scholar Award: Teaching/Research in the Sultanate of Oman: $58,000 awarded to D.W. Rodgers from the US Department of State.

1993: Radiometric dating of volcanic rocks in southern Idaho: $4,000 awarded to D.W. Rodgers from the Idaho State University Faculty Research Committee (money returned unspent)

1992: Paleogene transtension along the Glide Mountain fault of south-central Idaho. $30,653 awarded to D.W. Rodgers from the Idaho State Board of Education.

1990: Geologic and hydrologic investigation of modern and abandoned municipal and county landfills, Pocatello, Bannock County, Idaho. $14,764 awarded to Ore, H.T., Link, P.K., and Rodgers, D.W. by the Idaho Water Resources Research Institute.

1989: Miocene-Pliocene development of the Basin and Range Province and the eastern Snake River Plain. $35,000 awarded to D.W. Rodgers and H.T. Ore from the Idaho State Board of Education

1988: Mapping Howe Point. $2,000 awarded to D.W.Rodgers from EG&G, Idaho to investigate Neogene faults near the Idaho National Engineering Laboratory

1987: Investigation of faults adjacent to the proposed site of the Superconducting Super Collider in eastern Idaho. $15,000 awarded to D.W.Rodgers from the Idaho State Board of Education.

1986: Geologic Map of the Deep Creek Range Wilderness Study Areas, Tooele and Juab Counties, Utah. $10,000 awarded to D.W. Rodgers from the U.S. Geological Survey, Branch of Mineral Resources, Denver.

Teaching Experience

Overview: Courses in rock deformation, tectonics, and field geology. Emphasis placed on geologic processes, tectonic histories, critical thinking, and synthesis. Taught 4-6 courses per year from 1985-2010, then ~1 course per year 2011-2022

Classes taught to undergraduate students

Introductory Geology - beginning physical geology for geology majors and non-majors
Historical Geology - evolution of the earth and the historical development of earth science
Rocks, Minerals, Fossils, Map – hands-on instruction in the fundamental tools of geology
Earth in Space and Time – hands-on instruction in 3D visualization and GIScience.
Igneous and Metamorphic Petrology - identification and origin of crystalline rocks
Structural Geology - deformational theory and kinematics of brittle and ductile structures
Geology of North America - tectonic history of North America
Tectonics - regional continental tectonics emphasizing the geology of the Middle East
Seminar - One week field trips across the western United States to study classic outcrops
Field Geology - Five-week field geology camp for geology majors

Classes taught to graduate students

Advanced Physical Geology - scientific methodology, analysis, and research techniques
Structural Geology - advanced field & laboratory measurements of rock deformation
Tectonics and Sedimentation - subsidence analysis of sedimentary basins

Tectonics and Magmatism – mechanics of magma ascent and emplacement
Orogenic Belts of the World - tectonic histories and processes of mountain belts

Post-doctoral Supervision:

Dr. Catherine Helm-Clark, 2000-2002, *Borehole geophysical techniques applied to basalt.* Currently: Editor, Timberjay News, Ely, MN

Dr. Mohamed Aly, 2006-2008, *InSAR analysis of Yellowstone & Snake River Plain.* Currently: Associate Professor, University of Arkansas

M.S. Thesis Advising: 17 Primary advisees and 29 Secondary advisees

Primary Advisees

Autenrieth, Kathleen, 2012, *Geologic setting of gold mineralization in the Rattlesnake Hills, Wyoming.* Currently: Regional Director North American Brownfields Exploration, Kinross Gold, Reno, Nevada

Diedesch, Tim, 2011, *Kinematic analysis of the Wildhorse detachment fault system, Pioneer, Mountains, south-central Idaho.* After ISU: Ph.D. (University of Tennessee - Knoxville). Currently: Lecturer, Rice University, Texas

Polun, Sean, 2011, *Volcanic rift structure in the Blackfoot Volcanic Field, Idaho.* After ISU: Ph.D (University of Missouri). Currently: post-doctoral student @ University Missouri

Pink, Cody, 2010, *Structural controls on gold mineralization at the Rock Creek deposit, Nome, Alaska: implications for Cretaceous lode emplacement.* After ISU: P.G. Currently: owner of Piton Exploration, Palmer, Alaska

Price, Kathleen, 2009, *Geology of the northern end of the Big Hole mountains, Idaho.* Currently: Environmental Health Specialist, Eastern Idaho Health District, Idaho Falls, Idaho.

Michalek, Milana, 2009, *Age and amount of crustal flexure in the Lake Hills, south-central Idaho, and implications for the subsidence of the Eastern Snake River Plain.* Currently: Senior Staff Geologist, Associated Earth Sciences, Auburn, Washington

Holmes, Adrian, 2005, *Extension along the Great Rift as revealed by field measurements of surface deformation features.* After ISU: P.G., C.E.G, L.E.G. Currently: Engineering Geologist & Associate, Shannon & Wilson, Oregon City, Oregon

Long, Sean P., 2004, *Geology of the Henderson Creek quadrangle, Oneida County, Idaho: Multiple phases of Tertiary extension and depostion.* After ISU: Ph.D. (Princeton University). Currently: Associate Professor, Washington State University

Hough, Brian, 2001, *Temporal constraints on crustal flexure adjacent to the eastern Snake River Plain, Idaho.* After ISU: Ph.D. (University of Rochester) Assistant Professor, SUNY-Oswego (deceased)

McQuarrie, Nadine, 1997, *Crustal flexure adjacent to the eastern Snake River Plain*. After ISU: Ph.D. (University of Arizona). Currently: Professor, University of Pittsburgh

Jordan, Brennan T., 1994, *Emplacement, exhumation, and tilting of the southeastern Idaho batholith and outlying stocks.* After ISU: Ph.D. (Oregon State University). Currently: Professor, University South Dakota

Wilson, Eric, 1994, *Demise of the Glide Mountain thrust, south-central Idaho*. Currently: Bureau Chief, Idaho Department of Lands, Boise, Idaho (retired)

Huerta, Audrey D., 1992, *Lake Creek fault -- evidence of pre-Challis shear within Idaho*. After ISU: Ph.D. (MIT). Currently: Associate Professor, Central Washington University

Batatian, L. Darlene, 1991, *Paleozoic stratigraphy and Cenozoic structure, central Boulder Mountains, Blaine and Custer Counties, south-central Idaho*. After ISU: P.G. Currently: Deputy Director Utah Geological Survey, Salt Lake City, Utah

Whitman, Shelly K., 1990, *Metamorphic petrology and structural geology of the Pennsylvanian-Permian Dollarhide Formation, Blaine and Camas Counties, Idaho.* After ISU: DNP (University Arizona). Currently: RN, Salem Health, Oregon

Zentner, Nick C., 1989, *Neogene normal faults related to the structural origin of the eastern Snake River Plain, Idaho.* Currently: Senior Lecturer, Central Washington University

Malan, Paul O., 1989, *Structural history of the southern half of the Gold Hill Mining District, Tooele County, Utah.* Geologist, Newmont Mining, Elko, Nevada

Secondary Advisees

Liz Balgord[2] - Ph.D. (Arizona), Associate Professor, Weber State University

Phil Bandy[2] - Senior Project Manager, Excellon Resources, Eagle, Idaho

Luke Beranek[2] - Ph.D.(University of British Columbia), Associate Professor, Memorial University

Bob Bobo[2] - Environmental Geologist, Tennessee (retired)

Brad Burton[2] - Ph.D. (Wyoming), Rady Chair in Petroleum Geology, Western State Colorado University

Duane DeVecchio [2] - Ph.D. (UC Santa Barbara), Assistant Research Professor, Arizona State University

Doug Dvoracek [2] - Ph.D. (Georgia), Associate Research Scientist, University of Georgia (deceased)

Dave Ettner [2] - Ph.D. (Oslo), co-owner of Geode Consult AS, Oslo, Norway

Rudy Ganske [2] - Senior Geologist, Kennecott Utah Copper, Salt Lake City, Utah

Darci Hanson [2] - GIS Analyst II, City of Enumclaw, Washington

Jim Hengesh[2] - Director/Principal Seismic Geologist, Interface Geohazard Consulting, Lahaina, HI

Mary Hodges[2] - USGS geologist, Idaho Falls, Idaho (retired)

Gina Iwahashi [2] - Reno, Nevada

Brad Johnson[2] - Ph.D. (University North Carolina) Associate Professor, Davidson College

Eric Johnson[2] - Department Analyst, State of Michigan, Grand Ledge, Michigan

R.J. Johnson[2] - P.G., owner of RJ Johnson, Geosciences Consulting, Las Vegas, Nevada (retired)

Joshua Keeley[2] - Geologist, New Hampshire Geological Survey, Concord, New Hampshire

Brian Mahoney [2] - Ph.D. (British Columbia), Professor, University of Wisconsin-Eau Claire (retired)

Dan Narsavage [2] - Senior GIS Analyst, Idaho Department Water Resources, Boise, Idaho

J.P. O'Brien [2] - Environmental Geologist and Instructor, Vail, Colorado

Shannon Osterhout [2] – Petroleum Geologist, Weatherford, Texas

Suzette Payne [2] - Ph.D. (University of Idaho), Seismologist, Idaho National Laboratory, Idaho

Arron Pope [2] - Technical Lead of Hanford Geophysical Logging, Bay West, Richland, WA

Katie Potter [2] - Ph.D. (Utah State University), Professional Practice Assistant Professor, Utah State University

Jim Riesterer [2] - P.G., Geologist, Glorieta Geoscience, Santa Fe, New Mexico

Kerry Ruebelmann [2] - P.G., Vice President & Senior Principle Owner, Kleinfelder, Salt Lake City, Utah (retired)

Eric Stewart [2] - Ph.D. (Texas A&M University), Geologist, Wisconsin Geological and Natural History Survey, Madison, Wisconsin

Caleb Stroup [2] - President and CEO, Headwater Gold, Reno, Nevada

Paul Wetmore [2] - Ph.D. (USC), Associate Professor, University of South Florida

Administrative Experience

Associate Vice President for Research (2019-2022)

Help foster a campus-wide culture of creative and scholarly research activity. Work with Research staff to provide a variety of services to faculty including seed grants, proposal development and submission, post-award accounting of research expenses, compliance with government and safety guidelines, increasing diversity in STEM fields, community outreach, and technology transfer. The Office for Research also oversees several Research Centers and Institutes.

Associate Director, Center for Advanced Energy Studies (2019-2022)

Provide leadership on all activities that promote innovative energy-related research. Help to build and sustain a research collaboration ecosystem amongst four universities and the Idaho National Laboratory in seven energy-related disciplines: nuclear energy, advanced manufacturing, innovative energy systems, energy-water nexus, cybersecurity, energy policy, and computing/data/ visualization. Facilitate day-to-day operations in the CAES building which provides office and advanced laboratory space for consortia researchers.

Site leader, Managing Idaho's Landscape for Ecosystem Services (MILES), 2013-2018

Statewide - Member of Executive Leadership Team that directed all science and budget activities for this $20M National Science Foundation grant. Co-authored 5-year strategic plan and annual progress reports. Co-directed annual meetings (125+ attendees) and smaller planning and science meetings. Presented progress reports to NSF and external advisory boards. Evaluated internal research proposals and guide statewide research emphasis.

Idaho State University - Project Manager. Directed research activities by all participants (~25 faculty/staff and 50 students per year) including strategic planning, personnel, and budget. Facilitated science discussions, hired 4 post-docs, 3 staff, and 3 faculty, directed internal grant competition, disbursed $1M in annual funding for all ISU participants.

Associate Dean, College of Science & Engineering, 2010-2018

Manager - Oversaw college activities by ~2000 student majors, 110 faculty, and 25 staff. Worked with ten Chairs to solve departmental problems related to student petitions and appeals, curriculum, personnel, and finances. Compiled statistics on annual college enrollment, courses, and research productivity, then used them as strategic management tools to distribute available resources. Attracted new students, donors, and grants to College. Promoted new academic programs to ISU administration and State Board of Education. Evaluated faculty annually as well as for tenure/promotion. Negotiated employment offers with new faculty.

Recruitment/retention - Represented College on university STEM committees to enhance student retention and graduation rates. Attended multiple Recruiting fairs and hosted Freshman Orientation events each year. Worked with Chairs to develop better advising tools and revise remedial Math curriculum.

Budget - Advised Dean on spending. Distributed ad hoc funding from administration to faculty and departments. Provided advice on accommodating budget cuts and, more rarely, budget increases. Determined raises for individual faculty and staff based on recommendations from Chairs. Delivered occasional budget presentations.

Chair, ISU Department of Geosciences, 1993-2001 and 2008-2010

Curriculum - Managed departmental curriculum pursued by ~90 student majors leading to multiple undergraduate and graduate degrees. Instituted several new degree programs: MS w/Emphasis in Environmental Geology, Post-Baccalaureate Certificate in Geotechnology, Minor in Geotechnology, Ph.D. in Geosciences.

Enhanced productivity – Promoted research-based culture in department, such that faculty had time and resources (students, staff, space) to conduct externally funded research while still delivering high-quality courses.
Personnel – Supervised 10-15 faculty, 3 staff, and 5-8 graduate Teaching Assistants. Completed annual personnel evaluations. Mentored new faculty.
External Relations – Represented department to the University, Community, Alumni, and Professional Societies. Attracted new students, donors, and employers to department.
Budget – Managed annual departmental budget of $500,000+ in state allocated funds and $50,000-500,000 in external grants and contracts. Balanced budget every year. Facilitated ~10x increase in external grants to department.

Director, ISU Geology Field Camp, 1985-2000
Instruction – Taught geology field methods for five weeks to 15-35 students each year
Curriculum – Created more than 25 one- to four-day field-based exercises over 15 years
Enrollment – Attracted more than 200 high quality students from >75 different universities
Personnel – Supervised 6 faculty, 2 graduate teaching assistants, 1 camp cook each year
Budget - $50K operating expenses plus $50K faculty salaries. Balanced budget every year
Safety – No major casualties despite student inexperience, rugged terrain, and bad weather
Advertising – Created brochures and outstanding Web-based advertising to attract students
Assessment – Students consistently ranked this camp as a nearly perfect life experience
Awards – Student nominations resulted in 2 Master Teacher Awards to me as Director and a national reputation for camp overall

Professional Service

Fulbright Program, US Department of State
US Scholar Program - Peer Review committee member for earth science applications, 2021-2023
US Scholar Program - Orientation panelist for awardees traveling to Central Asia, 2021-2022
Egytian Scholar Program - Peer Review of earth science applications, 2021, 2022, 2023
Editorial Board: "Geology", 1998-2002
Geological Society of America, Rocky Mountain Section: Technical chairman (1987), Field trip co-leader (1990, 1999, 2011), Treasurer (1999).
External Peer Review
Department of Geology, Central Washington University, 2010
4 faculty from Jordanian Universities (Yarmouk, Hashemite, and Institute of Technology)
Several NSF proposals and journal articles each year, 1985-2015
State of Idaho
Advisory Board Member, Idaho Geological Survey, 1993-2001, 2008-2010
Member, Idaho Seismic Advisory Committee, 2007-2008
President, Board of Directors, Environmental Science & Research Foundation, 1999-2001
Member, Board of Directors, Idaho Foundation for Parks and Land, 2023-
Idaho State University
Geosciences Department: Director of Graduate Admissions, 1985-1993, 2001-2008
Inland Northwest Research Alliance: Curriculum Development Committee, 2001-2002
Sigma Xi Scientific Society: Treasurer, VP, and President of ISU Chapter, 1988-1994
ISU Committees: innumerable appointments, 1985-2022