

Karen S. Tefend
Curriculum Vitae
Professor, University of West Georgia
ktefend@westga.edu

Education

2001-2005 Doctoral Program in Geological Sciences, Michigan State University
2000-2001 Continuing Education Program in Chemistry, The Ohio State University
1998-2000 Master's Program in Geology, The Ohio State University
1993-1997 Continuing Education Program in Geology, The Ohio State University
1982-1986 Bachelor of Science Degree in Zoology, The Ohio State University

Awards

Spring 2017 UWG College of Science and Math Teaching Award
Spring 2004 Ronald W. Wilson Endowed Teaching Award (joint award to ISP203L
teaching assistants), Michigan State University

Fellowships

2004 Neal Endowed Fellowship, Michigan State University
1998 Orton Graduate Fellowship, The Ohio State University

Teaching Experience

Aug 2024-present Professor, University of West Georgia
Aug 2015-present Associate Professor, University of West Georgia
Aug 2010-May 2015 Assistant Professor, University of West Georgia
Aug 2007-May 2010 Visiting Assistant Professor, Central Michigan University
Aug 2005-Aug 2007 Visiting Assistant Professor, Michigan State University
Aug 2002-May 2005 Level 3 Teaching Assistant
Aug 2001-May 2002 Level 2 Teaching Assistant
1998-2000 Teaching Assistant, Geology, The Ohio State University
1994 Teaching Assistant, Geology, The Ohio State University

Employment Experience

- 2024-present *Professor, University of West Georgia*
Courses: Geochemistry (GEOL 4014), Environmental Geochemistry (GEOL 4083), Field Methods & Geologic Mapping (GEOL 3004), Physical Geology Lecture (GEOL 1121), Historical Geology Lecture (GEOL 1122), eCore Introduction to Geosciences (GEOL 1121k)
- 2015-2024 *Associate Professor, University of West Georgia*
Courses: Geochemistry (GEOL 4014), Environmental Geochemistry (GEOL 4083), Field Methods & Geologic Mapping (GEOL 3004), Senior Seminar (GEOL 4501), Geology of Georgia (GEOL 4203), Physical Geology Lecture and Lab (GEOL 1121, GEOL 1121L), Historical Geology Lecture and Lab (GEOL 1122, GEOL 1122L), eCore Introduction to Geosciences (GEOL 1121k)
- 2010-2015 *Assistant Professor, University of West Georgia*
Courses: Geochemistry (GEOL 4014), Environmental Geochemistry (GEOL 4083), Field Methods (GEOL 3004), Geology of Georgia (GEOL 4203), Physical Geology Lecture and Lab (GEOL 1121, GEOL 1121L), Historical Geology Lecture and Lab (GEOL 1122, GEOL 1122L)
- 2007-2010 *Visiting Assistant Professor, Central Michigan University*
Courses: Field Investigations (GEL 290) Environmental Geochemistry (GEL 402), Earth Systems (GEL 100), Physical Geology (GEL 101), Laboratory Course in Physical Geology (GEL 102), Earth Processes (GEL 130)
- 2005-2007 *Visiting Assistant Professor, Michigan State University*
Courses: Petrology (GLG 361), Integrative Studies-Physical Sciences (ISP 203); Other: Laboratory Coordinator for Integrative Studies
- 2001-2005 *Teaching Assistant, Geological Sciences, Michigan State University*
- Summer 2002 *Research Associate, Geological Science, Michigan State University*
- 2000-2001 *Research Associate I, Dept. of Physiology and Cell Biology, The Ohio State University*
- 1999 *Research Assistant I, Microscopic and Chemical Analysis Research Center, Ohio State University*
- 1998-2000 *Graduate Research Associate, Dept. of Physiology and Cell Biology, and Graduate Research Associate, Dept. of Geological Sciences, The Ohio State University*
- 1991-1998 *Research Associate I, Dept. of Physiology and Cell Biology, The Ohio State University*

- 1990-1991 *Study Supervisor*, Dept. of Toxicology, Battelle Memorial Institute, Columbus, OH
- 1988-1990 *Research Technician III*, Dept. of Toxicology, Battelle Memorial Institute, Columbus, OH
- 1987-1988 *Research Technician II*, Dept. of Toxicology, Battelle Memorial Institute, Columbus, OH

Independent Research Students

- 2021 (Fall) XRD and ICP Phyllite Analysis (Hannah Maciejewski)
- 2021 (Spring) XRD and ICP Phyllite Analysis (Hannah Maciejewski)
- 2020 (Spring) Advanced Geochemistry, XRD and Geochron (John McCue)
- 2020 (Spring) Advanced Geochemistry (Samuel Kirkham)
- 2018 (Spring) XRD of Pisolitic Bauxite (Tarah Monroe)
- 2017 (Spring) Clay Mineralogy (Scott Nilson)
- 2016 (Fall) XRD Analysis of Saprolite (Jaiden Massi)
- 2016 (Fall) Geochemistry of the Stonewall Gneiss (John Gammans)
- 2015 (Spring) Geologic Archiving (William Kellam)

Presentations

- Tefend, K.S., and Kath, R.L., 2023, Geochemical Investigation of the Long Island Creek Gneiss: Implications for the Paleozoic Tectonics of the Southern Appalachians. Southeastern Geological Society of America Meeting.
- Tefend, K.S., and Kath, R.L., 2020, Geochemical Investigation of the Long Island Creek Gneiss: Implications for the Paleozoic Tectonics of the Southern Appalachians. Southeastern Geological Society of America Meeting– meeting cancelled due to the COVID pandemic.
- Tefend, K.S., and Kath, R.L., 2017, Mineralogy and Geochemistry of Slate, Phyllite, and Shale from the Oak Level, Borden Springs, and Indian Mountain 7.5 Minute Quadrangles, Alabama-Georgia: A Comparison with the Rockmart Slate and Athens Shale in Georgia, Southeastern Geological Society of America Meeting.
- ¹Harstad, R.P., Whitmore, J.P., Steltenpohl, M.G., Kath, R.L., Tefend, K.S., and Schwartz, J.J., 2017, Geological Investigations of the Long Island Creek Gneiss within the Southernmost Brevard Fault Zone, Alabama and Georgia, Southeastern Geological Society of America Meeting.
- Mosac, T.A. and Tefend, K.S., The Cambrian Chilhowee Group Shale: A Preliminary Study of the Geochemical Variation with Depth, Southeastern Geological Society of America Meeting (March 18-20, 2015) Chattanooga, TN.

¹ Graduate student at Auburn University.

- Tefend, K.S. and Kath, R.L., Geochemical Characterization of the Cambrian Chilhowee Group, Ordovician Rockmart Slate, and Phyllite Associated with the Emerson-Talladega Fault Zone; from Cartersville, GA, to Borden Springs, AL, Southeastern Geological Society of America Meeting (April 7-9, 2014) Blacksburg, VA.
- Gallagher, K.L. and Tefend, K.S., A study on the Chemical Weathering of Amphibolite Gneiss from the Piedmont Province of Georgia. Southeastern Geological Society of America Meeting (April 7-9, 2014) Blacksburg, VA.
- Lunsford, J.D., Tefend, K.S., and Kath, R.L., Quantitative X-ray Diffraction Analysis of Slate and Phyllite from the Rock-Run, Oremont, Tecumseh, and Etna Mining District, Borden Springs Quadrangle, Cherokee County, Alabama: A Comparison with the Rockmart Slate in Polk County, Georgia. Southeastern Geological Society of America Meeting (April 1-2, 2012) Asheville, NC.
- Tefend, K.S., Vogel, T.A., Deering, C.D., Hidalgo, P., Donatelle, A., and Szymanski, D.W., Reexamination of the 26.5 Ka Oruanui Eruption, Taupo Volcano, New Zealand by Polytopic Vector Analysis. Geological Society of America, Annual Meeting (October 28-31, 2007) Denver, CO.
- Tefend, K.S., Vogel, T.A., Flood, T.P., and Ehrlich, R., Identifying relationships among magma batches by Polytopic Vector Analysis: a study of the Topopah Spring and Pah Canyon ash-flow sheets of the southwest Nevada Volcanic Field. Geological Society of America, Annual Meeting (October 15-19, 2005) Salt Lake City, UT.
- Tefend, K.S., Vogel, T.A., and Patino, L.C., Generation of magmas within the Southwest Nevada Volcanic Field; constraints based on trace element concentrations in melt inclusions and sanidine. American Geophysical Union, Fall Meeting (December 13-17, 2004), San Francisco, CA.
- Tefend, K.S., Vogel, T.A., and Patino, L.C., Role of accessory phase crystallization within the high-silica magma batches of the Rainier Mesa Tuff, Southwest Nevada Volcanic Field. American Geophysical Union, Spring 2004, Montreal.

Publications: Online

- 2023 ASBOG Fundamentals of Geology Examination Preparatory Course in Mineralogy, Petrology, and Geochemistry, launched August, 2023.
(<https://asbogprep.getlearnworlds.com>)

Publications: In Print

- Tefend, K.S., and Kath, R.L., 2024, Geochemical Investigation of the Long Island Creek Gneiss: Implications for the Paleozoic Tectonics of the Southern Appalachians. *Southeastern Geology (in prep)*.
- Tefend, K.S., and Kath, R.L., 2023, Mineralogy and Geochemistry of slate, shale and phyllite from the Indian Mountain Block, Alabama-Georgia: Assessment of possible

protoliths for phyllites from the hanging wall of the Emerson-Talladega Fault. *Southeastern Geology* (*in press*).

Tefend, K.S., and Kath, R.L., 2016, Mineralogy and Geochemistry of Slate, Phyllite, and Shale from the Oak Level, Borden Springs, and Indian Mountain 7.5 Minute Quadrangles, Alabama-Georgia: A Comparison with the Rockmart Slate and Athens Shale in Georgia. *Alabama Geological Society Guidebook*, v. 56, p. 19-30.

Deline, B., Harris, R., and Tefend, K., 2016, *Introductory Geology, Laboratory Manual*. University of North Georgia Press. ISBN: 978-1-940771-36-6.

Kath, R.L, and Tefend, K.S. (editors), 2015, *Origin of Ore Deposits in the Cartersville Mining District & Stratigraphic and Kinematic Evidence for the Separation of the Cartersville-Great Smoky and Emerson-Talladega Faults*. 49th Annual Field Trip, Georgia Geological Society.

Price, J.R., Peresolak, K., Brice, R.L., and Tefend, K.S., Temporal Variability in the Chemical Weathering of Ca²⁺-Bearing Phases in the Loch Vale Watershed, Colorado, USA: A Mass-Balance Approach. *Chemical Geology*, 2013, v. 342, p. 151-166.

Price, J.R., Hardy, C., Tefend, K.S., and Szymanski, D.W., Solute Geochemical Mass-Balances and Mineral Weathering Rates in Small Watersheds II: Biomass Nutrient Uptake, More Equations in More Unknowns, and Land Use/Land Cover Effects. *Applied Geochemistry*, 2012, v. 27, p.1247-1265.

Vogel, T.A., Hildalgo, P.J., Patino, L., Tefend, K.S., and Ehrlich, R., Examination of magma mixing and fractional crystallization using whole-rock chemical analyses: Polytopic vector analyses. *Geochemistry, Geophysics, and Geosystems*, 2008, v. 9, Q04020.

Tefend, K.S., Vogel, T.A, Flood, T.P., and Ehrlich, R., Identifying relationships among silicic magma batches by Polytopic Vector Analysis: A study of the Topopah Spring and Pah Canyon ash-flow sheets of the southwest Nevada volcanic field. *Journal of Volcanology and Geothermal Research*, 2007; v. 167, p.198-211.

Grants and Awards

2016 COSM Excellence of Teaching Award

2015 COSM Faculty Research Grant (\$1100), Mineral Weathering Study of the Long Island Creek Gneiss – the Role of Accessory Phases.

2014 COSM Faculty Research Grant (\$1250), Chemical Weathering Study of the Long Island Creek Gneiss – An Isovolumetric Approach.

2014-2015 SRAP (Student Research Assistant Program, \$1800), Geochemical Investigation of the Athens Shale, Valley and Ridge Province of Eastern Alabama and Western Georgia.

Memberships

2018-present National Association State Board of Geology (ASBOG) subject matter expert for the Council of Examiners (COE).

2013-present Serving as Treasurer for the Georgia Geological Society (GGS)

2010-present Georgia Geological Society (GGS)

2001-present American Geophysical Union (AGU)

2000-present Geological Society of America (GSA)

Service

2025-present Member of the Exam Review Committee for the Association of State Boards of Geology (ASBOG)

2024-present Exam Form Reviewer for ASBOG

2023 -2025 Served as the Geology Program Coordinator for the Department of Natural Sciences at the University of West Georgia

2025 Mentor for the Roy J. Shlemon Mentor Program in Applied Geoscience, at the Southeastern Geological Society of America meeting, Harrisonburg, VA, March 2025

2025 Served as a panelist in the Geosciences Career Exploration Workshop, at the Southeastern Geological Society of America meeting, Harrisonburg, VA, March 2025

2025 Co-chaired a technical session at the joint meeting of the Southeastern Geological Society of America meeting, Harrrisonburg, VA, March 2025

2023 Mentor for the Roy J. Shlemon Mentor Program in Applied Geoscience, at the joint meeting of the Northeastern and Southeastern Geological Society of America meeting, Reston VA, March 2023

2023 Co-chaired a technical session at the joint meeting of the Northeastern and Southeastern Geological Society of America meeting, Reston, VA March 2023

2022 Co-chaired a technical session at the joint meeting of the North-Central and Southeastern Geological Society of America meeting, Cincinnati, OH, April 2022

2021	Served as Chair of the 3 rd Year Review Committee for Dr. Cody Mason
2020-2022	Served on the College of Arts, Culture and Scientific Inquiry (CACSI) Executive Committee
2019	Served as Chair of the Geosciences Department search committee for the igneous/metamorphic faculty position
2018-present	Serving as a subject matter expert and on the Council of Examiners for National Association State Board of Geology (ASBOG).
2018	Served on the Geosciences Department search committee for the sedimentologist faculty position
2018	Revised the ECore GEOL1101k online course content and exam question bank.
2017	Revised the ECore GEOL1101k online course material
2017	Served on the department search committee for the mineralogist faculty position
2015-2017	Faculty Senate
2015-2017	Strategic Planning committee
2015-2017	COSM strategic planning committee
2015	COSM Judge for UWG Research Day
2014-2018	Content matter expert for the Math Science Partnership Program of Georgia (MSP)
2013-present	Treasurer for the Georgia Geological Society
2012	Judge for UWG Research Day
2011-2014	Reviewed journal submissions to Southeastern Geology
2011-2012	Served as Instructor for the UWide STEM Summer Bridge Program

Continuing Education/Workshops

Certified as a Licensed Professional Geologist by the Georgia State Board of Registration for Professional Geologist on October 5th, 2018

Jan 2022 – Feb 2023 ASBOG Task Analysis Survey workshop and meetings

Oct 2024	Attended the Fall ASBOG field trip in Ft. Collins, CO at the end of the Council of Examiners (COE) meeting
Mar 2024	Attended the Spring ASBOG field trip in Dallas, TX at the end of the Council of Examiners (COE) meeting
Oct 2023	Attended the Fall ASBOG field trip in Spokane, WA at the end of the Council of Examiners (COE) meeting
April 2023	Attended the Spring ASBOG field trip in Greenville, SC at the end of the Council of Examiners (COE) meeting
Oct 2022	Attended the Fall ASBOG field trip in Wilmington, NC at the end of the Council of Examiners (COE) meeting
April 2022	Attended the Spring ASBOG field trip in Albany, NY at the end of the Council of Examiners (COE) meeting
Oct 2021	Attended the Fall ASBOG field trip in Little Rock, AR at the end of the Council of Examiners (COE) meeting
April 2020	Scheduled to attend the Spring ASBOG meeting and field trip in Cheyenne, WI (<i>meeting was cancelled due to the COVID-19 pandemic</i>).
Nov 2019	Attended the Fall ASBOG field trip in Minneapolis, MN at the end of the Council of Examiners (COE) meeting
April 2019	Attended the Spring ASBOG field trip in Nashua, NH at the end of the Council of Examiners (COE) meeting.

Workshop on Atomic Spectroscopy. Perkin-Elmer. (May 13, 2015)