

Geoscience MS and PhD graduate student research utilizing the Weeks Hall Electron Microprobe 1994-2012

Banfield

- 1995-Sitzman-MS -- Microstructural controls on oxygen isotope distribution, rheology, and magnetic properties in metamorphic magnetite
- 1998-Penn-PhD -- Growth and phase transformations : Insights from hydrothermal coarsening experiments using nanocrystalline TiO₂
- 2002-Yohey-PhD -- Geomicrobiology of uranium: microbial impacts on the form, distribution and fate of uranium in the environment

Baumgartner

- 1994-Peare-MS -- Closed-system veining during low grade metamorphism, Rheems Quarry, Pennsylvania
- 1997-Roselle-PhD -- Integrated petrologic, stable isotopic, and statistical study of fluid-flow in carbonates in the Ubehebe Peak contact aureole, Death Valley National Park, California
- 1998-Everman-PhD -- A textural and microfabric analysis of the deformation at Ubehebe Peak contact aureole, Death Valley National Park, California
- 1996-Gerdes-PhD -- Fluid flow in contact aureoles with spatially heterogeneous permeabilities: implications from stochastic models and stable isotopic evidence from carbonates
- 1999-Pak-PhD -- Solubility of simple pelite and granite mineral assemblages in supercritical aqueous chloride solutions

Brown

- 1999-Lee-MS -- Fluid inclusion study of the Archean Lode gold deposit at Paddington, western Australia
- 2002-Maes-MS -- Scheelite geochemistry of the Pine Creek Pendant, California : EMPA and the stable isotope microanalysis
- 2002-Marma-MS -- Magmatic and hydrothermal PGE mineralization of the Birch Lake Cu-Ni-PGE deposit in the South Kawishiwi Intrusion, Duluth Complex, northeast Minnesota
- 2010-Gopon-MS -- Sandman low-sulfidation epithermal gold deposits, Northern Great Basin, Nevada

Byers

- 2002 – Emerson-PhD -- Sedimentology, sequence stratigraphy, and brachiopod biostratigraphy of the Ordovician (Mohawkian) Decorah Formation, midcontinent, USA
- 2003 - Beyer-MS -- Stratigraphy, sedimentology, and K-bentonite geochemistry of Galena group, northeastern Iowa, upper Mississippi Valley

Carroll

- 1998-Rhodes-MS -- Lacustrine stratigraphy and strontium isotope geochemistry of the Laney member, Green River formation, southwestern Wyoming

- 1999-Wartes-MS -- Sedimentary evolution of Permian lacustrine and associated deposits: southern Junggar and Turpan-Hami basins, northwestern China
- 2000-Walling-MS -- Origin of quartz silt in the permian phosphoria formation : isotopic and grain size evidence
- 2007-Smith-PhD -- The stratigraphy and geochronology of the Green River Formation, western U.S.
- 2010-Walling-PhD -- Stratigraphy and provenance of mudstone in the Phosphoria Formation

Clark

- 1997-Williams-MS -- Central Arctic Ocean Fe-Mn micronodules as indicators of paleoceanographic conditions

Goodwin

- 2006-Riley-MS -- The spatial distribution of deformation bands and fractures in the Pajarito fault zone and implication for Vadose zone fluid flow through the Bandelier Tuff, New Mexico
- 2007-Staffier-MS -- Field and microstructural investigation of plagioclase deformation behavior in granulite facies rocks, Mt. Hay, Central Australia
- 2007-Gage-MS -- Anisotropy of magnetic susceptibility (AMS) analysis of strain partitioning in a lithologically heterogeneous granulite facies shear zone, Mt. Chapple, central Australia
- 2010-Cook-PhD -- The physical, mechanical, and structural effects of diagenesis in siliciclastic rocks

Johnson

- 2002-Hart-PhD -- Isotope study of magmatic processes and crustal recycling in subduction zone environments in the Cascade Range of northwestern U.S.
- 2004-Zeichert-MS -- The evolution of magmas at a large stratocone volcano, Mount Shasta, N. Carolina
- 2005-Lapen-PhD -- Radiogenic isotopes as records of tectonic and metamorphic processes: examples from the western Alps, Italy, and the western Gneiss region, Norway
- 2005-Crosby-MS -- Mechanisms of iron isotope fractionation during dissimilatory iron reduction and Fe(II) adsorption
- 2007-Mahlen-PhD -- Investigations of radiogenic isotope geochronology and element zoning in garnets : partial dissolution studies, implications for geochronology, and a case study from the Zermatt-Saas Ophiolite, Western Alps
- 2007-Herrick-MS -- Isotopic studies of the 3.7-3.8 Ga Isua banded iron formation provide insight into early Archean geochemical cycles
- 2010-Ludois-MS -- Strontium isotopes in banded iron formation carbonates : disequilibrium with ancient seawater
- 2010-Szilvagyai-MS -- Rb-Sr geochronology of HP/UHP metasediments and further constraints on peak metamorphism and exhumation rates, Zermatt-Saas ophiolite, Western Alps

Kelly

2007-Shullenberger-MS -- Stratigraphic and mineralogic evidence of paleoweathering at the Paleocene-Eocene boundary, Williston Basin, North Dakota

Medaris

1996-Zimmer-MS -- Thermobarometry of spinel peridotite xenoliths from Kozákov Volcano, Czech Republic: constraining the thermal regime associated with Neogene rifting and volcanism

Michelsen

1997-Dochat-PhD -- Quaternary stratigraphy and geomorphology of the Cold Bay region of the Alaska Peninsula : a basis for paleoenvironmental reconstruction
1998-Carson-MS -- Holocene tephrochronology of the Cold Bay area, southwest Alaska Peninsula

Sahai

2003-Thornburg-MS -- Characterization of arsenic occurrence, mobility and retardation in sandstone and dolomite aquifers of the Fox River Valley, Wisconsin
2011-Greiner-MS -- Adsorption of alpha amino acids L-glutamate and L-aspartate to gamma-Al₂O₃

Simo

1996-Yocum-MS -- Iron oolites from the cretaceous interior seaway : Albian Paddy Member of the Peace River Formation, Alberta, Canada, and Campanian Castlegate Formation, Colorado, USA
1997-Stoklosa-MS -- Facies and sequence stratigraphic interpretations of Wolfcampian (Early Permian) strata: Hueco Mountains, west Texas
2002-Stoklosa-PhD -- Evaluation of controls on carbonate platform morphology, facies and diagenetic variability: an Oligocene example from Southeast Spain
2002-Leslie-MS -- Chemical fingerprinting, ⁴⁰Ar/³⁹Ar dating and diagenetic alteration of ordovician K-bentonites, Upper Mississippi Valley
2002-Emerson-PhD -- Sedimentology, sequence stratigraphy, and brachiopod biostratigraphy of the Ordovician (Mohawkian) Decorah Formation, midcontinent, USA
2004-Sharaf-PhD -- Stratigraphy and sedimentology of Oligocene-Miocene mixed carbonate and siliciclastic strata, East Java Basin, Indonesia
2004-Chetel-MS -- ⁴⁰Ar/³⁹Ar geochronology of detrital and volcanic K-feldspar of the Upper Mississippi Valley : implications for terrigenous provenance, and the depositional and biostratigraphic history of an upper Ordovician epeiric sea

Singer

2001-Relle-MS -- Precise ⁴⁰Ar/³⁹Ar ages for the Big Lost "event" and the Matuyama-Brunhes reversal from lava flows on La Palma, Canary Islands
2002-Jicha-MS -- Variable impact of the subducted slab on Aleutian Island arc magma sources : evidence from Sr, Nd, Pb and Hf isotopes and trace elements abundances

- 2004-Harper-MS -- $^{40}\text{Ar}/^{39}\text{Ar}$ constraints on the evolution of the Puyehue-Cordon Caulle volcanic complex, Andean southern volcanic zone, Chile
- 2006-Jicha-PhD -- Geochronologic and isotopic constraints on the magmatic evolution of Pleistocene-recent Aleutian and Andean volcanic complexes
- 2009-Hora-PhD -- Linking volcano morphology and composition to magma reservoir evolution at Parinacota Volcano, Chile
- 2009-Greene-MS -- Geochemical and petrological constraints on the 1902 eruption of Volcán Santa María
- 2010-Smith-MS -- A geochemical and isotopic perspective on magma evolution 103-25 ka beneath Volcán de Santa María-Santiaguito, Guatemala
- 2011-Siewert-MS -- Integrating $^{40}\text{Ar}/^{39}\text{Ar}$, U-Pb, and astronomical clocks in the Cretaceous Niobrara Formation

Tikoff

- 2002-Titus-MS-- Geological and geophysical investigation of two fine-grained granites, Sierra Nevada, California: evidence for structural controls on volcanism
- 2003-Giorgis-PhD -- Structural evolution of the Salmon River suture zone, Idaho, USA: implications for the tectonics of obliquely-convergent boundaries
- 2003-Charkoudian-MS -- A tale of two plutons: pluton emplacement and strike-slip deformation, vermilion granitic complex, northern Minnesota
- 2003-Mederos-MS -- Timing and geometry of the Rock Springs (WY)/Douglas Creek (CO) arch: an integrated geological and geophysical investigation of a Laramide-style uplift
- 2004-Waters-PhD -- Structural geology of a ten kilometer scale lower crustal shear zone: Mt. Hay granulites, central Australia
- 2005-Webber-MS -- Structural geology of the Porter's Knob Area, Red Hills ultramafic massif, New Zealand: implications for upper mantle deformation
- 2006-Maes-PhD -- Magnetic fabric constraints on the emplacement of igneous intrusions
- 2007-Gage-MS -- Anisotropy of magnetic susceptibility (AMS) analysis of strain partitioning in a lithologically heterogeneous granulite facies shear zone, Mt. Chapple, central Australia
- 2010-Riley-PhD -- Fracture system genesis and organization in the Tuolumne Intrusive Suite, Sierra Nevada Batholith, CA
- 2012-Braudy-MS -- Deformation history of West Mountain, west-central Idaho: Implications for the western Idaho shear zone

Valley

- 1995-Gilliam-MS -- Oxygen isotope study of gabbros and granites from the Isle of Skye, Scotland
- 1996-Edwards-MS -- Oxygen isotope diffusion and zoning in diopside : empirical constraints on water fugacity during cooling
- 1996-Peck-MS -- Stable isotope geochemistry of Precambrian anorthosite
- 1997-King-MS -- Oxygen isotope study of igneous rocks from the Superior Province, Canada
- 1999-Monani-MS -- Oxygen isotope study of granites from the British Tertiary igneous province, western Scotland

- 2000-Peck-PhD -- Oxygen isotope studies of Grenville metamorphism and magmatism
- 2000-Lackey-MS -- Fluid flow in sandstones and marbles during wollastonite grade contact metamorphism at Laurel Mountain, east-central California
- 2001-King-PhD -- Oxygen isotope study of source and alteration of granitic magmas in the western United States and the Superior Province, Canada
- 2001-Clechenko-MS -- Petrogenesis of the Willsboro-Lewis wollastonite skarns, Northeastern Adirondack Mountains, New York
- 2004-Valaas-MS -- Oxygen isotope thermometry in contact metamorphosed Biwabik iron-formation
- 2005-Lackey-PhD -- The magmatic and alteration history of the Sierra Nevada batholith as recorded by oxygen isotope ratios of zircon, titanite, garnet, and quartz
- 2005-Cavosie-PhD -- Geochemistry of >3900 MA detrital zircons from Jack Hills, Western Australia
- 2006-Kelly-MS -- Silicite in the St. Peter sandstone
- 2007-Lancaster-MS -- Granitoid genesis in the Adirondack Mountains, NY state
- 2010-Ortiz-MS -- Mineral inclusions in zircons: a tool for provenance analysis of sedimentary rocks
- 2011-Quintero-MS -- Oxygen isotope ratios in zircon and garnet: a record of magmatic processes and contamination history in the Dinkey Dome peraluminous granite, Sierra Nevada Batholith
- 2011-Russell-MS -- Oxygen isotopes in garnet from eclogite: Oxygen isotope geochemistry of the Bohemian Massif and zoning revealed by secondary ion mass spectrometry

Xu

- 2009-Hill-MS -- High-resolution transmission electron microscopy investigation of nano-crystals of pyroxene and copper in Oregon sunstones
- 2009-Fangfu-MS -- Sulfide-catalyzed nucleation and growth of very high-magnesian calcite and disordered dolomite, precursors to sedimentary dolomite
- 2010-Huberty-MS -- Crystal orientation effects for analysis of $d^{18}O$ in magnetite and hematite by SIMS
- 2011-Zhou-MS -- Investigation on the effect of biotite and diopside on calcite precipitation
- 2011-Shen-MS -- Composition and microstructure evolution during dolomitization of Wisconsin Ordovician limestones
- 2012-Hill-PhD -- TEM investigation of nano-scale precipitates in ultrahigh-pressure clinopyroxenes.