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Arlo Brandon Weil

Education

B.S., Geology, University of Oregon	1993
M.S., Geology, University of Michigan	1997
Ph.D., Geology, University of Michigan	2001

Professional Experience

The University of Oregon

- Worked with Columbia University and the University of Oregon on the Colorado Seismic Array 1992
- Research assistant for Dr. Ray Weldon
Geology Department, University of Oregon 1992, 1993

US Geologic Survey

- Research Scientist and field geologist (surface water hydrology) 1994

The University of Michigan

- Graduate Research Assistant 1995 – 2001
- Graduate Teaching Assistant 1995 – 2001
- Geology Field-Camp Instructor 1997, 1998
- Paleomagnetic Laboratory manager 1997 - 2001

Bryn Mawr College

- Assistant Professor of structural geology/tectonics 2001 – 2007
- Associate Professor 2007 – 2012
- Professor 2012 – present
 - Department Chair 2008 – present
- Marion Bridgman Slusser Professor in the Sciences 2019 – present

Geological Society of America

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Awards/Grants

- Outstanding Student Paper (Geomagnetism/Paleomagnetism Section) – Spring AGU 2000
- Outstanding Student Paper (Tectonophysics Section) – Fall AGU 2001
- NSF Academic Intern Fellowship
- University of Michigan - F. Scott Turner Fellowship (1996-1999)
- IRM Visiting Research Fellowship 1999 and 2002 and 2010
- Bryn Mawr College Faculty Grant 2002, 2004, 2006, 2009
- NSF Research Grant 2004-2007 – *Three-Dimensional kinematic history of the Wyoming Salient: Implications for the development of curved orogens* (**\$136,466.00**)
- NSF Equipment Grant 2004 - *Acquisition of new paleomagnetic lab equipment for Bryn Mawr College, Pennsylvania* (**\$114,446.90**)
- Ministeria de Educacion y Ciencia Grant 2006– Oroclines and Delamination: Relations and Effects (**\$90,743.00**)
- NSF Research Grant 2010-2013 – *Determining the 3D kinematic evolution of the Wyoming Laramide, implications for processes of foreland deformation* (**\$127,332.00**)
- UNESCO Project Grant – IGCP 574 - *Bending and Bent Orogens, and Continental Ribbons- 5 years*
- Ministeria de Educacion y Ciencia Grant 2010– Oroclines and Delamination: Relations and Effects II (ODRE) (**\$136,466.00**)
- **Awarded Fellow of the Geological Society of America – 2013**
- NSF Research Grant 2014-2017 - *Interrelations between foreland deformation, flat-slab subduction, and crustal architecture: Integrated analysis of the Sierras Pampeanas to Cordillera of the south-central Andes* (**\$170,849**)
- Ministeria de Educacion y Ciencia Grant 2014-2017– Oroclines and Delamination: Relations and Effects III (ODRE), with a focus on the Carpathians of eastern Europe (**\$150,000.00**)
- NSF Research Grant 2015-2018 - *Fold Form, Strain, and Mechanics at the Whaleback Anticline: New Approaches to a Classic Field Locality* (**\$150,000.00**)
- Geological Society of America 2017 **Outstanding Publication Award in Tectonics:**
 - Yonkee, A. and Weil, A.B., 2015. Tectonic evolution of the Sevier and Laramide belts within the North American Cordillera orogenic system, *Earth Science Reviews*, 150, 531-593.
- The Marion Bridgman Slusser Professor in the Sciences – Bryn Mawr College

Professional Societies

American Geophysical Union; Geological Society of America; Geological Society of Pennsylvania; Geologic Society of Philadelphia; Sigma XI Academic Society; European Geophysical Society

Graduate Advisors: Dr. Rob Van der Voo and Dr. Ben A. van der Pluijm (both at *The University of Michigan*)

Peer Reviewed Publications: Current H-index as of 2019 is 30.

- 1) **Weil, A.B.**, Van der Voo, Mac Niocaill, C., and Meert, G.M., 1998. The Proterozoic supercontinent Rodinia: Paleomagnetically derived reconstructions for the 1,100 to 800 Ma interval, *Earth Planet Sci. Lett.*, 154, 13-24.
 - 2) Karlstrom, Karl E., Bowring, S. A., Dehler, C.M., Knoll, A.H., Porter, S. M., Sharp, Z., Des Marais, D. J., **Weil, A.B.**, Geissman, J. W., Elrick, M., Timmons, M. J., Keefe, K. and Crossey, L. J., 2000. The Chuar Group of the Grand Canyon: Record of break up of Rodinia, associated change in the global carbon cycle, and eukaryotic diversification by 740 Ma, *Geology*, 28, 619-622.
 - 3) Parés, J.M., Perez-Gonzalez, A., **Weil, A.B.** and Arsuaga, J.L., 2000. On the Age of the Hominid Fossils at the Sima de los Huesos, Sierra de Atapuerca, Spain: Paleomagnetic Evidence, *American Journal of Physical Anthropology*, 111, 451-461.
 - 4) **Weil, A.B.**, Van der Voo, R., van der Pluijm, B. and Parés, J.M., 2000. The Formation of an orocline by multiphased deformation: a paleomagnetic investigation of the Cantabria-Asturias Arc Hinge-Zone (northern Spain), *Journal of Structural Geology*, 22, 735-756.
 - 5) **Weil, A.B.**, Van der Voo, R. and van der Pluijm, B., 2001. New paleomagnetic data from the southern Cantabria-Asturias Arc, northern Spain: Implications for true oroclinal rotation and the final amalgamation of Pangea, *Geology*, 29, 991-994.
 - 6) **Weil, A.B.** and Van der Voo, R., 2002. Insights into the mechanism for orogen related
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Selected Abstracts:

- ^Ashby, J.M., Geissman, J.M. and **Weil, A.B.**, 2001. Paleomagnetic results from the Neoproterozoic Uinta Mountain Group, Utah and Colorado, *Abstracts with Programs, GSA 2001 Annual Meeting*.
- Crider, G.C., Gray, M.B., Needle, M. and **Weil, A.B.**, Enhancing scientific and educational resources at the Whaleback Anticline, Bear Valley, Pennsylvania, *Abstracts with Programs, GSA 2017 Annual Meeting, Seattle*.
- ^Gage, J., Weil, A.W., and Pares, J., Preliminary AMS analysis of the Brevard Shear Zone, Rosman, NC, *Abstracts with Programs, GSA*
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Yonkee, A. and **Weil, A.B.**, Unraveling the early LPS-stress history of the Laramide foreland:
integrating field studies of minor faults with stress inversion and AMS studies:

University of California at Santa Cruz
 University of California at Davis
 University of Florida
 University of Michigan – Smith Lecture Series
 University of Michigan – Van der Voo lecture 2023
 University of Minnesota – Institute of Rock Magnetism (3)
 University of Nevada Reno
 University of Oslo, Norway
 University of Oklahoma
 University of Salamanca, Spain
 University of Texas at Austin (co-authored)
 University of Wisconsin
 University of Wisconsin - Structural Geology and Tectonics Forum
 University of Wyoming Distinguished lecture series
 University of Utah (co-authored)
 Utah State University (2)
 Weber State University, Utah (2)
 West Chester University (2)
 Williams College

Convened Professional Meeting Sessions

- 2000 - Rock- and Paleo-Magnetism
American Geophysical Union 2000 Spring Meeting
- 2001 - Geomagnetism and Paleomagnetism
American Geophysical Union 2001 Fall Meeting
- 2002 - Topical - Thrust Belt Curvature: Integrating Paleomagnetic and Structural Analysis
Geological Society of America 2002 National Meeting
- 2007 - New Innovations in Rock- and Paleo-Magnetism
American Geophysical Union 2007 Spring Meeting

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- ^Peiyang Wen – *Paleomagnetism of Laramide red beds*, Bryn Mawr Summer Science Research Program (2010).
 - \$^**Jamie Kindall– *AMS of Laramide deformed red beds*, in completion of a senior thesis (2011).
 - **Erin Lynch - *Polyphase Deformation of Precambrian Metasediments of the South Snowy Block, Beartooth Mountains, Yellowstone National Park, Wyoming and Montana*, in completion of a senior thesis (2011).
 - ^**Meghan Fisher - *Analysis of Slow Slip Triggered Tremors using Sonification and Audio Displays*, in completion of a senior thesis (2011).
 - \$^**David Wicks – *Paleomagnetism of Iberian carbonates*, in completion of a senior thesis (2011).
 - \$^**Mary Shultz – *Rocky Mountain Tectonics – Structural geology of the Wyoming Laramide*, Bryn Mawr Summer Science Research Program (2011).
 - ^**Amelia Lee Zhi Yi – *Rocky Mountain Tectonics – Paleomagnetism of the Wyoming Laramide*, Bryn Mawr Summer Science Research Program (2011).
 - ^Bryan Gulotta, *Rupture propagation and slip at complex fault intersections: The San Andreas-San Jacinto-Cucamonga fault system in Cajon Pass, CA*, in completion of a senior thesis (2012).
 - ^**Alina Bricker, *Tectono-thermal Uplift History of Archean Basement Rocks in the Beartooth Mountains: Rates and Dates of a classic Laramide Arch*, in completion of a senior thesis (2012).
 - \$^**Mary Shultz – *Early Layer-Parallel Shortening patterns along the Sweetwater Arch-Shirley Mountain Tectonic Zone of the Laramide Foreland: refraction of the regional stress field and development of multiple structural trends*, in completion of a senior thesis (2012).
 - ** Fern Esperanza Beetle-Moorcroft – *A terrane wreck? Or just a slip up? A paleomagnetic study of terrane accretion in the western Cordillera*
 - \$^**Rachel Clark – *Seismic stratigraphy of the Shatsky Rise, Pacific Ocean*.
 - **Christine Newville – *Tectonics of the Sierra Pampeanas Ranges, Argentina*.
 - ^**Meg Sumner-Moore – *Potential health hazards of fibrous amphibole minerals from the Wilson Ridge pluton, Arizona*, in completion of a senior thesis (2015).
 - Robin Chernowski – *Anisotropy of Magnetic Susceptibility as a recorder of early Layer Parallel Shortening in the Sierra Pampeanas Ranges, Argentina*, in completion of a senior thesis (2015).
 - Helen Whitty - *Anisotropy of Magnetic Susceptibility as a recorder of early Layer Parallel Shortening in the Sierra Pampeanas Ranges, Argentina* – summer research (thesis 2018).
 - ^ Helen Whitty and ** Ankitha Kannad - *Testing kinematic models of deformation sequence in the bear valley strip mine, east-central Pennsylvania: a fault kinematic and anisotropy of magnetic susceptibility (AMS) analysis*
 - ** ^ Katie Billings - *Vertical Axis Rotation And The Kinematic Evolution Of The Pennsylvania Salient:*
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