

MATTHEW E. BRUESEKE

CURRICULUM VITAE

Department of Geology
Kansas State University
108 Thompson Hall
Manhattan, KS 66506-3201

Fax: (785)-532-5159
Phone: (785)-532-6724
Email: brueseke@ksu.edu
<http://mattbrueseke.weebly.com/>

EDUCATION

2006: Ph.D. (Geology), Miami University, Oxford, OH

Dissertation: Mid-Miocene magmatic system development in the northwestern United States.

Ph.D. Advisor: Dr. William K. Hart; Ph.D. committee members: Elisabeth Widom, Brian Currie, Michael Brudzinski, John Hughes, and Michael Pechan.

1997: A.B. (Geology, minor in Physical Geography), Miami University, Oxford, OH

Senior project: Chronostratigraphy and volcanic stratigraphy of Hagerman Fossil Beds National Monument, Idaho (USA).

TEACHING

Positions Held

Professor and Acting Department Head:

April 2022 - June 2022: Kansas State University. Responsible for leadership of the Department, including oversight of the day-to-day operations of the Department of Geology, initiating policy discussions among faculty and staff, and promoting a culture of openness and shared governance. Led the initial Academic Program Review and Revitalization (APRR) initiative for the department; this included writing APRR reports for our degree programs.

Professor and Director of Graduate Studies:

March 2020 - present: Kansas State University. See Associate Professor information below. Responsible for answering inquiries about Geology M.S. degree program at K-State and handling graduate student applications for admission. Revised graduate application procedures and requirements, including leading the effort to drop the GRE scores for admission and instead utilize other more inclusive admission criteria.

Associate Professor (with tenure) and Director of Graduate Studies:

August 2013 – March 2020: Kansas State University. Courses taught include Earth in Action (on campus as large lecture and as an ~20 student First-Year Seminar), Mineralogy, Petrology (Igneous/Metamorphic/Sedimentary), Advanced Igneous and Metamorphic Petrology, X-Ray Methods, Regional Geology (field-based) and Economic Geology. Mineralogy and Petrology include lab sections, in which I am the primary instructor and also supervise graduate teaching assistants. Responsible for answering inquiries about Geology M.S. degree program at K-State and handling graduate student applications for admission.

Assistant Professor and Interim Director of Graduate Studies:

July 2007 – August 2013: Kansas State University. Courses taught include Earth in Action (on campus, via distance education, and as a First-Year Seminar that I developed centered on active learning), Natural Disasters First-Year Seminar, Mineralogy, Petrology (Igneous/Metamorphic/Sedimentary), Structural Geology, Economic Geology, Regional geology (field-based including Death Valley N.P., tectonic evolution of the Snake River plain - Yellowstone volcanic province), and Advanced Igneous Petrology. Mineralogy, Petrology, and Structural Geology include lab sections, in which I am the primary instructor. Also, I supervised undergraduate/graduate teaching assistants for Mineralogy, Petrology, and Structural Geology. Responsible for answering inquiries about Geology M.S. degree program at K-State and handling domestic graduate student applications for admission.

Instructor:

August 2005 - May 2007: Eastern Illinois University. Courses taught include introductory Weather and Climate, a Senior Seminar covering local/global environmental issues (Spaceship Earth), introductory Earth Science (physical geology), Mineralogy, Igneous/Metamorphic Petrology, Tectonics, and Honors Spaceship Earth. Weather and Climate, Earth Science, Mineralogy, and Igneous/Metamorphic Petrology are all lecture-based and each has at least one additional laboratory section that I taught. I

MATTHEW E. BRUESEKE

CURRICULUM VITAE

also supervised undergraduate teaching assistants for Mineralogy, Igneous/Metamorphic Petrology, Earth Science, and Weather and Climate.

Instructor:

2001 - 2006, 2013: Miami University Geology Field Station (www.muohio.edu/fieldgeology). Primary duties included day-to-day teaching, supervision of graduate student teaching assistants, and assisting with the organization and planning (pre- and during course logistics and content), and pedagogy of Miami University's five-week geology field course. Course emphasis is placed on understanding the geologic history of western North America through the description, interpretation, and mapping of local/regional units, structures, and other geologic phenomena throughout the Snake River Plain-Yellowstone volcanic province, the northern Rocky Mountains of the United States and Canada, and the greater Yellowstone region, WY-ID-MT and Wind River Basin, WY.

Teaching Assistant:

March 2003: Geology of the Rio Grande Rift (Field-based in New Mexico)

March 2002: Geology of Big Bend National Park (Field-based in Texas)

1998 - 2000: Courses taught were: Miami University Geology Field Station (field camp), Mineralogy, Igneous and Metamorphic Petrology, Geology of U.S. National Parks, Understanding the Earth (introductory geology laboratory), and the Dynamic Earth (introductory physical geology)

1998: Carbonate Depositional Systems (Field-based in San Salvador, Bahamas and Florida)

Undergraduate Teaching Assistant:

1997: Understanding the Earth (physical geology laboratory)

Education/Teaching Professional Development

2022: Participant, Subduction Zones in 4 Dimensions (SZ4D) workshop at 2022 GSA annual meeting.

2021: Participant, America's Geoh Heritage II: Identifying, developing, and preserving America's natural history (U.S. National Academy of Sciences) – Writing Workshop, January 10-15 2021.

2020: Participant, NSF-NAGT-IAGD sponsored “Designing remote field experiences” zoom-based workshops in response to the COVID-19 pandemic.

2019: Participant, NSF, NAGT, and ExxonMobil sponsored “Focusing the lens on field safety: a workshop for field trip leaders” (November, University of Iowa)

2014: Participant, NSF sponsored “Summit on the Future of Undergraduate Geoscience Education” (January, University of Texas - Austin)

2013: Participant, Kansas State University 2013 Spring Teaching Workshop

2010-2011: Participant, Kansas State University Peer Review of Teaching Program

2011: Participant, 8th annual K-State teaching retreat (January).

2008: Participant, NSF/NAGT sponsored “On the Cutting Edge - Teaching introductory geoscience courses in the 21st century” workshop (July).

2008: Participant and was a primary presenter at NSF/NAGT/GSA sponsored “On the Cutting Edge - Teaching petrology and structural geology in the 21st century” workshop (October).

2007-08: Graduate, K-State New Faculty Institute

HONORS

2021: Geology Department Undergraduate Teaching and Mentoring Award

2019: Page Twiss Faculty Development Award for Excellence in Graduate Advising and Teaching (inaugural award), Kansas State University Department of Geology

2019-20: Kansas State University Goals and Values in Science Faculty Fellowship

2018-2019: Big 12 Faculty Fellowship (awarded to work with Graham Andrews, West Virginia University. Project focused on testing kimberlite emplacement models).

2018: 2018 Honorary Award recipient (Rocky Mountain Federation of Mineralogical and Lapidary Societies for the AFMS Scholarship Foundation)

2015: Nominated for Kansas State University College of Arts and Sciences undergraduate teaching awards

2012: Nominated for Kansas State University College of Arts and Sciences undergraduate teaching awards

2010-2011: Kansas State University Peer Review of Teaching Program Fellow

2008: Elected member of the Graduate Faculty, Kansas State University

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- 2002: Brunton Award, Miami University Department of Geology. For outstanding contribution to field geology education
- 2000: Elected member of Phi Kappa Phi, academic honor society
- 1999: Elected member of Sigma Xi, scientific research society
- 1999: Certificate of merit for research achievements, Miami University Department of Geology
- 1997: Dean's List, Miami University, fall and spring semesters
- 1996: H. Van der Veer Hilker Memorial Scholarship Recipient, Miami University Department of Geology
Awarded to a junior geology major on basis of academic achievement and potential contribution to the community

RESEARCH

Interests

My geologic interests are broad, but primarily lie in the fields of igneous petrology, tectonics, economic geology, and volcanology. These interests are focused on understanding: [1] how magmas form and are modified; [2] relationships between volcanism and tectonism; [3] temporal, spatial, and mass relationships between magmatism and precious metal mineralization; [4] physical volcanology of silicic magmatic products and their eruptive systems; [5] volcanic stratigraphy, including tephrostratigraphy. This experience is centered on the mixed volcanic-sedimentary terranes of the western/central Snake River Plain, Oregon Plateau, and northern Great Basin; in the Wrangell Mountains and other parts of South-Central Alaska; in Precambrian through Quaternary terranes of the greater Wind River basin-Yellowstone region, Wyoming and Centennial Valley and vicinity, southwest Montana, and in Oklahoma and Kansas (U.S.A.).

Positions Held

Research Associate:

2004 - 2005: Department of Geology, Miami University. Primary duties included the field and laboratory investigation of western United States volcanic terrains. I worked closely with graduate and undergraduate students and other support staff to help prepare and perform chemical and Sr-Nd-Pb isotopic analyses of geologic materials by thermal ionization mass spectrometry (TIMS). I also prepared geologic materials for major (DCP-AES) and trace (DCP-AES, XRF, and ICP-MS) element geochemical analyses, helped maintain departmental equipment, and ordered supplies.

Research Assistant:

2000 - 2004: Department of Geology, Miami University. Principal duties included sample preparation of whole rock and purified glass separates for major and trace element geochemical analyses. This included the initial collection in the field and the subsequent rock crushing, thin section blank cutting, clean laboratory work necessary for analyses, and data collection. I also prepared whole rock samples for $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology, performed electron microprobe analyses on select phases (at the University of Kentucky), performed petrographic analysis of igneous materials, purchased laboratory supplies, and organized/purchased supplies for fieldwork and the laboratory.

Research Assistant:

1997 - 1998: Department of Geology, Miami University. Responsibilities included sample preparation of basalt and unconsolidated tephra for major and trace element analyses (DCP-AES). This involved concentrating/purifying bulk glass separates by magnetic/heavy liquid separation techniques, and clean laboratory techniques prior to analyses.

Internal and External Funding (awarded; amount received in bold)

- 2020: National Science Foundation RAPID: Collaborative Proposal: Development of Digital Models of Minerals and Rocks for Online Geoscience Classes. PI: G. Andrews (West Virginia U.), CO-PI: Brueseke. 8/1/2020-present, **\$16,864**.
- 2020: National Science Foundation, Collaborative Research: Investigating out-of-sequence magmatism and mantle plume-lithosphere interactions adjacent to the Snake River plain (U.S.A.). PI: Brueseke, CO-PI: J. Benowitz (UA-Fairbanks) 9/1/2020-present, **\$240,385**

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- 2020: National Science Foundation RAPID: PetCAT-Scan: A high definition scanning tool for geoscientists in the COVID-19 pandemic and beyond. PI: B. Lacroix, CO-PIs: Brueseke, P. Kempton (all KSU). 7/15/2020-2022, **\$169,220**.
- 2020: Kansas State University Small Research Grant, Investigating links between <5 million yr. old basaltic volcanism in the Centennial Valley Region and the Yellowstone hotspot. PI: Brueseke, 5/1/2020-4/30/2021, **\$4,428**.
- 2018: American Federation of Mineralogical Societies Scholarships, awarded to Brueseke to disburse. **\$8,000**.
- 2018: 2018-19 Big 12 Faculty Fellowship: Evaluating kimberlite ascent mechanisms: insights from the Cretaceous volcanoes of Riley County, Kansas (USA). PI: Brueseke, **\$2,312**.
- 2016: National Science Foundation REU Supplement, Collaborative Research: Geological constraints on ~25 Million years of magmatism along an arc-transform junction, Wrangell Volcanic Belt, Alaska. PI: Brueseke. **\$4,880**.
- 2016: Federal Railroad Administration, Field investigation of concrete tie abrasion wear prevalence and contributing environmental factors. PI: K. Riding (KSU), CO-PIs: R. Peterman (KSU) and M. Brueseke. **\$149,991**.
- 2015: National Science Foundation, Collaborative Research: Geological constraints on ~25 Million years of magmatism along an arc-transform junction, Wrangell Volcanic Belt, Alaska. PI: Brueseke, CO-PI: J. Benowitz (UA-Fairbanks), J. Trop (Bucknell), and Paul Layer (UA-Fairbanks). 2/10/2015 – 1/31/2018, **\$173,117**.
- 2014: Kansas State University Small Research Grant, Rare earth element economic potential of Pilot Knob, a Pliocene(?) alkaline intrusive complex in the greater Yellowstone region, northwestern Wyoming. PI: Brueseke, 2014-2015, **\$4000**.
- 2013: Kansas State University - College of Arts and Sciences Proposal for Larger Equipment Purchases – Partial support for a new X-Ray diffractometer: PI: P. Kempton, CO-PI: S. Datta and M. Brueseke, **\$180,000**.
- 2012: Kansas State University Small Research Grant, Mid-Miocene magmatism in the northern Great Basin (USA): Links between local Au-Ag precious metal mineralization and the inception of the Yellowstone hotspot. PI: Brueseke, 2012-2013, **\$2500**.
- 2009: National Science Foundation, K-State TEACH Program (Robert Noyce Scholarship). PI: C. Culbertson, former PI: L. Scharmann, CO-PI's: C. Ferguson, N.S. Rebello, M.Brueseke, former CO-PI: I.M. Totten. 6/15/2009-5/31/2014, **\$875,359** (<http://www.coe.k-state.edu/grants/teach/>).
- 2009: National Science Foundation, Collaborative Research: Magmatism and mineralization in the Owyhee Mountains, ID: A case study of mid-Miocene Au-Ag ores and the emergence of the Yellowstone Hotspot. PI: Brueseke, CO-PI's: J. Saunders & W. Hames (Auburn Univ.). 9/15/09-8/31/14, **\$162,082**.
- 2009: NASA Kansas Space Grant Consortium, Voluminous mafic volcanism on Earth: Field, geochronologic, and geochemical constraints on the temporal and spatial extent of mid-Miocene flood basalt volcanism on the Oregon Plateau (USA). PI: Brueseke, 1/31/09-12/31/09, **\$12,118**.
- 2007: Kansas State University Small Research Grant, Magmatism and mineralization in the Owyhee Mountains, ID: A case study of mid-Miocene Au-Ag ores and Pacific Northwest (U.S.A.) flood basalt volcanism. PI: Brueseke, 2007-2008, **\$2500**.
- 2004: Geological Society of America, Cordilleran section student travel grant, **\$500**.
- 2004: Miami University DUOS (Doctoral-Undergraduate Opportunities in Scholarship; <http://www.users.muohio.edu/shorec/DUOS/duos.htm>) program with Jacob Knight, **\$1000**.
- 2003: Geological Society of America, Cordilleran section student travel grant, **\$185**.
- 2002: Geological Society of America, Cordilleran section student travel grant, **\$475**.
- 2001: Geological Society of America, Student Research Grant, **\$1875**.
- 1999: Geological Society of America, Rocky Mt. section student travel grant, **\$350**.
- 1999: Miami University Graduate Student Association Travel Assistance Award, **\$150**.
- 1998: Geological Society of America, Student Research Grant, **\$1500**.

Student Mentee Research Funding (\$40,621 total)

- 2022: Alex Bearden, NSF/GSA student research grant, **\$2500**
- 2022: Alex Bearden, Alaska Geological Society – Don Richter Memorial Scholarship, **\$2000**.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- 2021: Alyssa Endrich, Geological Society of America Student Research Grant – Lipman Student Research grant, **\$2500.**
- 2021: Alyssa Endrich, Tobacco Root Geological Society Field Scholarship, **\$1000.**
- 2021: Alyssa Endrich, KSU Graduate student council travel award, **\$400**
- 2021: Alyssa Endrich, KSU College of Arts and Sciences Research Travel award, **\$400.**
- 2021: Alyssa Endrich, South Central GSA section travel grant, **\$300**
- 2021: Alex Karrasch, KSU College of Arts and Sciences Research Travel award, **\$400**
- 2019: Emily Fenner, Geological Society of America Student Research Grant, **\$2,600.**
- 2019: Emily Fenner, Society of Economic Geologists Student Research Grant, **\$1,183.**
- 2018: Pat Manselle, KSU College of Arts and Sciences Research Travel award, **\$800.**
- 2018: Emily Fenner, American Federation of Mineralogical Societies Scholarship, **\$4,000.**
- 2018: Pat Manselle, Alaska Geological Society – Don Richter Memorial Scholarship, **\$2000.**
- 2017: Maridee Weber, KSU College of Arts and Sciences Research Travel award, **\$800.**
- 2017: Maridee Weber, KSU Office of Undergraduate Research & Creative Inquiry travel grant, **\$1000.**
- 2017: Chris Wierman, Society of Economic Geologists Student Research Grant, **\$2800.**
- 2017: Chris Wierman, Geological Society of America Student Research Grant, **\$1488.**
- 2016: Maridee Weber, KSU College of Arts and Sciences Research Travel award, **\$800.**
- 2016: David Martin, KSU College of Arts and Sciences Undergraduate Research award, **\$1000.**
- 2015: Anna Maynard, Geological Society of Nevada (Elko Chapter), **\$1000.**
- 2015: Anna Maynard, Geological Society of America Student Research Grant, **\$1100.**
- 2014: Caleb Dodd, Society of Economic Geologists Student Research Grant, **\$2000.**
- 2014: Anna Downey, Geological Society of America Student Research Grant, **\$900.**
- 2014: Anna Downey, Tobacco Root Geological Society Field Scholarship, **\$500.**
- 2014: Anna Downey, Wyoming Geological Association J.D. Love scholarship, **\$1000.**
- 2014: Anna Downey, Kansas Geological Foundation research scholarship, **\$1000.**
- 2014: Jasper Hobbs, AAPG Grants-in-Aid (Grants-in-Aid Committee Named Grant), **\$1500.**
- 2014: Jasper Hobbs, KSU-Chapter Sigma Xi Student Research Grant, **\$400.**
- 2013: Benjamin Hamill, KSU-College of Arts and Sciences Undergraduate Research award, **\$250.**
- 2012: Bill Busch, Geological Society of America Student Research Grant, **\$2,000.**
- 2012: Kate Amrhein, Geological Society of America Student Research Grant, **\$1,500.**
- 2011: Casey Bulen, AAPG Grants-in-Aid (Barrett Family Named Grant), **\$500.**

Primary Student Mentoring

19 M.S. students (all at KSU; KSU geology does not have a Ph.D. program):

- Kyle Broley, 2022-present*, Tectonic implications of ca. 30-20 Ma volcanism in southwestern Montana (U.S.A.), **M.S. in progress.**
- Alex Bearden, 2020-present*, Newly recognized monogenetic volcanism in south-central Alaska (U.S.A.): the Maclaren river volcanic field - petrogenesis and implications for the architecture of the subducting Yakutat slab, **M.S. in progress.**
- Alyssa Endrich, 2020-present*, Petrogenesis of basalts in the Centennial Valley, MT and vicinity; off-axis volcanism related to the Yellowstone hotspot?, **M.S. in progress.**
- Alex Karrasch, 2020-present*, Mantle plume-lithosphere interactions adjacent to the Snake River plain (U.S.A.) in northwest Wyoming, **M.S. in progress.**
- Emily Fenner, 2018-2020*, Geochemical and mineralogical characterization of low-sulfidation epithermal deposit sinter, Milestone Deposit, Owyhee Mountains, ID, **M.S.**
- Pat Manselle, 2017-2019*, Physical volcanology, sedimentology and geochemistry of the Mid-Cretaceous Chisana Formation, south-central Alaska: implications for models of Wrangellia composite terrane accretion, **M.S.**
- Chris Wierman, 2016-2018*, Copper partitioning in Mid-Miocene flood basalts from the northern Great Basin (U.S.A): implications for Cu behavior in flood basalt provinces, **M.S.**
- Beth Morter, 2015-2017*, Petrography, geochemistry, and geochronology of volcanic clasts from Wrangell Mountains rivers: Characterizing the tempo of Wrangell Volcanic belt, Alaska (USA) magmatism **M.S.**

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- Sam Berkelhammer, 2015-2017*, Initiation of the Wrangell arc: A record of tectonic changes in an arc-transform junction revealed by new geochemistry and geochronology of the ~29–18 Ma Sonya Creek volcanic field, Alaska, **M.S.**
- Anna Maynard, 2014-2016*, Cu isotope compositions of Cenozoic mafic rocks from the northern Great Basin and Snake River Plain (USA), **M.S.**
- Anna Downey, 2014-2015*, Cenozoic mafic to intermediate volcanism at Lava Mountain and Spring Mountain, Upper Wind River Basin, Wyoming, **M.S.**
- Caleb Dodd, 2014-2015*, Petrogenesis and rare earth element economic potential of Pilot Knob, a Pliocene(?) alkaline intrusive complex in the Togwotee Pass region, northwestern Wyoming (U.S.A), **M.S.**
- Jasper Hobbs, 2013-2015*, Petrologic Geochemical/isotope constraints on Cambrian basalt volcanism in the Southern Oklahoma Aulocogen, **M.S.**
- Andrew Ingalls, 2012-2014*, Reconnaissance Cenozoic volcanic geology of the Little Goose Creek area, northeastern Elko County, NV with an emphasis on the Jarbidge Rhyolite, **M.S.**
- Bill Busch, 2011-2013*, Mid-Miocene mafic magmatism in the vicinity of Midas, NV: Implications for the timing and development of local Au-Ag precious metal mineralization, **M.S.** in progress
- Kate Amrhein, 2011-2013*, Testing models of low- $\delta^{18}\text{O}$ silicic magmatism in the mid-Miocene Santa Rosa-Calico volcanic field, NV, **M.S.**
- Casey Bulen, 2010-2012*, The Role of Magmatism in the Evolution of the Cambrian Southern Oklahoma Rift Zone: Geochemical Constraints on the Mafic-Intermediate Rocks in the Arbuckle Mountains, OK. **M.S.**
- Zachary Hasten, 2010-2012*, Mid-Miocene magmatism in the Owyhee Mountains, ID: origin and petrogenesis of volcanic rocks in the Silver City District. **M.S.**
- Jeffery Callicoa, 2008-2010*, Significance of Mid-Miocene volcanism in northeast Nevada: petrographic, chemical, isotopic, and temporal importance of the Jarbidge Rhyolite, **M.S.**

27 undergraduate students (at KSU unless noted):

- Asa Tarrant, 2022-present*, Geochronological comparison between off-track Yellowstone hotspot volcanism and on-track Snake River Plain-Yellowstone eruptions. **B.S.**
- Quinton Mindrup, 2022-present*, Li concentrations in Cenozoic northern Great Basin rhyolites. **B.S.**
- Isaiah Euhler, 2021-2022*, 3D models of minerals and rocks; getting the word out via social media (e.g., Instagram and Twitter). **B.S.**
- Cara Gunzleman, 2020-2021*, 3D models of minerals and rocks; getting the word out via social media (e.g., Instagram and Twitter). **B.S.**
- Ben Walters, 2019-2021*, Petrology of Cenozoic igneous rocks adjacent to the Snake River plain, WY/ID; tectonic implications of off-track Snake River Plain-Yellowstone volcanism. **B.S.**
- Sarah Green, 2019-2020*, Petrology and crystal chemistry of Cenozoic basalts from the Centennial Valley, Montana. **B.S.**
- Gergely Motolai, 2019*, Soil volume changes during water-ice transition, **B.S.**, Horticulture and Natural Resources
- Maridee Weber, 2016-2019*, Geochemistry and tectonic significance of hypabyssal intrusives (map units Th/Tp) across the Wrangell Arc (AK) and implications for adakite petrogenesis and slab-edge melting. **B.S.**
- David Martin, 2016-2018*, Crystal chemistry of feldspar and pyroxene from Miocene Jarbidge Rhyolite lavas (NV). **B.S.**
- Wyatt Risovi-Hendrickson, 2016-2017*, Lithologic and characterization of railroad ballast and fines for evaluation of track abrasion damage. Civil Engineering **B.S.**
- Victoria Fitzgerald, 2016*, Geochemical characterization of Wrangell arc lavas from Green Hills section (AK). **B.S.**
- Ryan Keast, 2015-2016*, Petrogenesis of Euchre Mountain volcanism: potential leaky strike-slip volcanism along the Totschunda Fault, Wrangell Arc (AK). **B.S.**
- Clay Robertson, 2015*, Characterization of xenoliths from the Fancy Creek, KS kimberlite, **B.S.**
- Ben Hamill, 2013*, Creation of a dynamic digital geologic map of the Owyhee Mountains, ID in Google Earth, **B.S.**

MATTHEW E. BRUESEKE

CURRICULUM VITAE

Caleb Akerstrom, 2011-2013, Geochemical characterization of Cambrian mafic well-cuttings from the Turner Falls test well, OK (U.S.A.), **B.S.**

David Kowal, 2012-2013, Creation and integration of a visual mineral database into Mineralogy and Petrology coursework, **B.S.**

Tyler Meek, 2011-2012, Oxygen isotopes values of igneous rocks from the Owyhee Mts., ID, **B.S.**

Jason Kolb, 2010-2011, Petrography and geochemistry of Cretaceous granitoids from the Owyhee Mts., ID, **B.S.**

Eric Whiting, 2010-2011, Metamorphic rocks of the Flint District (Owyhee Mts.), ID, **B.S.**

Abby Lynch, 2010, Provenance of Quaternary Lake Kaw sediments, KS, **B.S.**

Chris Cook, 2009-2010, Petrology of Eocene ash flow tuffs in the vicinity of Jarbidge, NV, **B.S.**

Josh Foster, 2009-2010, Mid-Miocene volcanism in the Silver City District, ID, **B.S.**

Kendra Risen, 2007-2008, Mafic(?) intrusive magmatism in the Oregon-Idaho graben, OR, **B.S.**

Jacob Knight, 2003-2005, Characterization of ash flow volcanism in the Santa Rosa-Calico volcanic field, NV (Miami U.), **B.S.**

Lauren Gilbert, 2001-2002, Tephrostratigraphy of the Santa Rosa-Calico volcanic field, NV (MU), **B.S.**

Amy Maloy, 2001-2002, Generation of intermediate magma in the Santa Rosa-Calico volcanic field, NV (Miami U.), **B.S.**

Becki Witherow, 2001, Topic: Sr isotopic analyses of late Cenozoic basalts from the Owyhee Plateau, OR/NV (Miami U.), **B.S.**

M.S./Ph.D. Thesis and Dissertation Committee Member (all KSU)

Ali Roustazadeh, Department of Geology, 2022.

Claudia Morello, PhD. student, Dept. of Physics, 2021-present.

Vidhesh Shukla, Department of Geology, 2021-present.

William Jarvis, Department of Geology, 2021-present.

Carrie Brooks, Department of Geology, 2021-present.

Mikaela Rader, Department of Geology, 2019-2021.

Hallie Bruce, Department of Geology, 2019-present.

Madison Smith, Department of Geology, 2019-2021.

Brayton Pew, Department of Geology, 2019-2021.

Joshua Ford, Department of Geology, 2018-2020.

Kayleigh Rodgers, Department of Geology, 2017-present.

Nina Atae, Department of Geology, 2017-2019.

Grant Zwiefelhofer, Department of Geology, 2015-present.

Jacob Hughes, Department of Geology, 2015-2018.

Michelle Berube, Department of Geology, 2015-2017.

Jan Vosahlik, PhD. student, Dept. of Civil Engineering, 2015-2018.

Outside Chair for Ph.D., *Shahin Nayyri Amiri*, Dept. of Mech. and Nuclear Engineering, 2014-2018.

Michael Tummons, Department of Geology, 2014-2017.

Jamie Harrington, Department of Geology, 2014-2015.

Sultan Alkhamalli, Department of Geology, 2013-2015.

Shovon Barua, Department of Geology, 2013-2015.

Kolle Kahle-Riggs, Department of Art, 2013-2015.

Brent Campbell, Department of Geology, 2013-2015.

Saad Abdullah Almalki, Department of Geology, 2011-2013

Sankar Manalilkada Sasidharan, Department of Geology, 2011-2013

Chad Hobson, Department of Geology, 2011-2013.

Andrea Leggett, Department of Geology, 2011-present.

Amelia Fader, Department of Geology, 2011-2012.

Angela Tran, Department of Agronomy, 2011-2012.

Robin Barker, Department of Geology, 2010-2012.

O.C. Eke, Department of Geology, 2009-2011.

Mohammed Al Salim, Department of Geology, 2011 (MS report option).

MATTHEW E. BRUESEKE

CURRICULUM VITAE

Andy Neal, Department of Geology, 2008-2010.

Student Mentee Honors/Awards

Emily Fenner, 2019, Second Place, Student Poster Contest (American Exploration & Mining Association annual meeting)

Jasper Hobbs, 2015, First Place, Oral Presentation (Ecology, Environmental and Earth Sciences - 2015 Emerging Researchers National Conference in STEM)

Casey Bulen, 2012 1st place oral presentation (Engineering, Math, and Physical Sciences), K-State Student Research Forum

Tyler Meek, 2011-2012 KSU Chapman Scholar

Andrew Ingalls, 2013-2014 National Science Foundation GK-12 fellowship

Zachary Hasten, 2011-2012 National Science Foundation GK-12 fellowship

Jeffery Callicoat, 2009-2010 National Science Foundation GK-12 fellowship

Kendra Risen, 2007-2008, Intern, KSU Campus Internship Program (CSI)

PEER-REVIEWED PUBLICATIONS (accepted, published; *=student mentee)

Brueseke, M.E., Benowitz, J.A., *Bearden, A.T., Mann, M.E., and Miggins, D.P., (in press), Subduction Disruption, Slab Tears: ca. 1 Ma true collision of an ~30-km-thick oceanic plateau segment recorded by Yakutat slab nascent tear magmatism: *Terra Nova*.

Adam, C., Smith, M., Kempton, P.K., Brueseke, M.E., (in press), Temporal evolution of the swell and magmatic fluxes along Louisville hotspot track: *G-Cubed*. <https://doi-org.er.lib.k-state.edu/10.1029/2022GC010568>

*Fenner, E.R., Brueseke, M.E., Shaulis, B.J., 2022, Archetypal Au-bearing silica sinter from the Miocene Milestone deposit, Idaho, USA: *Mineralium Deposita*. <https://doi.org/10.1007/s00126-022-01117-z>

Trop, J.M., Benowitz, J.A., Kirby, C., and Brueseke, M.E., 2022, Geochronology of the Wrangell Arc: Spatial-temporal evolution of slab edge magmatism along a at slab subduction-transform transition, Alaska-Yukon: *Geosphere*. <https://doi.org/10.1130/GES02417.1>.

*Manselle, P., Brueseke, M.E., Trop, J.M., Benowitz, J.A., Snyder, D.C., and Hart, W.K., 2020, Geochemical and stratigraphic analysis of the Chisana Formation, Wrangellia terrane, eastern Alaska: Insights into Early Cretaceous magmatism and tectonics along the northern Cordilleran margin: *Tectonics*, <https://doi.org/10.1029/2020TC006131>.

Saunders, J.A., Burke, M., and Brueseke, M.E., 2019, Scanning-electron-microscope imaging of gold (electrum) nanoparticles in middle Miocene bonanza epithermal ores from northern Nevada, USA: *Mineralium Deposita*, v. 55, p. 389-398, DOI: 10.1007/s00126-019-00935-y

Trop, J.M., Benowitz, J.A., Koepf, D., Sunderlin, D., Brueseke, M.E., Layer, P.W., Fitzgerald, P., 2019., Stitch in the Ditch: Fluvial strata and a Totschunda fault zone dike in the Nutzotin Mountains (Alaska) record ~117 Ma suturing between the Wrangellia terrane and western North America and initiation of the Totschunda fault zone by ~114 Ma: *Geosphere*, v. 16. p. 1-29. <https://doi.org/10.1130/GES02127.1>

*Berkelhammer, S.E., Brueseke, M.E., Benowitz, J.A., Trop, J.M., Davis, K., Layer, P.W., and *Weber, M., 2019, Geochemical and geochronological records of tectonic changes along a flat-slab arc-transform junction: ~30 Ma to ~19 Ma Sonya Creek volcanic field, Wrangell Arc, Alaska: *Geosphere*, v. 15, p. 1508-1538, <https://doi.org/10.1130/GES02114.1>

Kempton, P.D., Rogers, K., Brueseke, M.E., 2019, Windows into the Cretaceous mantle of the North American mid-continent– kimberlites of Riley County, in, Schulmeister, M.K. and Aber, J.S., eds., *Geological Society of America Field Guide 52*, <https://doi.org/10.1130/fl052>

Brueseke, M.E., Benowitz, J., Trop, J., Davis, K., *Berkelhammer, S., Layer, P., *Morter, B., 2019, The Alaska Wrangell Arc: ~30 Ma of subduction related magmatism along a still active arc-transform junction: *Terra Nova*. doi.org/10.1111/ter.12369

Brueseke, M.E., 2018, Book Review: A photographic atlas of flood basalt volcanism: *Frontiers Earth Science*, 6:115. doi: 10.3389/feart.2018.00115

Riding, K.A., Peterman, R.J., Guthrie, S., Brueseke, M., Mosavi, H., Daily, K., *Risovi-Hendrickson, W., 2018, Environmental and track factors that contribute to abrasion damage: *Proceedings of the 2018 Joint Rail Conference JRC2018*, April 2018.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- Brueseke, M.E., *Downey, A.C., *Dodd, Z.C., Hart, W.K., Adams, D.C., and Benowitz, J.A., 2017, The leading wisps of Yellowstone: Post-ca. 5 Ma extension-related magmatism in the upper Wind River Basin, Wyoming (USA) associated with the Yellowstone hotspot tectonic parabola: *Geosphere*. DOI: <https://doi.org/10.1130/GES01553.1>
- Brueseke, M.E., *Hobbs, J.M., *Bulen, C.L., Mertzman, S.A., Puckett, R.E., Walker, J.D., and Feldman, J., 2016, Cambrian intermediate-mafic magmatism along the Laurentian margin: Evidence for flood basalt volcanism from well cuttings in the Southern Oklahoma Aulacogen (U.S.A.): *Lithos*. DOI:10.1016/j.lithos.2016.05.016
- Saunders, J., Mathur, R., Kamenov, G.D., Shimizu, T., Brueseke, M.E., 2016, New isotopic evidence bearing on bonanza (Au-Ag) epithermal ore-forming processes: *Mineralium Deposita*. DOI 10.1007/s00126-015-0623-y
- Ladderud, J.A., Wolff, J.A., Rember, W.C., and Brueseke, M.E., 2015, Volcanic ash layers in the Miocene Lake Clarkia beds: geochemistry, regional correlation, and age of the Clarkia flora: *Northwest Science* <http://dx.doi.org/10.3955/046.089.0402>
- Mason, M.S., Saunders, J.A., Aseto, C., Hames, W.E., and Brueseke, M.E., 2015, Epithermal ores of War Eagle and Florida Mountains, Silver City District, Owyhee County, Idaho: *Geological Society of Nevada, New Concepts and Discoveries*, p. 859-870.
- Brueseke, M.E., *Calliccoat, J.S., Hames, W., and Larson, P.B., 2014, Mid-Miocene rhyolite volcanism in northeastern Nevada: the Jarbidge Rhyolite and its relationship to the Cenozoic evolution of the northern Great Basin (U.S.A.): *Geological Society of America Bulletin*, v. 126, p. 1047-1067
- Brueseke, M.E., *Bulen, C.L., and Mertzman, S.A., 2014, Major- and trace-element constraints on Cambrian basalt volcanism from well cuttings in the Arbuckle Province, Oklahoma (U.S.A.): in Suneson, N., *Igneous and Tectonic history of the Southern Oklahoma Aulacogen, Guidebook 38, Oklahoma Geological Survey*, p. 95-104
- Puckett, R.E. Jr., Hanson, R., Eschberger, A., Brueseke, M.E., *Bulen, C., and Price, J., 2014, New insights into the Early Cambrian igneous and sedimentary history of the Arbuckle Mountains area of the Southern Oklahoma Aulacogen from Basement Well Penetrations in the Arbuckle Mountains Area: in Suneson, N., *Igneous and Tectonic history of the Southern Oklahoma Aulacogen, Guidebook 38, Oklahoma Geological Survey*, p. 61-94
- Hanson, R.E., Puckett, R.E. Jr., Keller, G.R., Brueseke, M.E., *Bulen, C.L., Mertzman, S.A., and McCleery, D.A., 2012, Cambrian Wichita igneous province in the southern OK rift zone: *Lithos*, doi: 10.1016/j.lithos.2012.06.003
- Saunders, J.A., and Brueseke, M.E., 2012, Volatility of metal(oids) during subduction-related “distillation” and the geochemistry of epithermal ores of western USA: *Economic Geology*, v. 107, p. 165-172
- Henry, C.D., McGrew, A.J., Colgan, J.P., Snoke, A.W., and Brueseke, M.E., 2011, Timing, distribution, amount, and style of Cenozoic extension in the northern Great Basin, 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. 27-66.
- Brueseke, M.E., 2011, Magmatism and mineralization in the northern Great Basin: mid-Miocene volcanism related to the inception of the Yellowstone hotspot and its relationship to regional bonanza ore deposits: *Geological Society of Nevada, Great Basin Evolution and Metallogeny*, p. 247-255
- Brueseke, M.E., and Hart, W.K., 2009, Intermediate composition magma production in an intracontinental setting: Unusual andesites and dacites of the mid-Miocene Santa Rosa-Calico volcanic field, northern Nevada: *Journal of Volcanology and Geothermal Research*, v. 188, p. 197-213
- Brueseke, M.E. and Hart, W.K., 2008, Geology and petrology of the mid-Miocene Santa Rosa-Calico volcanic field, northern Nevada. Nevada Bureau of Mines and Geology Bulletin #113
- Brueseke, M.E., Hart, W.K., and M.T. Heizler, 2008, Diverse mid-Miocene silicic volcanism associated with the Yellowstone-Newberry thermal anomaly: *Bulletin of Volcanology*, v. 70, p. 343-360
- Brueseke, M.E., Heizler, M.T., Hart, W.K., and S.A. Mertzman, 2007, Distribution and geochronology of Oregon Plateau (U.S.A.) flood basalt volcanism: The Steens Basalt revisited: *Journal of Volcanology and Geothermal Research*, v. 161, p. 187-214
- Hughes, J.M., Cureton, F.E., Marty, J., Gault, R.A., Gunter, M.E., Campana, C.F., Rakovan, J., Sommer, A., and M.E. Brueseke, 2001, Dickthomssenite, Mg(V₂O₆)•7H₂O, a new mineral species from the Firefly-Pigmy mine, Utah: Descriptive mineralogy and arrangement of atoms: *The Canadian Mineralogist*, 39, 1691-1700

MATTHEW E. BRUESEKE

CURRICULUM VITAE

NON PEER-REVIEWED CONFERENCE PROCEEDINGS AND REPORTS (*=student mentee)

- Contributed to National Academies of Sciences, Engineering, and Medicine. 2021. *America's Geoheritage II: Identifying, Developing, and Preserving America's Natural Legacy: Proceedings of a Workshop*. Washington, DC: The National Academies Press., 47p. <https://doi.org/10.17226/26316>
- Riding, K.A., Peterman, R.J., Guthrie, S., Brueseke, M., Mosavi, H., Daily, K., 2017, Environmental and track factors that contribute to abrasion damage: Final report to U.S. Department of Transportation, Federal Railroad Administration. 242p.
- Saunders, J.A., Kamenov, G.D., Mathur, R., Shimizu, T., and Brueseke, M.E., 2013, Transport and deposition of metallic nanoparticles and the origin of bonanza epithermal ores: *Biennial SGA Proceedings*, Uppsala, Sweden, August, 2013
- Hart, W.K. and M.E. Brueseke, 1999, Analysis and Dating of Volcanic Horizons from Hagerman Fossil Beds National Monument and a Revised Interpretation of Eastern Glenns Ferry Formation Chronostratigraphy, A Report of Work Accomplished and Scientific Results: Hagerman Fossil Beds National Monument, National Park Service, 37p. NPS Report No.: 1443-PX9608-97-003

NON PEER-REVIEWED BOOK/JOURNAL/OTHER ARTICLES/DATABASES

- The leading edge of the Snake River Plain – Yellowstone volcanic province: <5 million-year-old volcanism around Dubois, Wyoming, 10/24/2022, Brueseke, M.E., Yellowstone Volcano Observatory Caldera Chronicles. <https://www.usgs.gov/observatories/yvo/news/leading-edge-snake-river-plain-yellowstone-volcanic-province>
- Searchable Sketchfab.com rock & mineral catalog, 2020, Andrews, G., Brueseke, M., Himelstein, A, McFarland, R.I. A searchable catalog of 3D digital models hosted on Sketchfab.com. Rock & mineral catalog (Version 1.0) [Data set]. Zenodo. <https://zenodo.org/record/3988525#.YWWzpxlOnBI>
- Why Alaskan summers rock, 2016, Brueseke, M.E. College of Arts and Sciences A & S Letters magazine. Summer 2016.
- Saunders, J.A. and Brueseke, M.E., 2015, How Gold and Silver got into the Owyhee Mountains, *in*, O'Malley, M, Townsend, D, and Packard, P., eds., Owyhee Outpost, A Journal of the History of the Owyhee County. Owyhee County Historical Society Press 46, p. 89-99.

INVITED WEBSITE CONTRIBUTION (*=student mentee)

- Hanson, R.E., Puckett, R.E. Jr., McCleery, Brueseke, M.E., *Bulen, C.L., and Mertzman, S.A. 2011, Cambrian Wichita igneous province in the southern OK rift zone: posted on the IAVCEI large igneous provinces commission website (November 2011 LIP of the month; <http://www.largeigneousprovinces.org/11nov>).

INVITED PRESENTATIONS – Academic conferences (*=student mentee)

- Brueseke, M.E., 2022, 30 Million Years of Magmatism Along a Flat-Slab Subduction-Transform Transition, Wrangell Arc, Alaska-Yukon. Alaska EarthScope and Beyond: Synthesis Meeting. 4/25/2022.
- Lacroix, B., Kempton, P., and Brueseke, M., 2021, PetCAT-Scan: a new tool for quantitative petrography in the COVID-19 pandemic and beyond: Geological Society of America Abstracts with Programs, v. 53. (Brueseke invited, Lacroix gave talk - session T67. The Lasting Effects of the 2020–2021 COVID-19 Crisis on Geoscience Education: Insights, Problems, and Unanticipated Benefits I).
- Trop, J., Brueseke, M., Benowitz, J.A., and Kirby, C.S., 2021, Evolution of magmatism along a flat-slab subduction-transform transition, Wrangell Arc, Alaska-Yukon: Geological Society of America Abstracts with Programs, v. 53.
- Invited speaker request for T13. Cenozoic volcanism in the inland Northwestern United States - GSA 2016 Rocky Mountain Section meeting, Moscow, ID, but declined due to prior commitment.
- Brueseke, M.E., Ingalls, A.I., and Hames, W.E., 2015, Miocene Rhyolite Volcanism in the Northeastern Great Basin: Spatio-Temporal-Petrogenetic Characteristics and Connection to Basin and Range Extension: Geological Society of Nevada, New Concepts and Discoveries 2015 Symposium.
- Brueseke, M.E., Saunders, J.A., Kamenov, G.D., Hames, W.E., 2012, Subduction related volatility of metal(loids), fertile lithosphere, and the implications for mid-Miocene epithermal Au-Ag deposits in the western United States: Geological Society of America Abstracts with Programs, Nov 2012.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- Saunders, J.A., Mathur, R., Kamenov, G.D., Brueseke, M., Hames, W., 2012, New Pb- and Cu-isotope data supporting a deep origin of metallic nanoparticles in bonanza epithermal ores of the northern Great Basin, Nevada-Idaho. Geological Society of America Abstracts with Programs, Nov 2012.
- *Hasten, Z.E.L. and M.E. Brueseke, 2011, Mid-Miocene volcanism in the Owyhee Mountains (ID): local physical and geochemical characteristics and implications for regional magmatism linked to the inception of the Yellowstone hotspot: Geological Society of America Abstracts with Programs, V.43, p. 651.
- Brueseke, M. E., 2011, Extensive middle-Miocene silicic magmatism in northeastern NV: the Jarbidge Rhyolite and its connection to the Cenozoic evolution of the northern Great Basin: Geological Society of America Abstracts with Programs, V.43, p. 4.
- *Hasten, Z.E.L., Brueseke, M.E., Hames, W.E., Saunders, J.A., 2011, Petrology and magmatic evolution of the Silver City district, Owyhee Mountains (ID): Geological Society of America Abstracts with Programs, V.43, p. 14.
- Saunders, J.A. and M. Brueseke, 2010, Volatility of metal(loids) and the geographic-geochemical zonation of Tertiary epithermal/epizonal ores in western USA: Geological Society of America Abstracts with Programs, V.42, p. 45.
- Brueseke, M. and W. Hart, 2010, Early Miocene volcanism along the southeastern margin of the HLP and its relationship to regional tectonomagmatic processes: High Lava Plains Workshop 2010.
- Hart, W., Brueseke, M., Wypych A., Shoemaker, K., Bondre, N., Hinterberger T., and E. Short, 2010, Progress toward a comprehensive understanding of late Cenozoic volcanism and crust-mantle evolution in and adjacent to the southeastern portion of the High Lava Plains: High Lava Plains Workshop 2010.
- Saunders, J.A. and M.E. Brueseke, 2010, Volatility of metals during subduction-related “distillation” and the geochemistry of ores. *Geochimica et Cosmochimica Acta*, Goldschmidt Conference Abstracts 2010, A913.
- Brueseke, M.E., Saunders, J. and W. Hames, 2009, Mid-Miocene magmatism and mineralization in the northern Great Basin and Oregon Plateau: the link between bonanza epithermal ore deposits and the Yellowstone hotspot, Geological Society of America Abstracts with Programs, V.41, p. 415.
- *Callicoat, J. and M.E. Brueseke, 2009, Mid-Miocene Volcanism in Northeast Nevada: Spatial, Chemical, and Chronologic Significance of the Jarbidge Rhyolite, Geological Society of America Abstracts with Programs, V.41, p. 298.
- Brueseke, M.E., 2008, Understanding the evolution of magmas via multiple data types: a case study of the Santa Rosa-Calico volcanic field, NV. On the cutting edge “teaching petrology and structural geology in the 21st century” workshop, October 2008, Houston, TX.
- Brueseke, M.E., Hart, W.K., and K.A. Shoemaker, 2004, Re-evaluating the “Owyhee-Humboldt” eruptive center: Relationships between voluminous middle Miocene silicic volcanism and the Owyhee Plateau: Geological Society of America Abstracts with Programs, v. 36, p. 97.
- Hart, W.K., and M.E. Brueseke, 2004, Eruptive diversity and styles of silicic volcanism in the mid-Miocene Santa Rosa-Calico volcanic field, northern Nevada: Geological Society of America Abstracts with Programs, v. 36, p. 11.
- Brueseke, M.E. and Hart, W.K., 1999, Stratigraphy and whole-rock chemistry of mid-Miocene lava flows in the vicinity of Steens MT, Southeastern Oregon: Geological Society of America Abstracts with Programs, Rocky Mountain Section, v. 31, p. 5.
- Hart, W.K., and Brueseke, M.E., Renne, P.R., and H.G. McDonald, 1999, Chronostratigraphy of the Pliocene Glens Ferry Formation, Hagerman Fossil Beds National Monument, ID: Geological Society of America Abstracts with Programs, Rocky Mountain Section, v. 31, p. 15.

INVITED PRESENTATIONS – Academic institutions/professional non-profit organizations

- Brueseke, M.E., 2022, Investigating the Lost Arc: Constraints on ~30 Million Years of Diachronous Magmatism along an Arc - Transform Junction, Wrangell Arc, southern Alaska: Michigan State University EES Distinguished Speaker Series, 9/30/22.
- Brueseke, M.E., 2022, The story in the rocks: differences between the volcanic activity that formed the Absaroka range vs. volcanism associated with the Yellowstone hotspot. The Dubois Museum (Fremont County, WY Museums), 8/11/2022.
- Brueseke, M.E., 2021, Geoscience research in Mineralogy/Igneous Petrology. Olathe Geoscience Academy (Olathe North high school, Olathe, KS), 10/6/21.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- Brueseke, M.E., *Karrasch, A., *Endrich, A., 2021, Rising and falling mountains: regional and local controls on the mountains and basins of northwest Wyoming. The Dubois Museum (Fremont County, WY Museums), 7/8/2021.
- Brueseke, M.E., 2021, Investigating the #lostarc: Geologic Constraints on ~30 Million Years of Diachronous Magmatism along an Arc-Transform Junction, Wrangell Arc, southern Alaska. University of Buffalo, 3/19/2021.
- Brueseke, M.E., *Downey, A., *Dodd, C., Adams, D., Benowitz, J., 2020, More than just Yellowstone? Lava Mountain and other recent volcanism in the Dubois, WY area. The Dubois Museum (Fremont County, WY Museums), 8/6/2020.
- Brueseke, M.E., 2020, Investigating the #lostarc: geologic constraints on ~30 Million years of diachronous magmatism along an arc-transform junction, Wrangell Arc, southern Alaska. *Scheduled for April 2, Oklahoma State University, but cancelled due to coronavirus pandemic.*
- Brueseke, M.E., 2019, 16 to 14 million year old gold and silver deposits in the northern Great Basin (U.S.A.): epithermal bonanza ores linked to the Yellowstone hotspot. Topeka Gem and Mineral Society, 10/31/19.
- *Fenner, E. and Brueseke, N., 2019, Field evidence for the paragenesis of the Miocene Milestone Hotspring Sinter. Topeka Gem and Mineral Society, 10/31/19.
- Brueseke, M.E., 2019, Investigating the #lostarc: geologic constraints on ~30 Million years of diachronous magmatism along an arc-transform junction, Wrangell Arc, southern Alaska. Kansas State University, 9/17/19.
- Brueseke, M.E., 2019, Investigating the #lostarc: geologic constraints on ~30 Million years of diachronous magmatism along an arc-transform junction, Wrangell Arc, southern Alaska. West Virginia University, 3/8/19.
- Brueseke, M.E., 2018, Investigating the lost arc: geologic constraints on ~29 million years of continuous magmatism along an arc-transform junction, Wrangell arc, Alaska. Wichita State University, 2/16/18.
- Benowitz, J., Davis, K.N., Brueseke, M.E., Trop, J., Layer, P.W., 2017, Investigating the lost volcanic arc: Wrangell-St. Elias National Park Alaska. Wrangell Mountains Center, 8/3/17.
- Brueseke, M.E., 2016, Understanding links between volcanism and plate tectonics in Wrangell St. Elias, National Park, Alaska. Topeka Gem and Mineral Society, 4/22/16.
- Brueseke, M.E., 2015, The Yellowstone Plateau volcanic field: what makes it super? KSU Chapter Sigma Xi, Manhattan, KS science café, 10/13/15.
- Brueseke, M.E., 2013, Subduction related volatility of metal(oids) and the implications for Mid-Miocene epithermal Au-Ag deposits in the northern Great Basin (U.S.A.). Miami University, Department of Geology and Environmental Earth Science.
- Brueseke, M.E., 2010, Mid-Miocene magmatism and mineralization in the Pacific Northwest (USA): bonanza epithermal ore deposits, the Yellowstone hotspot, and Laramide subduction. Kansas State University, Department of Geology.
- Saunders, J.A., and Brueseke, M.E., 2010, The Case for the Mantle-Epithermal Connection in Western USA. Denver Region Exploration Geologists' Society.
- Brueseke, M.E., 2010, Geochronology (& inferences) of unobservable Earth processes, K-State EIDRoP GK-12 Program Summer Institute.
- Brueseke, M.E., 2010, Mid-Miocene magmatism on the Oregon Plateau: the "birth" of the Yellowstone hotspot, Auburn University, Department of Geology and Geography.
- Brueseke, M.E., 2010, The Yellowstone volcanic field: the formation and behavior of a voluminous magmatic system, Auburn University, Department of Geology and Geography.
- Brueseke, M.E., 2009, Mid-Miocene Magmatism and Mineralization in the Northern Great Basin & Oregon Plateau, Kansas Geological Society.
- Brueseke, M.E., 2009, More Than Just McDermitt: Temporal-spatial Relationships of Mid-Miocene Magmatism on the Oregon Plateau, Department of Geology, University of Kansas.
- Brueseke, M.E., 2008, Petrogenesis of a compositionally diverse volcanic field: implications for the inception of the Yellowstone hotspot, University of Nebraska-Lincoln, Department of Geosciences (I declined this presentation due to a scheduling conflict).
- Brueseke, M.E., 2008, Mid-Miocene Magmatic System Development in the Northwestern United States, Southern Methodist University, Department of Earth Sciences.
- Brueseke, M.E., 2007, Mid-Miocene Magmatic System Development in the Northwestern United States, Fort Hays State University Department of Geosciences.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

Brueseke, M.E., 2006, Mid- Mid-Miocene Magmatic System Development in the Northwestern United States, Illinois State University, Department of Geology-Geography.

Brueseke, M.E., 2005, North America's sleeping giant: The past, present, and future of Yellowstone Volcano, Eastern Illinois University (Earth Science week keynote speaker).

CONTRIBUTED PRESENTATIONS – Academic conferences (*=student mentee)

Brueseke, M., *Karrasch, A., *Endrich, A., Adams, D.C., Miggins, D.P., and Benowitz, J., (accepted), Yellowstone hotspot - lithosphere interactions (U.S.A.): <10 Ma off-axis magmatism in northwest Wyoming distinct from the Yellowstone hotspot track: International Association of Volcanology and Chemistry of the Earth's Interior, Scientific Assembly 2023, Rotorua New Zealand.

*Bearden, A.T., Brueseke, M., Benowitz, J., Miggins, D.P., Mann, M.E., 2022, New Insights on the Yakutat slab tear, south central Alaska (USA): Sr-Nd-Pb isotope constraints on the Pleistocene Maclaren River Volcanic Field: American Geophysical Union Fall Meeting.

Brigham, K.B., Brueseke, M.E., and Turner, S., 2022, Geochemistry of Wrangell Arc Lavas Indicate a Mantle Origin for Voluminous High-Mg# Andesites, With Implications for the Growth of Continental Crust: American Geophysical Union Fall Meeting.

*Bearden, A.T., Brueseke, M., Benowitz, J., Miggins, D.P., Mann, M.E., 2022, Evidence for a post 1 Ma Yakutat slab tear: geological, geochronological, and geochemical constraints on the Maclaren river volcanic field, south-central Alaska (USA): Geological Society of America Abstracts with Programs, v. 55.

Brueseke, M.E., *Karrasch, A., *Endrich, A., Adams, D.C., Miggins, D.P., and Benowitz, J., 2022, Investigating <10 Ma off-axis magmatism in the Centennial Valley, Montana and Upper Wind River basin-Jackson Hole, Wyoming: Yellowstone hotspot-lithosphere interactions at the leading edge of the Snake River plain (U.S.A.): Geological Society of America Abstracts with Programs, v. 55.

*Endrich, A., Brueseke, M., *Karrasch, A., Haley, J.C., and Miggins, D.P., 2022, Cenozoic basaltic volcanism in the Centennial Valley and vicinity: implications for the areal extent of Snake River olivine tholeiites associated with the Yellowstone hotspot: Geological Society of America Abstracts with Programs, v. 54.

Kempton, P.K., Mathur, R., and Brueseke, M., 2022, Metasomatized lithospheric mantle an unlikely source for porphyry Cu deposits in the southern Basin and Range: Geological Society of America Abstracts with Programs, v. 54.

*Endrich, A., Brueseke, M., *Walters, B.J., and *Karrasch, A., 2021, Petrogenesis of Cenozoic basalts in the Centennial Valley and vicinity in SW Montana: Out-of-sequence Snake River plain basalt eruptions north of the eastern Snake River plain?: Geological Society of America Abstracts with Programs, v. 53.

*Karrasch, A., Brueseke, M., and Adams, D.C., 2021, New bulk rock geochemical data for <10 Ma volcanism in Jackson Hols and the upper Wind River basin, WY: comparative geochemistry to Snake River plain-Yellowstone basalts and petrogenetic implications: Geological Society of America Abstracts with Programs, v. 53.

Brueseke, M., Benowitz, J., and Miggins, D.P., 2021, Newly recognized monogenetic volcanism in south-central Alaska (U.S.A.): the Maclaren River volcanic field and implications for the architecture of the subducting Yakutat slab: Geological Society of America Abstracts with Programs, v. 53.

Brueseke, M.E., *Green, S.M., *Endrich, A., *Walters, B.J., *Fenner, E.R., *Karrasch, A.K., and Benowitz, J.A., 2021, Off-track Yellowstone hotspot basalt volcanism north of the eastern Snake River plain: physical and chemical constraints on a monogenetic volcano in the Centennial Valley, Montana: Geological Society of America Abstracts with Programs, v. 53.

Andrews, G., Isom, S., Brueseke, M., Labishak, G., Pettus, H., and *Gunzleman, C., 2021, Getting to grips with untouchable samples: online 3D geological specimen models on Sketchfab.com: Geological Society of America Abstracts with Programs, v. 53.

Brueseke, M.E., *Manselle, P., Trop, J.M., Benowitz, J.A., Snyder, D.C., and Hart, W.K., 2020, Geochemical and stratigraphic analysis of the Chisana formation, Insular terranes, eastern Alaska: early Cretaceous magmatism and tectonics along the northern Cordilleran margin: Geological Society of America Abstracts with Programs, v. 52.

*Fenner, E, Brueseke, M.E., Deatherage, A., 2020 (postponed to 2022), Paragneiss and geochemistry of the Miocene Milestone sinter, Silver City district, Owyhee County, Idaho: implications for sinter-hosted epithermal Au-Ag deposits: Geological Society of Nevada, Vision for Discovery: Geology and ore deposits of the Basin and Range, 2022.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- *Fenner, E, Brueseke, M.E., Deatherage, A., 2019, Field constraints on the paragenesis of a mid-Miocene sinter-hydrothermal vent complex, Silver City District, Owyhee Mountains, ID: American Exploration & Mining Association 2019 annual meeting, 12/4/19.
- *Motolai, G. and Brueseke, M.E., 2019, Change of saturated soil volume due to the freeze thaw cycle: K-State Undergraduate Research Symposium: Undergraduate research experience for all, Dec. 10, 2019 (Inaugural symposium and due to COVID-19 pandemic, the only one thus far at K-State).
- *Morter, B.K., Brueseke, M.E., Benowitz, J.A., Kirby, C.S., Trop, J.M., Davis, K, and Layer, P.W., 2019, What lies beneath the ice? Using the geochemistry and geochronology of modern river clasts to decipher the evolution of a glaciated volcanic arc (Wrangell Arc, Alaska, UA): Geological Society of America Abstracts with Programs, v. 51.
- Kempton, P.D., Brueseke, M.E., Rogers, K, 2019, The mystery of kimberlites in Kansas: Geological Society of America Abstracts with Programs, v. 51.
- Rogers, K., Kempton, P.D., Brueseke, M.E., and Adam, C., 2019., In situ LA-ICP-MS trace element data on perovskite: implications for original melt compositions from kimberlites in Kansas: Geological Society of America Abstracts with Programs, v. 51.
- Cole, B.G., Andrews, G.D.M., Brown, S.R., and Brueseke, M., 2019, Grain size and shape characteristics of xenocrysts in the Masontown (SW Pennsylvania) and Stockdale (NE Kansas) kimberlites: insights from optical microscopy and computed X-ray tomography: Geological Society of America Abstracts with Programs, v. 51.
- Brueseke, M.E., and *Martin, D.A., 2019, Glass and crystal chemistry from Miocene Jarbidge rhyolite lavas (Nevada, USA): constraints on crystal-rich rhyolite petrogenesis and effusive volcanism: Geological Society of America Abstracts with Programs, v. 51.
- *Wierman, C., and Brueseke, M.E., 2019, Copper partitioning in mid-Miocene Steens Basalt lavas from southeastern Oregon (USA): Implications for Cu behavior in mafic magmas: Geological Society of America Abstracts with Programs, v. 51.
- Rogers, K., Kempton, P.D., Brueseke, M.E., and Adam, C., 2019, A petrographic and geochemical analysis of off-craton kimberlites from Riley and Marshall County, Kansas (USA): Geological Society of America Abstracts with Programs, v. 51.
- Brueseke M.E., Trop, J.N., Benowitz, J.A., Layer, P.W., Davis, K.N., *Morter, B.K., *Berkelhammer, S.E., and *Weber, M.A., 2018, Geological constraints on ~30 million years of diachronous magmatism along an arc-transform junction, Wrangell Arc, southern Alaska: EOS, Transactions, American Geophysical Union, Suppl. Abstract T21G-1645.
- *Manselle, P., Brueseke, M.E., Trop, J.M., Benowitz, J.A., Snyder, D.C., and Hart, W.K., 2018, Mid-Cretaceous volcanism and fluvial-deltaic sedimentation associated with accretion of the Wrangellia composite terrane, Chisana Arc, Gravina-Nutzotin Belt, Alaska: Geological Society of America Abstracts with Programs, v. 50.
- Brueseke, M.E., *Dodd, Z.C., Hart, W.K., and Benowitz, J.A., 2018, Petrogenesis and rare earth element economic potential of Pilot Knob, an apatite-rich, Pliocene alkaline intrusive body in the Upper Wind river basin volcanic field, WY (U.S.A.): Geological Society of America Abstracts with Programs, v. 50.
- Brueseke M.E., Trop, J.N., Benowitz, J.A., Layer, P.W., Davis, K.N., *Berkelhammer, S.E., *Weber, M.A., and *Morter, B.K., 2018, Geochemical constraints on ~30 million years of diachronous magmatism along an arc-transform junction, Wrangell Arc, southern Alaska and Canada: Geological Society of America Abstracts with Programs, v. 50.
- Trop, J.N., Benowitz, J.A., Brueseke, M.E., Layer, P.W., Kirby, C.S., Davis, K.N., *Berkelhammer, S.E., and *Morter, B.K., 2018, Geochronologic constraints on ~30 million years of diachronous magmatism along an arc-transform junction, Wrangell Arc, southern Alaska and Canada: Geological Society of America Abstracts with Programs, v. 50.
- Gardner, C.T., Trop, J.M., Daniel, C.G., Benowitz, J.A., Brueseke, M.E., and McFarlane, C.R.M., 2018, Late Devonian sedimentary record of Appalachian Tectonics and erosion: geochronology and geochemistry of detrital muscovite and zircon: Geological Society of America Abstracts with Programs, v. 50.
- Brueseke, M.E., *Downey, A.C., *Dodd, Z.C., Hart, W.K., Adams, D.C., and Benowitz, J.A., 2018, Post-ca. 5 Ma extension-related magmatism in the upper Wind River Basin, Wyoming (USA) associated with the Yellowstone hotspot tectonic parabola: Geological Society of America Abstracts with Programs, v. 50.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- Zwiefelhofer, G., Kempton, P.D., Mathur, R., Brueseke, M., 2018, Cu-isotope heterogeneity in the lithospheric mantle: evidence from Type I and Type II peridotite xenoliths from the Geronimo volcanic field, SE Arizona: Geological Society of America Abstracts with Programs, v. 50.
- *Martin, D.A, Brueseke, M.E., Ellis, B., Allaz, J., 2017, Insights on eruptions of crystal-rich rhyolite magma: crystal chemistry constraints on Mid-Miocene Jarbidge Rhyolite (Nevada, USA) volcanism: Geological Society of America Abstracts with Programs, v. 49.
- *Weber, M.A., Brueseke, M.E., *Berkelhammer, S.E., Benowitz, J., Trop, J.M., Davis, K.N., Layer, P.W., and *Morter, B.K., 2017, Geochemical evidence for adakite-like magmatism at the Oligo-Miocene initiation of the Wrangell Arc, Alaska. Geological Society of America Abstracts with Programs, v. 49.
- *Berkelhammer, S.E., Brueseke, M.E., Benowitz, J.A., M.E., Trop, J.M., Davis, K.N., Layer, P.W., and Mertzman, S.A., 2017, Initiation of the Wrangell Arc: a record of tectonic changes in an arc-transform junction revealed by new geochemistry and geochronology of the ~29-18 Ma Sonya Creek volcanic field, Alaska. Geological Society of America Abstracts with Programs, v. 48.
- Koepf, D.Q., Trop, J.M., Benowitz, J.A., Layer, P.W., Zippi, P.A., and Brueseke, M.E., 2017, Mid-Cretaceous volcanism and fluvial sedimentation in the Alaska range suture zone: implications for the accretionary history of the Wrangellia composite terrane. Geological Society of America Abstracts with Programs, v. 49.
- Davis, K.N., Benowitz, J., Layer, P.W., Trop, J., and Brueseke, M., 2017, Dating the lost arc of Alaska: constraining the timing of initiation of the Wrangell arc with a new $^{40}\text{Ar}/^{39}\text{Ar}$ detrital geochronology approach on modern river lithic grains. Geological Society of America Abstracts with Programs, v. 49.
- *Weber, M.A., Brueseke, M.E., Benowitz, J., Trop, J.M., *Berkelhammer, S.E., Davis, K.N., Layer, P.W., *Morter, B.K., and Mertzman, S.A., 2017, Geological and geochemical constraints on Oligo-Miocene hypabyssal intrusive bodies from the Wrangell Arc, Alaska. Geological Society of America Abstracts with Programs, v. 49.
- Davis, K.N., Benowitz, J., Layer, P.W., Trop, J., and Brueseke, M., 2017, Dating the lost arc of Alaska: constraining the timing of initiation of the Wrangell arc with a new $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology approach on modern river detrital lithic grains. Geological Society of America Abstracts with Programs, v. 49.
- Trop, J.M., Benowitz, J., Brueseke, M., Davis, K.N., *Berkelhammer, S.E., *Morter, B.K., Layer, P.W., Weber, M., *Fitzgerald, V.T., *Keast, R.T., and Moretti, B., 2017, Investigating the lost arc: geologic constraints on ~29 million years of continuous magmatism along an arc-transform junction, Wrangell Arc, Alaska. Geological Society of America Abstracts with Programs, v. 49.
- Puckett, R.E., Hanson, R.E., Brueseke, M.E., Eschberger, A.M., Toews, C.E., and Boro, J.R., 2017, Physical volcanology of Cambrian basalts and rhyolites in the southern Oklahoma aulacogen from surface exposures and deep drilling penetrations. Geological Society of America Abstracts with Programs, v. 49.
- Brueseke, M.E., *Berkelhammer, S., Benowitz, J., Trop, J.M., Layer, P., Davis, K.N., 2016, New geochemical and age constraints on the inception of the Wrangell Volcanic Belt, Wrangell St. Elias National Park, Alaska. NPS Centennial Science and Stewardship Symposium, National Park Service, 10/19-10/20/16, Fairbanks, AK.
- Benowitz, J., Trop, J.M., Cole, R.B., Layer, P.W., O'Sullivan, P.B., Roeske, S.M., and Brueseke, M.E., 2016. Mesozoic-Cenozoic magmatic history of the Alaska Range suture zone. Geological Society of America Abstracts with Programs, v. 48.
- *Berkelhammer, S.E., Brueseke, M.E., Trop, J.M., Benowitz, J., Davis, K., and Layer, P.W., 2016. Inception of the Wrangell Arc: geochemistry and petrography of the Oligo-Miocene Sonya Creek volcanic field, south-central Alaska. Geological Society of America Abstracts with Programs, v. 48.
- Brueseke, M.E., Trop, J.M., Benowitz, J., *Berkelhammer, S.E., Davis, K., Layer, P., 2016. 26 million years of slab edge magmatism: new geochemical constraints on the Wrangell Arc, Alaska. Geological Society of America Abstracts with Programs, v. 48.
- *Fitzgerald, V.T., Brueseke, M.E., *Berkelhammer, S.E., Trop, J.M., Benowitz, J., Layer, P.W., and Davis, K., 2016. Stuck in the middle: stratigraphy and geochemistry of volcanic rocks from the Green Hills in the central Wrangell Arc, Alaska. Geological Society of America Abstracts with Programs, v. 48.
- *Keast, R.T., Brueseke, M.E., Trop, J.M., *Berkelhammer, S.E., and Benowitz, J., 2016. Volcanic stratigraphy of the ~2.4 Ma Eucher Mountain volcano, Wrangell Arc, Alaska (U.S.A.). Geological Society of America Abstracts with Programs, v. 48.
- *Martin, D. A., Brueseke, M.E., and Kempton, P., 2016. Sediment provenance study of Cretaceous Dakota sandstone and modern Kansas River sediment as an integrated experiential project in the undergraduate

MATTHEW E. BRUESEKE

CURRICULUM VITAE

mineralogy and petrology courses at Kansas State University. Geological Society of America Abstracts with Programs, v. 48.

- *Maynard, A.M., Brueseke, M.E., Mathur, R., and Kempton, P., 2016. Copper isotope compositions of Cenozoic mafic-intermediate rocks of the northern Great Basin and Snake River Plain (USA). Geological Society of America Abstracts with Programs, v. 48.
- *Morter, B.K., Brueseke, M.E., Benowitz, J., Trop, J.M., Davis, K., and Layer, P.W., 2016. Linking geochemistry of Cenozoic volcanic clasts from the Wrangell Arc, Alaska, to upper plate and subducting slab tectonic processes. Geological Society of America Abstracts with Programs, v. 48.
- Puckett, R.E., Hanson, R., Brueseke, M.E., Price, J.D., Keller, G.R., *Bulen, C.B., Eschberger, A.M., *Hobbs, J.M., and Mertzman, S.A., 2016. Structural and petrological insights and contrasts between the Wichita and Arbuckle segments of the southern Oklahoma aulacogen as revealed by deep drilling into rift-related rocks. Geological Society of America Abstracts with Programs, v. 48.
- Trop, J.M., Benowitz, J., Davis, K. N., Layer, P.W., and Brueseke, M.E., 2016. U-Pb and $^{40}\text{Ar}/^{39}\text{Ar}$ detrital geochronology of modern river sediments in the Wrangell Mountains, Alaska: Improved constraints on the age and tectonic evolution of Jurassic-Quaternary magmatism. Geological Society of America Abstracts with Programs, v. 48.
- *Maynard, A.M., Brueseke, M.E., and Mathur, R.M., 2015, Copper isotope compositions of Cenozoic mafic rocks from the northern Great Basin and Snake River Plain (USA): Geological Society of America Abstracts with Programs, v. 47.
- *Robertson, C.H., Kempton, P., Brueseke, M.E., Allaz, J.M., and *Spencer, T., 2015, Petrography, geochemistry, and geothermometry of xenoliths and xenocrysts from the Fancy Creek kimberlite, Riley County, Kansas: Geological Society of America Abstracts with Programs, v. 47, p. 0.
- Brueseke, M.E., *Downey, A.C., *Dodd, Z.C., and Hart, W.K., 2015, Geochemical and Sr-Nd-Pb isotope constraints on Cenozoic basaltic volcanism in the upper Wind River Basin, Wyoming, USA: Geological Society of America Abstracts with Programs, v. 47, p. 0.
- Mason, M.S., Saunders, J.A., Aseto, C., Hames, W.E., and Brueseke, M.E., 2015, Epithermal ores of War Eagle and Florida Mountains, Silver City District, Owyhee County, Idaho: Geological Society of Nevada, New Concepts and Discoveries 2015 Symposium.
- Terhune, P., Benowitz, J., Waldien, T., Allen, W., Davis, K., Ridgway, K., Roeske, S., Fitzgerald, P., Brueseke, M., and O'Sullivan, P.B., 2015, Geochronological Framework for the Cenozoic history of the southern Alaska Range fold and thrust belt: Geological Society of America Abstracts with Programs, v. 47, p. 60.
- Brueseke, M.E., Benowitz, J., Trop, J.M., Davis, K.N., and Layer, P., 2015, New geochemical and age constraints on the initiation of the lost arc, Wrangell volcanic belt, Alaska: Geological Society of America Abstracts with Programs, v. 47, p. 14.
- *Downey, A.C., Dodd, Z.C., Brueseke, M.E., Hart, W.K., and Adams, D.C., 2014, Geochemical constraints on Cenozoic intraplate magmatism in the Upper Wind River Basin, Wyoming (U.S.A.): EOS, Transactions, American Geophysical Union, Suppl. Abstract V23D-4826.
- *Hobbs, J.M., Brueseke, M.E., Mertzman, S.A., and Puckett Jr., R.E., 2014 Cambrian magmatism along the southern Laurentian margin: new petrologic constraints from well cuttings in the southern Oklahoma aulacogen (USA): EOS, Transactions, American Geophysical Union, Suppl. Abstract V33C-4887.
- Benowitz, J., Davis, Kailyn N., Brueseke, M.E., Trop, J.M., and Layer, P., 2014, Investigating the lost arc: Geological constraints on ~25 million years of magmatism along an arc-transform junction, Wrangell volcanic belt, Alaska: Geological Society of America Abstracts with Programs, v. 46, p. 363.
- Hart, W.K., Brueseke, M.E., Brudzinski, M.R., 2014, Neogene basaltic volcanism and mantle evolution in the Idaho-Oregon-Nevada region: Implications for northwestern USA tectonomagmatic development: Geological Society of America Abstracts with Programs, v. 46, p. 824.
- Brueseke, M.E., Hames, W.E., and *Ingalls, A.I., 2014, Spatio-temporal characteristics of Miocene silicic magmatism across northeastern Nevada: links between magmatism and extension, not the Yellowstone hotspot: Geological Society of America Abstracts with Programs, v. 46, p. 93.
- *Downey, A.C., Brueseke, M.E., Hart, W.K., and Mertzman, S.A., 2014, New Geochemical constraints on Quaternary mafic volcanism in the Upper Wind River Basin, Wyoming (U.S.A.): Geological Society of America Abstracts with Programs, v. 46, p. 82.
- *Ingalls, A.S., Brueseke, M.E., and Hames, W., 2014, Chemical and temporal constraints on the Cenozoic volcanic geology of the Little Goose Creek area, northeastern Elko County, NV: Geological Society of America Abstracts with Programs, v. 46, p. 88.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- Saunders, J.A., Mathur, R., Kamenov, G., Shimizu, T., and Brueseke, M.E., 2014, Textural and isotopic evidence for metallic nanoparticles in bonanza epithermal ores: Society of Economic Geologists, SEG 2104 Annual Conference, Keystone, CO.
- *Ingalls, A.S., and Brueseke, M.E., 2014, Jarbidge Rhyolite in northeastern NV: Relationships between the Cenozoic evolution of the northern Great Basin and the Yellowstone hotspot: K-State Research Forum, Manhattan, KS.
- *Hobbs, J., and Brueseke, M.E., 2014, Petrologic constraints on Cambrian aged flood basalt volcanism in the southern Oklahoma aulacogen: K-State Research Forum, Manhattan, KS.
- *Downey, A.C., and Brueseke, M.E., 2014, Pleistocene to Holocene mafic volcanism in the upper Wind River basin, WY: K-State Research Forum, Manhattan, KS.
- *Amrhein, K.E., Brueseke, M.E., and Larson, P. B., 2013, Oxygen isotope constraints on mid-Miocene rhyolite production in the Santa Rosa-Calico volcanic field, NV: Geological Society of America Abstracts with Programs, v. 45, p. 84.
- Brueseke, M.E., *Kowal, D.A., *Ingalls, A.S., and *Amrhein, K.E., 2013, Using cellphone cameras to enhance student learning of mineral identification and textural characteristics through mineral/rock thin sections: Geological Society of America Abstracts with Programs, v. 45, p. 793
- Hames, W., Brueseke, M., and Saunders, J., 2013, Laser $^{40}\text{Ar}/^{39}\text{Ar}$ Dating of Supervolcanoes and Super Gold Deposits along the Trace of the Miocene Yellowstone Hotspot: Goldschmidt 2013, Mineralogical Magazine, 77(5) 1248.
- Saunders, J.A., Kamenov, G.D., Mathur, R., Shimizu, T., Brueseke, M.E., 2013, Transport and deposition of metallic nanoparticles and the origin of bonanza epithermal ores: Society for Geology Applied to Mineral Deposits Biennial Meeting 2013.
- *Amrhein, K.E., and Brueseke, M.E., 2013, Testing models of low- $\delta^{18}\text{O}$ silicic magmatism in the mid-Miocene Santa Rosa-Calico volcanic field, NV: Geological Society of America Abstracts with Programs, v. 45, p. 25.
- Puckett, R.E. Jr., Hanson, R., Brueseke, M., Keller, G.R., Eschberger A.M., and *Bulen, C.L., 2013, New insights into the early Cambrian igneous and sedimentary history of the southern Oklahoma aulacogen from basement well penetrations: Geological Society of America Abstracts with Programs, v. 45, p. 230.
- Brueseke, M.E., and Ellis, B.E., 2012, Messing up the mush model? Single crystal constraints from the Miocene Jarbidge Rhyolite (USA): EOS, Transactions, American Geophysical Union, Suppl. Abstract V43D-2894.
- *Meek, T.N., Brueseke, M.E., Larson, P.B., and *Hasten, Z.E.L., 2012, Oxygen isotope constraints on mid-Miocene silicic magma production in the Owyhee Mountains, ID: Geological Society of America Abstracts with Programs, Nov 2012.
- *Bulen, C.L., Brueseke, M.E., Mertzman, S.A., Puckett, R.E., 2012, The role of magmatism in the evolution of the Cambrian southern Oklahoma rift zone: geochemical constraints on the mafic-intermediate rocks in the Arbuckle Mountains, OK: Geological Society of America Abstracts with Programs, Nov 2012.
- Aseto, C.O., Hames, W., Saunders, J.A., Brueseke, M., 2012, Timing of mineralization in epithermal Au-Ag deposits in relation to magmatism along the track of the Miocene Yellowstone hotspot: Geological Society of America Abstracts with Programs, Nov 2012.
- *Hasten, Z., Brueseke, M., Saunders, J., and Hames, W., 2012, Mid-Miocene volcanism in the Owyhee Mountains (ID) and implications for coeval epithermal precious metal mineralization: Geochimica et Cosmochimica Acta, Goldschmidt Conference Abstracts 2012
- *Hasten, Z. and M. Brueseke, 2012, Mid-Miocene silicic volcanism in the Owyhee Mountains (ID): local physical and geochemical characteristics and implications for regional magmatism linked to the inception of the Yellowstone hotspot: 17th Annual K-State Research Forum.
- *Bulen, C., and M. Brueseke, 2012, The role of basaltic magmatism in the evolution of the Cambrian southern Oklahoma aulacogen: geochemical and isotopic constraints on the mafic rocks in the Arbuckle Mountains, OK: 17th Annual K-State Research Forum.
- Puckett, R.E. Jr., Hanson, R.E., Eschberger, A.M., *Bulen, C.L., and M.E. Brueseke, 2012, Profiling the buried Cambrian sedimentary and bimodal igneous stratigraphy of the Southern Oklahoma rift zone using basement well penetrations: Geological Society of America 2012 south-central section meeting.
- Saunders, J.A., Kamenov, G.D., Brueseke, M.E., Hames, W.E., and Mathur, R., 2011, Hydrothermal precious-metal and sulfide nanoparticle transport and deposition and the genesis of bonanza epithermal ores: Geological Society of America Abstracts with Programs, v. 41, p. 514.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- Puckett, R.E. Jr., Hanson, R.E., Eschberger, A.M., *Bulen, C.L., and M.E. Brueseke, 2011, Using basement wells to investigate the subsurface Cambrian bimodal volcanic record in the southern Oklahoma aulacogen: Geological Society of America Abstracts with Programs, v. 41, p. 437.
- *Kolb, J., *Whiting, E., Brueseke, M.E., *Hasten, Z.E.L., 2011, Petrographic and geochemical characterization of granitoid and metamorphic basement rocks, Owyhee Mountains, ID: Geological Society of America Abstracts with Programs, V.43, p. 66.
- Aseto, C.O., Saunders, J.A., Hames, W., and Brueseke, M.E., 2011, Geochronology of gold-silver epithermal mineralization on War Eagle Mountain and contiguous mines in the Silver City district, Idaho: Geological Society of America Abstracts with Programs, Paper No. 13-10.
- *Calliccoat, J., Brueseke, M., and Larson, P.B., 2010, Oxygen isotope constraints on voluminous mid-Miocene effusive silicic magmatism in north-central Nevada: Geological Society of America Abstracts with Programs, V.42, p. 101.
- *Cook, C.C. and M. Brueseke, 2010, Petrography and identification of Eocene ash-flow tuffs in the vicinity of the Jarbidge Mountains, Nevada: Geological Society of America Abstracts with Programs, V.42, p. 285.
- Hames, W., Brueseke, M., Kamenov, G., Marma, J., Saunders, J., and D. Unger, 2010, Geochemical and geochronologic constraints for evolution of epithermal Au-Ag veins of the northern Great Basin: new data from Midas, NV: Geological Society of America Abstracts with Programs, V.42, p. 45.
- Brueseke, M.E., 2010, Magmatism and mineralization in the northern Great Basin: mid-Miocene volcanism related to the inception of the Yellowstone hotspot and its relationship to regional bonanza ore deposits, Geological Society of Nevada 2010 Symposium.
- Brueseke, M. E. and W.K. Hart, 2009, Geology and geochemistry of early Miocene intermediate composition volcanism in northern Nevada and its relationship to regional tectonomagmatic processes, Geological Society of America Abstracts with Programs, V.41, p. 337.
- Brueseke, M.E., 2009, Regional implications of silicic magmatism in the mid-Miocene Santa Rosa-Calico volcanic field (NV), Geological Society of America Penrose conference on Low $\delta^{18}\text{O}$ rhyolites and crustal melting: Growth and redistribution of the continental crust.
- *Calliccoat, J. and M.E. Brueseke, 2009, Mid-Miocene Volcanism in Northeast Nevada: Spatial, Chemical, and Chronologic Significance of the Jarbidge Rhyolite, Geological Society of America Penrose conference on Low $\delta^{18}\text{O}$ rhyolites and crustal melting: Growth and redistribution of the continental crust.
- Oviatt, C.G., Spencer, J.Q.G., McLauchlan, K.K., Verosub, K.L., and M. Brueseke, 2008, Sediments of Kaw Lake, a Glacier-Dammed Lake in Kansas, Geol. Society of America Abstracts with Programs, V. 40, p. 148.
- Hart, W.K., Shoemaker, K.S., Brueseke, M.E., and N.R. Bondre, 2008, Basalt source evolution at the intersection of the Snake River Plain-Yellowstone and High Lava Plains-Newberry magmatic provinces, Geological Society of America Abstracts with Programs, V.40, p. 34.
- Brueseke, M.E., 2007, More than just McDermitt and Steens Mountain: temporal-spatial relationships of mid-Miocene magmatism on the Oregon Plateau, Geological Society of America Abstracts with Programs, V.39, p. 291.
- Brueseke M.E. and W.K. Hart, 2006, The production of intermediate composition magmas in an intracontinental setting: Geological Society of America Abstracts with Programs, V.38, p. 446.
- Brueseke, M.E., Haley, J.C., and W.K. Hart, 2006, The use of a mapping assessment rubric to help students improve the creation and comprehension of geologic maps: Geological Society of America Abstracts with Programs, V. 38, p. 220.
- Brueseke, M.E. and W.K. Hart, 2005, Mid-Miocene basalt driven volcanic field development in the Pacific Northwest, USA: *Geochimica et Cosmochimica Acta*, Goldschmidt Conference Abstracts 2005, V. 69, Issue 10, p. A144.
- Hart, W.K., Brueseke, M.E., Shoemaker, K.A., and N.R. Bondre, 2005, Revisiting the tectonomagmatic implications of Oregon Plateau basaltic volcanism: *Geochimica et Cosmochimica Acta*, Goldschmidt Conference Abstracts 2005, V. 69, Issue 10, p. A140.
- Brueseke M.E. and W.K. Hart, 2004, The physical and petrologic evolution of a multi-vent volcanic field associated with Yellowstone-Newberry volcanism: EOS, Transactions, American Geophysical Union, 85 (47), Suppl. Abstract V53A-0605.
- *Knight, J. E., Brueseke, M.E., and W.K. Hart, 2004, Physical, petrographic, and geochemical characterization of ash flow volcanism: the mid-Miocene Cold Springs Tuff of the Santa Rosa Calico Volcanic Field, Nevada: Geological Society of America Abstracts with Programs, v. 36, p. 77.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- *Knight, J. and M. Brueseke, 2004, Geochemical and petrographic characterization of ash flow volcanism: The Cold Springs tuff and its significance to the evolution of the Santa Rosa-Calico volcanic field, Nevada: Miami University Undergraduate Research Forum.
- Brueseke, M.E., and W.K. Hart, 2003, Compositional diversity in mid-Miocene mafic lavas from the southeastern Oregon Plateau: Geological Society of America Abstracts with Programs: Geological Society of America Abstracts with Programs, v. 35, p 549.
- Brueseke, M.E., Hart, W.K., Wallace, A.R., Heizler, M.T., and R.J. Fleck, 2003, Mid-Miocene volcanic field development in northern Nevada: New age constraints on the timing of Santa Rosa-Calico volcanism: Geological Society of America Abstracts with Programs, v. 35, p. 63.
- *Gilbert, L.Y., Brueseke, M.E., Snyder, D.C., and W.K. Hart, 2003, A record of mid-Miocene explosive volcanism and rift basin development in the Santa Rosa-Calico volcanic field, Nevada: Geological Society of America Abstracts with Programs, v. 35, p. 7.
- *Gilbert, L.Y., Brueseke, M.E., Snyder, D.C., and W.K. Hart, 2003, A record of mid-Miocene explosive volcanism and rift basin development in the Santa Rosa-Calico volcanic field, Nevada: Miami University Undergraduate Research Forum.
- *Maloy, A.K., Brueseke, M.E., Minturn, C.B., and W.K. Hart, 2003, The generation of intermediate composition magmas in a bimodal setting: evidence from the Santa Rosa-Calico volcanic field, Nevada: Geological Society of America Abstracts with Programs, v. 35, p. 5.
- *Maloy, A.K., Brueseke, M.E., Minturn, C.B., and W.K. Hart, 2003, The generation of intermediate composition magmas in a bimodal setting: evidence from the Santa Rosa-Calico volcanic field, Nevada: Miami University Undergraduate Research Forum.
- Brueseke, M.E. and W.K. Hart, 2002, Mid-Miocene flood basalt volcanism in southeastern Oregon: New insights on an old problem: Geological Society of America Abstracts with Programs v. 34, p. 364.
- Brueseke, M.E., Shoemaker, K.A., and W.K. Hart, 2002, New tectonic implications derived from southern Oregon Plateau basaltic volcanism: defining the Owyhee Block; Geological Society of America Abstracts with Programs, v. 34, p 38.
- Brueseke, M.E. and W.K. Hart, 2001, Complex magma system development in northern Nevada and the role of episodic basalt injection into the crust: Geological Society of America Abstracts with Programs, v. 33, p 302.
- Brueseke, M.E., and W.K. Hart, 2000, Re-evaluation and new age constraints on the eruptive history of the mid-Miocene Steens Basalt, southeastern Oregon; Geological Society of America Abstracts with Programs, v. 32, p 147.
- Brueseke, M. and K. Cooper, 1997, Benthic community classification of the Arnheim Formation based on limestone petrography. Ninth Annual Undergraduate Research Conference, Butler University, Program and Abstracts, p. 15.

RESEARCH/INTERVIEWS/VIDEOS IN POPULAR PRESS (e.g., television interviews, newspaper/magazine articles, social media, etc.)

- Story in the Rocks. 2022, Shawn O'Brate, The Ranger (Fremont County, WY newspaper), <https://rivertonranger.com/2022/08/13/08-13-2022-2/>
- A tectonic plate is dying under Oregon. Here's why that matters. 2019, Wei-Haas, Maya, National Geographic, <https://www.nationalgeographic.com/science/2019/07/tectonic-plate-dying-oregon-why-matters/>
- Bucknell professor, students expand long-term record of active Alaskan volcanic belt. The Daily Item (online and in print), 2018, Scicchitano, Eric. 12/25/18.
- Geologists' study unearths new information on age, activity of Alaska's Wrangell volcanic belt, 2018, Bohn, Beth. National Science Foundation Science360 News, Picture of the Day, December, 21, 2018, <https://news.science360.gov/obj/pic-day/5ad64732-b1db-4a99-bc07-dc67198b890d/geologists-study-unearths-new-information-age-activity-alaskas-wrangell-volcanic>
- @NSF. (2018, December 21). A team of #NSFfunded geologists has 'unearthed' new data on Alaska's Wrangell volcanic belt where the Pacific and North American Plates collide. Learn how they did it in remote parts of Alaska and the Yukon: <http://bit.ly/2PTXf1c> [Twitter post]. Retrieved from <https://twitter.com/NSF/status/1076158432628146176>
- Kansas State University[@kansasstateuniversity], 12/19/18. [Photograph of Matt Brueseke, by Jeff Trop]. Retrieved from https://www.instagram.com/p/BrlDh_OF9qH/

MATTHEW E. BRUESEKE

CURRICULUM VITAE

Geologists' study unearths new information on age, activity of Alaska's Wrangell volcanic belt, 2018, Bohn, Beth. K-State Today, 12/19/18, <https://www.k-state.edu/media/newsreleases/2018-12/wrangell121918.html>

Study unearths new information on age, activity of Alaska's Wrangell volcanic belt, 2018, Bohn, Beth, Phys.org, 12/19/18, <https://phys.org/news/2018-12-unearts-age-alaska-wrangell-volcanic.html>

Why Alaskan summers rock, 2016, Brueseke, M.E. College of Arts and Sciences A & S Letters magazine. Summer 2016.

Researchers of the Lost Arc, 2016, Szentkereszti, K., and Williams, A. May, 17, 2016. https://www.youtube.com/watch?v=cJztNfBTkP0&feature=em-subsub_digest

Rock Stars, 2016, Hancock, Sarah Caldwell. Seek: Vol. 6: Iss. 1. Seek is the bi-yearly KSU research magazine.

Geoscience jobs down in Kansas, prospects higher in other states. The Collegian (KSU student newspaper). Interview of M. Brueseke, published 12/1/2015.

Field Notes: The mysterious Wrangells offer a clue into Earth's past. Fairbanks NewsMiner (online and in print) article written by Paul Layer discussing our group's work in the Wrangell Mountains (AK), 7/14/2015. This was also disseminated via the UAF-Fairbanks website and in many other newspapers across Alaska, as well as via social media (e.g., NPS Wrangell St. Elias NP Facebook page, Twitter, etc.).

Diamonds in Kansas? Maybe. KSN.TV (ksn.com- Wichita, KS television station). Interview of M. Brueseke discussing Riley County, KS kimberlites published 5/13/2013.

PROFESSIONAL ACTIVITIES

Member

Geological Society of America (1994 - present); American Geophysical Union (1998 - present); Sigma Xi (1999 - present); The Geochemical Society (2005 - present); National Association of Geoscience Teachers (2005 - present); International Association of Volcanology and Chemistry of the Earth's Interior (2006 - present); IAVCEI Commission on Collapse Calderas (2007-present); Society of Economic Geologists (2008 - present); Mineralogical Society of America (2009 - present); The International Association for Geoscience Diversity (2019 - present).

Referee for the Following Funding Agencies/Journals/Publishing Companies/Other

The National Science Foundation (Petrology/Geochemistry, Tectonics, MRI, CAREER, GRFPF), Deutsche Forschungsgemeinschaft (German Research Foundation), U.S. Department of Agriculture – Small Business Innovation Research Program (Mineral exploration technique proposal), National Park Service (Yellowstone N.P. research permitting multiple times), Nature Geoscience, Geology, GSA Bulletin, G-Cubed, Lithos, Earth Science Reviews, Economic Geology, Earth and Planetary Science Letters, Geosphere, Geological Magazine, Bulletin of Volcanology, Journal of Geoscience Education, Journal of Volcanology and Geothermal Research, International Geology Review, Geological Society of America Special Paper, Geological Society of America Field Guides, Applied, Geochemistry, Marine and Petroleum Geology, Geochemistry, Prentice Hall, Central European Journal of Geosciences, Brooks-Cole Publishing, Cambridge Press, Pearson Publishing Co.

Symposia/Field Trip Leadership

2023: Session Co-Convener, Drivers of Continental Magmatism (2023 GSA Rocky Mountain Section meeting, Fort Collins, CO).

2022: Session Co-Convener, T33A The Alaskan and Northern Canadian Cordillera: Geology, Geochemistry, Geophysics, Petrology, and Tectonics (2022 AGU Fall meeting, Chicago, IL).

2021: Session Co-Convener, From the Afar Rift to Alaskan Arcs (and the Oregon Plateau in between): Honoring the Career and Contributions of William K. Hart T21 (2021 GSA Annual Meeting, Portland, OR).

2021: Field trip leader, "Torrey Canyon Geology Adventure Trek", 7/9/2021, Trip run through The Dubois Museum (WY) and focused on public geological outreach <https://fremontcountymuseums.com/event/torrey-canyon-geology-adventure-trek>.

2020-21: Session Co-Convener, Ultramafic and mafic magmatism T16 (2020 GSA combined South-Central and North-Central sections meeting, virtual).

2020-21: Session Co-Convener, Granites and Rhyolites as a Record of Crustal Magmatic Processes T15 (2020 GSA combined South-Central and North-Central sections meeting, virtual).

MATTHEW E. BRUESEKE

CURRICULUM VITAE

- 2020: Field trip leader, “Volcanic Geology of the Dubois Area Trek”, 8/7/2021, Trip run through The Dubois Museum (WY) and focused on public geological outreach <https://duboisywoming.org/event/dubois-museum-volcanic-geology-of-the-dubois-area-trek/>
- 2018-19: Session Co-Convener, Mafic and ultramafic magmatism in the mid-continent and beyond T9 (2019 GSA combined South-Central, North-Central, Rocky Mountain sections supermeeting, Manhattan, KS).
- 2018-19: Session Co-Convener, Rhyolite/granite magmatism T10 (2019 GSA combined South-Central, North-Central, Rocky Mountain sections supermeeting, Manhattan, KS).
- 2018-19: Co-field trip leader for Windows into the Cretaceous Mantle of the North American Mid-Continent—Kimberlites of Riley County. (2019 GSA combined South-Central, North-Central, Rocky Mountain sections supermeeting, Manhattan, KS).
- 2016: Session Co-Convener, Recent advances in understanding magmatism along and within the northern North American Cordillera T154 (2016 GSA Annual Meeting, Denver, CO).
- 2016: Co-field trip leader for Mineral deposits and geology of the Silver City mining district and Owyhee Mountains, southwestern Idaho (2016 GSA Annual Meeting; trip was cancelled).
- 2015: Session Co-Convener, Recent advances in the geological evolution of the southern Oklahoma Aulacogen T5 (2015 GSA South-central Meeting, Stillwater, OK).
- 2014: Co-Convener, Igneous rocks of the southern Oklahoma Aulacogen, Oklahoma Geological Survey Field Forum (March 8-9, 2014).
- 2013: Session Co-Convener, Recent advances and applications of isotope geochemistry and geochronology to ore deposit studies T98 (2013 GSA Annual Meeting, Denver, CO).
- 2012: Session Co-Convener, Subduction-related mantle preparation and subsequent magmatism and ore genesis T38 (2012 GSA Annual Meeting, Charlotte, NC).
- 2011: Session Co-Convener, Recent advances in studies of large-volume silicic volcanism: stratigraphy, architecture, evolution, T25 (2011 GSA Annual Meeting, Minneapolis, MN).
- 2011: Co-field trip leader for Timing, distribution, amount, style, and causes of Cenozoic extension, northern Great Basin (2011 GSA Rocky Mountain/Cordilleran section meeting, May 20-23).

Other Service/Development/Positions

- 2019: Skype-a-scientist presenter (K-12 classes)
- 2018-present: Review Editor, *Frontiers in Earth Science – Petrology*
- 2018-2019: Guest Editor (with Jim Saunders), *Minerals Special Issue "Application of New Geochemical Analytical Techniques to the Understanding of the Genesis of Epithermal Au-Ag Deposits"*
- 2018-2019: Organizing Committee Member and Exhibits Chair, *combined GSA South-Central, North-Central, and Rocky Mountain sections super meeting (March 2019, Manhattan, KS)*
- 2016- 2018: Member, GSA-MGVP (Geological Society of America - Mineralogy, Geochemistry, Volcanology, Petrology division) early career award committee
- 2015 - 2019: Member, GSA Annual Meeting Joint Technical Program Committee
- 2015 - 2019: Geochemical Society liaison to the Geological Society of America
- 2015 - 2019: Member, Geochemical Society program committee
- 2015 - 2019: Member, Kansas Geological Survey geologic mapping advisory committee
- 2012 - 2018: Guest editor (with Graham Andrews and Ben Ellis), *Geosphere Themed Issue: Cenozoic Tectonics, Magmatism and Volcanic Stratigraphy of the Snake River Plain–Yellowstone Region (SRP–Y) and Adjacent Areas*
- 2012 - 2016: At large Executive Committee member and Secretary, Sigma Xi KSU Chapter
- 2011: Session Judge for student posters, Joint GSA Rocky Mountain/Cordilleran section meeting (May)
- 2011: Participant, NSF sponsored “Science: Becoming the Messenger” workshop (January)

ACADEMIC SERVICE

- 2021: External promotion reviewer, Texas Tech U. (KSU)
- 2019: External tenure reviewer, West Virginia U. Dept. of Geology and Geography (KSU)
- 2018: External tenure reviewer, U. Arkansas Dept. of Geosciences (KSU)
- 2018-2020: Chair, Student Affairs subcommittee; Graduate council (KSU)
- 2018-present: Member, Undergraduate curriculum committee – Dept. of Geology (KSU)
- 2018-present: Member, KBOR Graduate program review committee – Dept. of Geology (KSU)
- 2018-present: Member, Graduate program strategy committee – Dept. of Geology (KSU)

MATTHEW E. BRUESEKE

CURRICULUM VITAE

2017-present: Member, Field Camp committee (KSU)
2016-2022: Elected Member, Graduate Council (KSU); re-elected in 2019 for a second three-year term.
2015 - 2016: Member, Instructor search committee (KSU)
2015 - 2016: Member, Solid earth geophysics/Basin fluid modeling search committee (KSU)
2014 - 2015: Member, Carbonate Sedimentology search committee (KSU)
2014 - 2018: Member, Geology Curriculum committee (KSU)
2014 - 2015: Chair, Structural Geology search committee (KSU)
2012- 2013: Member, Geology Department Head search committee (KSU)
2011 - 2013: Department of Geology webmaster (KSU)
2011 - 2014: Geology representative to K-State EIDRoP GK-12 program (KSU)
2010 - 2012: Member, Environmental Geobiology faculty search committee (KSU)
2010 - 2015: Member, University Library Committee (KSU)
2009 - 2016: Organized departmental activities for University-wide open house (KSU)
2009 - 2016: Organized departmental activities for majors fair (KSU)
2009 - 2011: GPS program faculty mentor (KSU)
2008 - 2017: Faculty Advisor, Williston Geology Club (KSU)
2008 - 2015: Chair, Departmental Recruitment Committee (KSU)
2007 - present: Geological Society of America campus representative (KSU)
2007 - present: Faculty Academic Advisor (KSU)
2007 - present: Mineral/rock identification for general public (KSU)
2007 - present: Dept. Rep. at Geol. Society of America graduate student recruitment booth (KSU)
2007 - present: Dept. representative at academic majors fair (KSU)
2007 - 2008: Dept. representative at University-wide open house (KSU)
2007 - 2008: Faculty Mentor, Campus Internship Program (KSU)
2007 - 2008: Coordinator, Structural Geology/Tectonics faculty search (KSU)
2007 - 2008: Coordinator, K-State Geology Department seminar series (KSU)
2005-06: Guest lecturer, Department of Geology and Geography (EIU)
2005: Member, Peer institutions and competitors committee (EIU)
2004 - 2005: Department representative at accepted student open houses (Miami University; MU)
1997 - 2005: Host, for prospective graduate students (MU)
1997 - 2005: Substitute lecturer for Dr. William K. Hart (MU)
1997 - 2005: Guide, local geological field trips for public outreach (MU)
2004: Graduate student member, Geophysics Assistant Professor search committee (MU)
2004: Judge, Miami University Science Fair (MU)
1998 - 2003: Dept. Representative at Geol. Society of America graduate student recruitment booth (MU)
2001: Judge, Miami University Science Fair (MU)
2000 - 2001: Graduate student representative to the faculty (MU)
1997 - 1998: Graduate student representative to the faculty (MU)
1996 - 1997: President, Miami University Geological Society (MU)
1995 - 1996: Treasurer, Miami University Geological Society (MU)

OTHER SKILLS

National Outdoors Leadership School wilderness first aid certification (2019-2021). Proficiency/experience with MS-Office Suite, CorelDraw/Photo-Paint/Adobe Illustrator & related graphics software, ESRI ArcGIS, course maintenance software for on-campus and online teaching efforts, image reduction and interpretation for remote sensing software and aerial imagery, worldwide web page creation and maintenance, and college Spanish coursework equivalent to two years of study. I also received the ESRI ArcGIS I Certification. In addition to the analytical skills and instrumentation used during my research and time spent as a Research Associate (e.g., TIMS, ICP-MS/DCP-AES, etc.), I have experience with powder X-ray diffraction (KSU), hand-held XRF (KSU), Raman spectroscopy (KSU), fluid-inclusion work (KSU), reflected light microscopy (KSU), electron microprobe analyses and imaging (KSU and earlier), LA-ICP-MS analyses (KSU), and thin section making.

MATTHEW E. BRUESEKE

CURRICULUM VITAE

APPLICABLE EMPLOYMENT

1995 - 1996: Geotechnical Lab Technician: Shilts, Graves, and Associates, South Bend, IN. Hired for field soil sampling of Quaternary glacial sediment & other geologic material by split spoon-hollow stem drilling and hand auguring methods. I also characterized and tested sediment, concrete, asphalt, and other materials for regional engineering and environmental work, by both laboratory and field-based methods.