KURT E. SUNDELL

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EDUCATION

Ph.D. Geology, The University of Houston **2017**
M.S. Geology, The University of Kansas **2011**
B.S. Geology, Music Minor, The University of California, Davis **2009**

PROFESSIONAL APPOINTMENTS

Assistant Professor, Idaho State University **2021–present**
Postdoctoral Research Associate, University of Arizona **2018–2021**
Graduate Research/Teaching Assistant, University of Houston **2013–2017**
GeoSolutions Geophysicist, Schlumberger WesternGeco, Houston, TX **2011–2013**
Graduate Research/Teaching Assistant, University of Kansas **2009–2011**

PROFESSIONAL EXPERIENCE

Assistant Professor, Idaho State University **2021–present**

- Teaching (courses previously taught, currently in progress, or on deck for next semester)
  - GEOL 6623 Tectonics and Sedimentation (Sp22)
  - GEOL 6603 Geologic Writing Seminar (Sp22, Sp23)
  - GEOL 6601 Advanced Physical Geology (F22)
  - GEOL 5599 Data Analytics in MATLAB (Sp23)
  - GEOL 5599 Tectonics Seminar (F21, Sp22, Sp23, F23)
  - GEOL 4491 Field Seminar (F21, Sp22, Sp23)
  - GEOL 4452 Sedimentation and Stratigraphy (F21, F22, F23)
  - GEOL 4450 Geology Field Camp (Su21, Su22, Su23)

Postdoctoral Research Associate, University of Arizona **2018–present**

- Operation of day-to-day ALC activities on multicollector (*Nu Plasma*) and single-collector (*Thermo Element2*) mass spectrometers with visiting and in-house researchers
- Co-teaching Introductory Geology (GEOS 251) for Geoscience majors
- Developing a seminar-style course on quantitative analysis using detrital geochronological and geochemical data
- Undergraduate student advisement
- Development of an increasingly independent research program

Research Assistant, University of Houston **2015–2017**

- Conducting research and assisting in-house and external users in operating laser ablation ICP-MS laboratory (Varian 810 quadrupole ICP-MS)

- Development in-house U-Pb data reduction and visualization software as MATLAB-based graphical user interfaces
- Mentoring graduate and undergraduate students and visiting researchers on zircon U-Pb data presentation and interpretation
- Conducting guest lectures in radioisotope geochemistry and geochronology

Teaching Assistant, University of Houston **2013–2015, 2017**

Courses: *Sedimentary Petrogenesis, Stratigraphy, Geology Summer Field Camp, Paleobiology*

- Preparing labs and lectures and managing large groups of students in field, classroom, and laboratory settings
- Providing assistance in the field and during laboratory exercises and grading
- Development of new exercises, tests, and field projects

GeoSolutions Geophysicist, Schlumberger WesternGeco **2011–2013**

- Processing 3D land and marine seismic data using Omega 2 and Petrel software
- Testing and administering production, troubleshoting software issues while working on multiple teams
- Project leader for preparing and presenting data for external and internal client meetings, producing and managing deliverables, team management, and writing final reports

Research Assistant, University of Kansas Isotope Geochemistry Laboratory **2009–2011**

- Operation of ultra-high vacuum helium diffusion line and Nd:YAG >1000°C laser and Thermo Element 2 single-collector ICP-MS
- HF-HCL pressure vessel digestion and associated wet chemistry
- Training new laboratory technicians and visiting researchers on (U-Th)/He thermochronology

Teaching Assistant, University of Kansas **2009–2011**

Courses: *Summer Field Camp, Field Camp Preparation, Introductory Geology Laboratory, History of the Earth*

- Biweekly lectures and assistance in field and during laboratory exercises
- Managing large groups of students in remote mapping areas
- Preparation of ArcGIS files and computer-based field mapping equipment and compiling necessary aerial imagery and topographic maps

RESEARCH EXPERIENCE

Postdoctoral Research Associate, University of Arizona **2018–2021**

- Applied and developmental research in laser ablation geochronology and geochemistry at the Arizona LaserChron Center (ALC)
- Development of ALC data reduction-visualization-archiving platform, *AgeCalcML*, for U-Th-Pb geochronology, and Lu-Hf and trace element geochemistry
- Development of rapid (12–3s/analysis) zircon U-Pb geochronology methods
- Enhancement of cyberinfrastructure and connectivity to geochronology databases for data archiving (e.g., IEDA Geochron.org and EarthCube *Sparrow*)

Ph.D. Dissertation Research, University of Houston **2013–2017**

- Dissertation: “Cenozoic surface uplift and basin formation in the Peruvian central Andes” Ph.D. Advisor: Dr. Joel Saylor

- Field-based geochronology and geochemistry focused project (3 separate field seasons, ~6 months total fieldwork) on understanding geodynamic processes controlling the topographic development of the Central Andes of South America
- Development of U-Th-Pb in-house data reduction-visualization software, *U-PbToolbox*
- Measured >12 km stratigraphy in southern Peru at decimeter scale complete with lithofacies characterization, paleocurrent analysis, conglomerate clast counts, sandstone petrography, and detrital zircon U-Pb geochronology
- Development of detrital zircon mixing model, *DZmix* (github.com/kurtsundell/DZmix)
- Paleoelevation in southern Peru based on δD stable isotopic analysis of ancient water preserved in volcanic glass benchmarked to modern water $\delta^{18}O$ and δD analysis

Master's Thesis Research, University of Kansas **2009–2011**

- Thesis: “Thermochronometric analysis of the North Lunggar Rift: Implications for the timing of extension initiation and structural style of deformation in southern Tibet” M.S. Advisors: Drs. Michael Taylor and Daniel Stockli
- Research on determining the rate and magnitude of extension through geologic mapping, kinematic and petrographic analysis, and apatite and zircon (U-Th)/He thermochronometry and thermal modeling (~2 months of extremely remote field work)

Senior Thesis, University of California, Davis **2008–2009**

- Thesis: "Late Quaternary Activity of the Earthquake Valley Fault" Thesis advisor: Dr. Michael Oskin
- Neotectonic mapping and surface geomorphic characterization of the Earthquake Valley Fault in the Anza Borrego Desert, CA
- Characterization of soil profiles as a time proxy to determine late Quaternary slip rates for comparison to slip deficits along a subparallel strand of the San Andreas Fault

GRANTS

- NSF GEO-NERC 2026864 “Impact of the Plio-Pleistocene Transition on Provenance and Sediment Routing from the Himalaya to the Deep-Sea Bengal Fan” **2020–present**

AWARDS AND SCHOLARSHIPS

- 1st place oral presentation UH 32nd Annual Student Research Day **2017**
- Earth and Atmospheric Sciences Marathon Oil Corporation Scholarship **2016**
- University of Michigan Mountain Ranges and High Plateaus, Summer Course **2015**
- University of Houston NSM Alumni Association Scholarship **2015**
- Joe & Lucy Steward Scholarship **2015**
- Houston Geological Society Outstanding Student Award **2015**
- 1st place oral presentation University of Houston Geoscience Day **2015**
- Sam Penn Memorial Outstanding Academic Achievements in Geology **2015**
- Sigma Xi Grants-in-Aid of Research Grant **2014**
- 1st place Poster Competition EAS Student Research Day **2014**
- Earth and Atmospheric Sciences BP Scholarship **2014**
- Geological Society of America Student Research Grant **2014**
- International Association of Sedimentologists Student Research Grant **2014**
- Bob F. Perkins Conference, Gulf Coast Section 2014 honorable mention **2013**
- The University of Kansas, Masters of Science Degree defended with honors **2011**
- The University of Kansas GeoHawker Symposium, 2nd place oral presentation **2010**
- University of Kansas Summer Scholarship **2010**

- Geological Society of America Student Research Grant **2010**
- UC Davis Scholarship in Geology and Natural Sciences (SIGNS) **2009**
- National Science and Mathematics Access to Retain Talent (SMART Grant) **2008**

SERVICE AND COMMUNITY INVOLVEMENT

- GSA GeoCareers Center Drop-in Mentoring volunteer **2021**
- Poster judge University of Arizona GeoDaze Symposium **2021**
- Co-Head judge University of Arizona GeoDaze Symposium **2020**
- AGU Outstanding Student Presentation Awards (OSPA) **2019**
- Head judge University of Arizona GeoDaze Symposium **2019**
- Goldschmidt LA-ICP-MS U-Th-Pb Working Group (*PlasmAge.org*) workshop **2018**
- European Geosciences Union General Assembly poster judge **2018**
- UH 32nd Student Research Day volunteer organizer (Judging Coordinator) **2017**
- AAPG/SEPM Ace Annual Meeting volunteer judge for posters and talks **2017**
- GSA On to the Future (OTF) Mentorship program volunteer **2016**
- Co-teaching short course on DZstats at the University of Texas at Austin **2016**
- SGE Undergraduate Academic Writing Workshop Volunteer Teacher **2016**
- Guest Lecturer for Graduate Course Inductively Coupled Plasma Mass Spec. **2016**
- Volunteer Judge Writing Contest Science Engineering Fair Houston **2016**
- Sigma Gamma Epsilon Undergraduate Academic Writing Workshop Volunteer **2016**
- Guest Lecturer for Graduate Course Radiogenic Isotope Geology **2015**
- Mars rover celebration Houston Texas science fair judge (3-5 grade) **2015**
- University of Houston Earth and Atmospheric Sciences Mentorship Program **2014**
- TerraElm Outreach Program Assistant to Peter Anderson **2014–2016**
- Mark Twain Elementary, Houston, TX 3-5 grade volunteer science fair judge **2014**
- Volunteer to Judge the Science Writing Contest (11-12 grade) Science Engineering Fair of Houston **2014**
- Volunteer to Judge (7-8 grade) the Science and Engineering Fair of Houston **2014**
- University of Kansas Geology Mentorship Program Volunteer **2009–2011**
- University of Kansas Adopt-a-Highway Program Volunteer **2009–2011**
- University of California, Davis Geology Club Treasurer **2007–2009**
- High School/Elementary School Mathematics Tutor **1998–2002**

COMPUTER SKILLS

MATLAB, Python, ArcGIS, Adobe Design Suite, Microsoft Office Suite, Petrel, Omega-2 Seismic Data Processing, experience in building and managing websites, development of graphical user interfaces.

INVITED TALKS

Global compilations of hafnium and oxygen data in zircon: A biased view into Earth's deep past, University of Colorado Boulder, May, 2023.

Global compilations of zircon geochemistry: A biased view into Earth's deep past, Rocky Mountain Section, Society for Sedimentary Geology, November, 2022.

Hinterland basin records of crustal thickening, surface uplift, and paleoclimate in the northern Central Andes, University of British Columbia, September, 2022.

Application of rapid U-Pb acquisition (3s/analysis) to the Book Cliffs, UT, brown bag talk at University of British Columbia, September, 2022.

Global records of hafnium isotopes in zircon shed light on Earth's deep past, University of Texas, San Antonio, September, 2022.

Global records of hafnium isotopes in zircon shed light on Earth's deep past, Virtual Seminars in Precambrian Geology (VS-PG), June, 2022.

Global records of hafnium isotopes in zircon: New quantitative methods shed light on Earth's deep past, Idaho State University, January, 2022.

Refining geochemical proxies of crustal thickness: Case studies of the Tibetan Plateau and Central Andes, Colloquium at University of Idaho, October, 2021.

Hinterland basin records of crustal thickening, surface uplift and paleoclimate in the northern Central Andes, University of California, Santa Barbara, February, 2020.

Paleogene foreland basin formation and Neogene surface uplift in the Peruvian central Andes, University of California, Santa Barbara, February, 2020.

Application of rapid U-Pb acquisition (3s/analysis) to combat lithofacies bias in detrital zircon age distributions: Example from the Book Cliffs, UT, GSA Annual Meeting, September, 2019.

Documenting sediment recycling during Andean mountain building using combined U-Pb geochronology and Lu-Hf geochemistry of detrital zircons from Peruvian Altiplano strata, Colloquium at Northern Arizona University, February, 2019.

Documenting sediment recycling during Andean mountain building using combined U-Pb geochronology and Lu-Hf geochemistry of detrital zircons from Peruvian Altiplano strata, AGU Annual Meeting, December, 2018.

Paleogene foreland basin formation and Neogene surface uplift in the Peruvian central Andes, Colloquium at the University of Kansas September, 2018.

Reconstrucción Cenozoica del Altiplano en el sur del Perú," (en Español) Invited lecture at Departamento Académico de Geología, Universidad San Antonio Abad del Cusco, Cusco, Peru, July, 2015.

SHORT COURSES

[9] 2022 GSA Annual Meeting. Methods and geological applications in geo-thermo-petro-chronology Part I. Instructors: George Gehrels, **Kurt Sundell**, and Sarah George.

[8] 2022 GSA Annual Meeting. Quantitative Analysis, Visualization, and Modelling of Detrital Geochronology Data. Instructors: Joel Saylor, **Kurt Sundell**, and Glenn Sharman.

[7] 2021 GSA Annual Meeting. Methods and Geological Applications in Geo-Thermo-Petro-Chronology Part I. Instructors: George Gehrels, **Kurt Sundell**, Sarah George; Mauricio Ibanez; Peter Reiners; Allen Schaen.

[6] 2021 GSA Annual Meeting. Quantitative Analysis, Visualization, and Modelling of Detrital Geochronology Data. Instructors: Joel Saylor, **Kurt Sundell**, and Glenn Sharman.

[5] 2020 GSA Annual Meeting: Detrital and Petrochronologic Applications of U-Pb Geochronology and Lu-Hf and Trace/REE Geochemistry by Laser Ablation Inductively Coupled Plasma–Mass Spectrometry, Instructors: George Gehrels, **Kurt Sundell**, and Sarah George.

[4] 2020 GSA Annual Meeting: Quantitative Analysis, Visualization, and Modelling of Detrital Geochronology Data, Instructors: Joel Saylor, **Kurt Sundell**, Sam Johnstone, Glenn Sharman.

[3] 2019 GSA Annual Meeting: Detrital Zircon Geochronology: Best Practices for U-Pb Data Acquisition, Reduction, Analysis, and Archiving. Instructors: George Gehrels, **Kurt Sundell**, and Sarah George.

[2] 2018 GSA Annual Meeting: Detrital Zircon Geochronology: Best Practices, Current Challenges, Future Opportunities. Instructors: George Gehrels and **Kurt Sundell**.

[1] 2017 GSA Annual Meeting: U-Pb geochronology, Lu-Hf Isotopes, Oxygen Isotopes, and Trace/Rare Earth Element Geochemistry. Instructors: George Gehrels, John Valley, Jay Chapman, **Kurt Sundell**.

CONFERENCE CONVENING

[7] "Advances in Reconstructing Paleotopography," GSA 2022 Annual Meeting. Conveners: Kristina Butler, **Kurt Sundell**, Emma Heitmann.

[6] "Assessing paleotopography, relief, and elevation across spatio-temporal scales," AGU 2020 Annual Meeting. Conveners: Magdalena Currie, **Kurt Sundell**, Jessica Stanley, Katherrine Kravitz.

[5] "Bridging the laboratory–database divide in geochemistry," submitted for 2020 GSA Annual Meeting. Conveners: Daven Quinn, Benjamin Linzmeier, Leah Morgan, **Kurt Sundell**.

[4] "Structure, sedimentation, and dynamics of fold-and-thrust belts and associated basins on Earth and other planets I & II," 2019 AGU Annual Meeting. Conveners: Feng Cheng, Yiduo Liu, **Kurt Sundell**, Andrew Zuza.

[3] "Recent Advances and Future Directions in Paleoaltimetry and Paleoclimate," 2018 GSA Annual Meeting. Conveners: Lily Jackson, **Kurt Sundell**, Miquela Ingalls.

[2] "Emerging Trends, Novel Applications, and Applied Studies in Detrital Geochronology," 2016 AGU Annual Meeting. Conveners: **Kurt Sundell**, Owen Anfinson, Andrew Laskowski.

[1] "Novel High-Resolution Approaches to Deciphering Source-to-Sink Linkages between Tectonic Hinterland and Basin Evolution," 2015 AGU Annual Meeting. Conveners: Edgardo Pujols, **Kurt Sundell**, Julio Leva Lopez.

JOURNAL REVIEWER

The Depositional Record; Earth Surface; Earth and Planetary Science Letters; Frontiers in Earth Science; Geology; Geochemistry, Geophysics, Geosystems; Geoscience Frontiers; Geosphere; Geophysical Research Letters; GSA Bulletin; Journal of South American Earth Sciences; Journal of Geophysical Research; Lithosphere; Scientific Reports; Terra Nova.

EDITORIAL BOARDS

Review Editor *Frontiers in Earth Sciences*, Sedimentology, Stratigraphy, and Diagenesis section.

EDITED VOLUMES

Guest Editors: Cheng, F., Zuza, A., Liu, Y., **Sundell, K.E.** (2022) Fold-and-thrust belts and associated basins: structure, sedimentation, and dynamics, *The Journal of the Geological Society*.

PROPOSAL REVIEWER

National Science Foundation, *Tectonics*.

STUDENTS ADVISING AND COMMITTEES

Graduate

Cheyenne Bartelt, Master of Science (advisor), Idaho State University, in progress, anticipated completion May, 2025.

Maria Reinoso, Master of Science (advisor), Idaho State University, in progress, anticipated completion May, 2024.

Robert J. Manta, Master of Science (advisor), Idaho State University, in progress, anticipated completion May, 2024.

Jon P. Lever, Master of Science (co-advisor), Idaho State University, in progress, anticipated completion June, 2023.

Timothy S. Dixon, Master of Science (committee member), Montana State University, completed May, 2023.

Undergraduate

Cassandra Kenyon, Undergraduate Senior Thesis (advisor), Idaho State University, in progress, anticipated completion June, 2023.

Kyle Mangum, Undergraduate Senior Capstone Project (co-advisor), Idaho State University, completed December, 2022.

Ryan Eden, Undergraduate Senior Thesis (advisor), University of Arizona, completed May, 2021. Currently: Ph.D. student at University of California, Santa Barbara.

PUBLICATIONS (IN PREPARATION)

[--] **Sundell, K.E.,** Macdonald, F.A., Puetz, S.J. (in prep.), Latest Neoproterozoic global zircon Hf and O isotope excursions record the assembly of Gondwana, *anticipated submission Summer 2023 t*o *Geology.*

[--] **Sundell, K.E.**, Saylor, J.E., Styron, R.H., Lapen, T.J., Villarreal, D., Usnayo, W.P., Cardenas, J. (in prep.), Hinterland basin response to late Cenozoic lithospheric foundering in the Western Cordillera of southern Peru, *anticipated submission fall 2023 to Tectonics*.

[--] Eden, R., **Sundell., K.E.**, Gehrels, G., Saylor, J.E., Göğüş, O.H. (in prep.), Late Cenozoic foundering of mantle lithosphere inferred from Paired U-Pb and Lu-Hf Zircon Petrochronology, *anticipated submission Summer 2023 to Terra Nova*.

[--] Dixon, S., Orme, D.A., **Sundell, K.E.**, Blum, M., Guenthner, W. (in prep.), Changes in provenance and sediment routing history of the Miocene-Pleistocene Bengal Fan, Indian Ocean using detrital zircon (U-Th)/He thermochronology, *anticipated submission summer 2023 to Geosphere.*

[--] Lever, J.P., **Sundell, K.E.**, Pearson, D.M., Link, P.K. (in prep.), Mesoproterozoic stratigraphy in SE Idaho suggest post-1370 Ma rifting within the Belt Ba-sin of Western Laurentia during Tenure of the Nuna Supercontinent, *anticipated submission summer 2023 to Tectonics.*

[--] Link, P.K., Welcker, C., **Sundell, K.E.** (in prep.), The Geochronometry of Idaho and the Bumpy Barcode Revisited: Snake River Detrital Zircons in Hells Canyon and Beyond, *anticipated submission summer 2023 to Sedimentary Geology*.

[--] George, S.W.M., Gehrels, G., Jepson, G., Rojay, B., **Sundell, K.E.**, Campbell, C., Alberts, D., Quade, J., Mueller, M., Moreno, F. (in prep.), Late Cenozoic lithospheric dripping under the Anatolian Plateau, *submitted to Geophysical Research Letters.*

PUBLICATIONS (UNDER CONSIDERATION)

[--] **Sundell, K.E.**, Gehrels, G., Blum, M., Saylor, J.E., Pecha, M., and Pettit, B. (in review), "Large-n" detrital zircon geochronology, grain size, and maximum depositional age: An exploratory investigation of rapid (3 s/analysis) U-Pb dating, the Book Cliffs, Utah, *submitted to Basin Research*.

[--] **Sundell, K.E.**, Laskowski, A.K., Howlett, C., Kapp, P., Ducea, M., Chapman, J.B., Ding, L. (in review), Episodic Late Cretaceous to Neogene crustal thickness variation in southern Tibet, *submitted to Terra Nova*.

[--] Brennan, D.T., Link, P.K., Pearson, D.M., Milton, J., Sundell., K.E., Mangum, K. (in review), Neoproterozoic and Cambrian strata of the locally mineralized Bayhorse succession on the western side of the Lemhi Arch in East-central Idaho, *submitted to the tobacco Root Society*.

[--] Reynolds, A.N., Howlett, C.J., Laskowski, A.K., Orme, D.A., **Sundell, K.E.**, Taylor, M.H., Guo, X., Ding, L. (in review), Kinematic Evolution of the Tangra Yumco Rift, South-Central Tibet, *submitted to Tektonika.*

PUBLICATIONS (PEER REVIEWED)

[34] Saylor, J.E., **Sundell, K.E.**, Perez, N.D., Hensley, J.B., McCain, P., Runyon, B., Alvarez, P., Cárdenas, J., Usnayo Perales, W.P., and Valer Medina, C.S. (2023), Central Andean Plateau formation in response to southward migrating flat-slab subduction, *Earth and Planetary Science Letters*.

[33] Smith, T.M., Saylor, J.E., Lapen, T.J., Leary, R.J., **Sundell, K.E.** (2023), Large detrital zircon data set investigation and provenance mapping: Local versus regional and continental sediment sources before, during, and after Ancestral Rocky Mountain deformation, *GSA Bulletin*.

[32] Smith, T.M., Lapen, T.J., Saylor, J.E., Hatfield, K., **Sundell, K.E.** (2023), Identifying sources of non-unique detrital age distributions through integrated provenance analysis: An example from the Paleozoic Central Colorado Trough, *Geosphere*.

[33] Cheng, F., Zuza, A., Liu, Y., **Sundell, K.E.** (2023), Fold-and-thrust belts and associated basins: a perspective on structure, sedimentation, and dynamics, *Journal of the Geological Society*.

[30] Wang, J.W., Gehrels, G.E., Kapp, P.A., **Sundell, K.E.** (2023), The mid-Cretaceous Coast Mountains Batholith: Record of the Transition from Sinistral-Oblique to Strongly Convergent Two-Plate Margin, *Geosphere*.

[29] Pecha, M.E., Blum, M.D., Gehrels, G.E., **Sundell, K.E.**, Karlstrom, K.E., Gonzales, D.A., and Mahoney, J.B. (2022), Linking the Gulf of Mexico and Coast Mountains batholith during the Late Paleocene: Insights from Hf isotopes in detrital zircons, *GSA Spec. Pub*.

[28] Göğüş, O.H., **Sundell, K.E.**, Uluocak, E.S., Saylor, J.E., Çetiner, U. (2022), Rapid, axisymmetric surface uplift and crustal flow in Central Andes controlled by lithospheric instability, *Scientific Reports*.

[27] **Sundell, K.E.** and Macdonald, F.A. (2022), The tectonic context of hafnium isotopes in zircon, *Earth and Planetary Science Letters.*

[26] **Sundell, K.E.**, George, S.W., Carrapa, B., Gehrels, G.E., Ducea, M.N., Saylor, J.E. and Pepper, M. (2022) Crustal Thickening of the Northern Central Andean Plateau Inferred from Trace Elements in Zircon. *Geophysical Research Letters*, p.e2021GL096443, doi.org/10.1029/2021GL096443.

[25] **Sundell, K.E.**, Laskowski, A.K., Kapp, P.A., Ducea, M.N. and Chapman, J.B., 2021. Jurassic to Neogene Quantitative Crustal Thickness Estimates in Southern Tibet. *GSA Today*, *31*(6), doi.org/10.1130/GSATG461A.1.

[24] Burke, W.B., Laskowski, A.K., Orme, D.A., **Sundell, K.E.**, Taylor, M.H., Guo, X., and Ding, L. (2021), Record of Crustal Thickening and Synconvergent Extension from the Dajiamang Tso Rift, Southern Tibet, *MDPI Geosciences*, doi.org/10.3390/geosciences11050209.

[23] **Sundell, K.E.** and Saylor, J.E., 2021. Two-Dimensional Quantitative Comparison of Density Distributions in Detrital Geochronology and Geochemistry. *Geochemistry, Geophysics, Geosystems*, *22*(4), p.e2020GC009559, doi.org/10.1029/2020GC009559.

[22] Saylor, J.E. and **Sundell, K.E.**, 2021. Tracking Proterozoic–Triassic sediment routing to western Laurentia via bivariate non-negative matrix factorization of detrital provenance data. *Journal of the Geological Society*, *178*(3), doi.org/10.1144/jgs2020-215.

[21] Heizler, M.T., Karlstrom, K.E., Albonico, M., Hereford, R., Beard, L.S., Cather, S.M., Crossey, L.J. and **Sundell, K.E.**, 2021. Detrital sanidine 40Ar/39Ar dating confirms< 2 Ma age of Crooked Ridge paleoriver and subsequent deep denudation of the southwestern Colorado Plateau. *Geosphere*, *17*(2), pp.438-454, doi.org/10.1130/GES02319.1.

[20] Thomas, W.A., Gehrels, G.E., **Sundell, K.E.** and Romero, M.C., 2021. Detrital-zircon analyses, provenance, and late Paleozoic sediment dispersal in the context of tectonic evolution of the Ouachita orogen. *Geosphere*, *17*(4), pp.1214-1247, doi.org/10.1130/GES02288.1.

[19] Caylor, E.A., Carrapa, B., **Sundell, K.E.**, DeCelles, P.G. and Smith, J.M., 2021. Age and deposition of the Fort Crittenden Formation: A window into Late Cretaceous Laramide and Cenozoic tectonics in southeastern Arizona. *GSA Bulletin*, v. 133; no. 9/10; p. 1996–2016; https://doi.org/10.1130/B35808.1.

[18] **Sundell, K.E.**, Gehrels, G.E. and Pecha, M.E., 2021. Rapid U-Pb Geochronology by Laser Ablation Multi-collector ICP-MS. *Geostandards and Geoanalytical Research*, *45*(1), pp.37-57, doi.org/10.1111/ggr.12355.

[17] Saylor, J.E., Rudolph, K.W., **Sundell, K.E.** and van Wijk, J., 2020. Laramide orogenesis driven by Late Cretaceous weakening of the North American lithosphere. *Journal of Geophysical Research: Solid Earth*, *125*(8), p.e2020JB019570, doi.org/10.1029/2020JB019570.

[16] Karlstrom, K.E., Jacobson, C.E., **Sundell, K.E.**, Eyster, A., Blakey, R., Ingersoll, R.V., Mulder, J.A., Young, R.A., Beard, L.S., Holland, M.E. and Shuster, D.L., 2020. Evaluating the Shinumo-Sespe drainage connection: Arguments against the “old”(70–17 Ma) Grand Canyon models for Colorado Plateau drainage evolution. *Geosphere*, *16*(6), pp.1425-1456, doi.org/10.1130/GES02265.1.

[15] Thomas, W.A., Gehrels, G.E., **Sundell, K.E.**, Greb, S.F., Finzel, E.S., Clark, R.J., Malone, D.H., Hampton, B.A. and Romero, M.C., 2020. Detrital zircons and sediment dispersal in the eastern Midcontinent of North America. *Geosphere*, *16*(3), pp.817-843, doi.org/10.1130/GES02152.1.

[14] **Sundell, K.E.**, Saylor, J.E., Pecha, M. 2019. Sediment provenance and recycling of detrital zircons from Cenozoic Altiplano strata in southern Peru and implications for the crustal evolution of west-central South America, in Horton, K.B. and Folguera, A., *Andean Tectonics: Amsterdam, Elsevier*, pp.363-397, doi.org/10.1016/B978-0-12-816009-1.00014-9.

[13] Thomas, W.A., Gehrels, G.E., Lawton, T.F., Satterfield, J.I., Romero, M.C. and **Sundell, K.E.**, 2019. Detrital zircons and sediment dispersal from the Coahuila terrane of northern Mexico into the Marathon foreland of the southern Midcontinent. *Geosphere*, *15*(4), pp.1102-1127, doi.org/10.1130/GES02033.1.

[12] Smith, T.M., **Sundell, K.E.**, Johnston, S.N., Andrade, C.N.G., Andrea, R.A., Dickinson, J.N., Liu, Y.A., Murphy, M.A., Lapen, T.J. and Saylor, J.E., 2020. Drainage reorganization and Laramide tectonics in north-central New Mexico and downstream effects in the Gulf of Mexico. *Basin Research*, *32*(3), pp.419-452, doi.org/10.1111/bre.12373.

[11] Saylor, J.E., **Sundell, K.E.** and Sharman, G.R., 2019. Characterizing sediment sources by non-negative matrix factorization of detrital geochronological data. *Earth and Planetary Science Letters*, *512*, pp.46-58, doi.org/10.1016/j.epsl.2019.01.044.

[10] **Sundell, K.E.**, Saylor, J.E., Lapen, T.J. and Horton, B.K., 2019. Implications of variable late Cenozoic surface uplift across the Peruvian central Andes. *Scientific reports*, *9*(1), pp.1-12, doi.org/10.1038/s41598-019-41257-3.

[9] **Sundell, K.E.**, Saylor, J.E., Lapen, T.J., Styron, R.H., Villarreal, D.P., Usnayo, P. and Cárdenas, J., 2018. Peruvian Altiplano stratigraphy highlights along-strike variability in foreland basin evolution of the Cenozoic central Andes. *Tectonics*, *37*(6), pp.1876-1904, doi.org/10.1029/2017TC004775.

[8] Saylor, J.E., Jordan, J.C., **Sundell, K.E.**, Wang, X., Wang, S. and Deng, T., 2018. Topographic growth of the Jishi Shan and its impact on basin and hydrology evolution, NE Tibetan Plateau. *Basin Research*, *30*(3), pp.544-563, doi.org/10.1111/bre.12264.

[7] **Sundell, K.E.** and Saylor, J.E., 2017. Unmixing detrital geochronology age distributions. Geochemistry, Geophysics, Geosystems, 18(8), pp.2872-2886, doi.org/10.1002/2016GC006774.

[6] Bershaw, J., Saylor, J.E., Garzione, C.N., Leier, A. and **Sundell, K.E.**, 2016. Stable isotope variations (δ18O and δD) in modern waters across the Andean Plateau. *Geochimica et Cosmochimica Acta*, *194*, pp.310-324, doi.org/10.1016/j.gca.2016.08.011.

[5] Saylor, J.E. and **Sundell, K.E.**, 2016. Quantifying comparison of large detrital geochronology data sets. *Geosphere*, *12*(1), pp.203-220, doi.org/10.1130/GES01237.1.

[4] Copeland, P., Bertrand, G., France-Lanord, C. and **Sundell, K.E.**, 2015. 40Ar/39Ar ages of muscovites from modern Himalayan rivers: Himalayan evolution and the relative contribution of tectonics and climate. *Geosphere*, *11*(6), pp.1837-1859, doi.org/10.1130/GES01154.1.

[3] Styron, R., Taylor, M. and **Sundell, K.E.**, 2015. Accelerated extension of Tibet linked to the northward underthrusting of Indian crust. *Nature Geoscience*, *8*(2), pp.131-134, doi.org/10.1038/ngeo2336.

[2] **Sundell, K.E.**, Taylor, M.H., Styron, R.H., Stockli, D.F., Kapp, P., Hager, C., Liu, D. and Ding, L., 2013. Evidence for constriction and Pliocene acceleration of east-west extension in the North Lunggar rift region of west central Tibet. *Tectonics*, *32*(5), pp.1454-1479, doi.org/10.1002/tect.20086.

[1] Styron, R.H., Taylor, M.H., **Sundell, K.E.**, Stockli, D.F., Oalmann, J.A., Moeller, A., McCallister, A.T., Liu, D. and Ding, L., 2013. Miocene initiation and acceleration of extension in the South Lunggar rift, western Tibet: Evolution of an active detachment system from structural mapping and (U-Th)/He thermochronology. *Tectonics*, *32*(4), pp.880-907, doi.org/10.1002/tect.20053.

CONFERENCE ABSTRACTS (***advised student or committee member***)**

[73] Saylor, J.E., Sundell, K.E. (2023), Sediment provenance and copper porphyry identification via non-negative matrix factorization of bivariate detrital data sets, Cordilleran Tectonics Workshop, Whitehorse, Canada.

[72] **Sundell, K.E.**, Macdonald, F.A. (2022), Global compilations of zircon geochemistry: A biased view into the Proterozoic–Phanerozoic transition, GSA Annual Meeting.

[71] Dixon, T.S.**, Orme, D.A., **Sundell, K.E.**, and Blum, M. (2022), Using detrital zircon (U-Th)/He thermochronology to determine change in provenance, sediment routing and depositional history of the Miocene-Pleistocene Bengal Fan, Indian Ocean, GSA Annual Meeting.

[70] Mangum, K.**, **Sundell, K.E.**, Anderson, R.B., Pearson, D.M., and Link, P.K. (2022), Detrital zircon data supports a Neoproterozoic phase of tilting within the Lemhi Arch pf east-central Idaho, GSA Annual Meeting.

[69] Lever, J.P.**, **Sundell, K.E.**, Pearson, D.M., and Link, P.K. (2022), Testing provenance and regional correlations of newly recognized Mesoproterozoic strata in east-central Idaho, GSA Annual Meeting.

[68] Manta, R.J.**, **Sundell, K.E.**, Kenyon, C., and Carlotto, V. (2022), Wedge-top stratigraphy of southern Peru: Key to understanding foreland basin evolution of the Cenozoic Central Andes, GSA Annual Meeting.

[67] Kenyon, C.**, **Sundell, K.E.**, Finney, B.P., and McCafferty, K. (2022), Variable surface uplift along and across the Central Andes: A re-evaluation of empirically derived isotopic lapse rates applied to hydrated volcanic glass, GSA Annual Meeting.

[66] Link, P.K., Welcker, C., **Sundell, K.E.**, and Christensen, C. (2022), The bumpy barcode goes to hell(s canyon, Idaho): Large-n detrital zircon mixture modeling of the Snake River drainage, GSA Annual Meeting.

[65] Saylor, J.E., **Sundell, K.E.**, Perez, N.D., Hensley, J.B., McCain, P., Runyon, B., Alvarez, P., Cárdenas, J., Usnayo Perales, W.P., and Valer Medina, C.S. (2022), Diachronous deformation, magmatism, and basin formation in the Central Andean Plateau due to flat slab subduction, GSA Annual Meeting.

[64] **Sundell, K.E.**, Macdonald, F.A. (2022), The latest Neoproterozoic hafnium isotope excursion: Snowball Earth erosion or Pan-African orogens? GSA Joint Cordillerian-Rocky Mountain Section Meeting, Las Vegas, NV.

[63] Eden, R.P.**, **Sundell, K.E.**, Gehrels, G.E., Saylor, J.E. (2022), Late Cenozoic foundering of mantle lithosphere in the Western Cordillera of southern Peru. GSA Joint Cordillerian-Rocky Mountain Section Meeting, Las Vegas, NV.

[62] **Sundell, K.E.**, Macdonald, F.A. (2021), Latest Neoproterozoic Hafnium Isotope Excursion Records the Assembly of Gondwana, AGU, Fall Meeting, New Orleans, LA.

[61] Smith, T.M., Saylor, J.E., Lapen, T.J., Leary, R., **Sundell, K.E.** (2021), Leveraging of large detrital zircon data sets: Modeling sediment sources, contributions, and provenance mapping of the Ancestral Rocky Mountains, AGU, Fall Meeting, New Orleans, LA.

[60] **Sundell, K.E.**, George, S.W.M., Carrapa, B., Gehrels, G., Saylor, J.E., Ducea, M., and Pepper, M. (2021), Two-stage crustal growth of the northern Central Andean Plateau, Geological Society of America Annual Meeting, Portland, OR.

[59] Lever, J.**, **Sundell, K.E.**, Pearson, D., Link, P.K. (2021), Tightening the belt: New age and provenance constraints on Proterozoic strata in east-central Idaho, Geological Society of America Annual Meeting, Portland, OR.

[58] Saylor, J.E., Rudolph, K., **Sundell, K.E.**, van Wijk, J. (2021), Late Cretaceous evolution of paleo-relief and lithospheric strength in the North American Cordilleran from Monte Carlo-based flexure modeling, Geological Society of America Annual Meeting, Portland, OR.

[57] Welcker, C., **Sundell, K.E.**, Fisher, J.M., Link, P.K. (2021), More than you wanted to know about detrital zircons of Hells Canyon, Idaho and Oregon: Revisiting the bumpy barcode with large-n U-Pb geochronological methods, Geological Society of America Annual Meeting, Portland, OR.

[56] Quinn, D.P., Linzmeier, B.J., **Sundell, K.E.**, Gehrels, G.G., Goring, S.M., Marcott, S.A., Meyers, S.R., Peters, S.E., Ross, J.I., Schmitz, M.D., Singer, B.S., and Williams, J.W. (2021), An extensible database for geochemical data sharing atop the Sparrow laboratory management system, EarthCube, 2021.

[56] Quinn, D.P., Linzmeier, B.J., **Sundell, K.E.**, Gehrels, G.G., Goring, S.M., Marcott, S.A., Meyers, S.R., Peters, S.E., Ross, J.I., Schmitz, M.D., Singer, B.S., and Williams, J.W. (2021), Implementing the Sparrow laboratory data system in multiple subdomains of geochronology and geochemistry, European Geosciences Union General Assembly.

[55] Eden, R.**, **Sundell, K.E.**, Gehrels, G.E., and Saylor, J.E. (2020), Hinterland basin geodynamics: Implications of Lu-Hf analyses of zircon from the Tincopalca basin, Peru, American Geophysical Union, Fall Meeting.

[54] **Sundell, K.E.**, Laskowski, A.K., Kapp, P., Ducea, M., and Chapman, J.B. (2020), Jurassic to Neogene quantitative crustal thickness estimates in southern Tibet from recalibrated Sr/Y and La/Yb trace element geochemical proxies, American Geophysical Union, Fall Meeting.

[53] Eden, R.**, **Sundell, K.E.**, Gehrels, G.E., and Saylor, J.E. (2020), Hinterland basin geodynamics: Implications of Lu-Hf analyses of zircon from the Tincopalca basin, Peru, Geological Society of America Annual Meeting.

[52] **Sundell, K.E.**, Saylor, J.E., and Macdonald, FA. (2020), Fingerprinting Gondwana via bivariate quantitative analysis of joint zircon U-Pb and Hf global archives, Geological Society of America Annual Meeting.

[51] Holland, M.E., Sundell, K.E., and Saylor, J.E. (2020), Testing supercontinent-superocean cycle predictions with quantitative comparison of bivariate kernel density estimates of the global zircon record, Geological Society of America Annual Meeting.

[50] **Sundell, K.E.**, Gehrels, G.E., Quinn, D.P., Pecha, M.E., Giesler, D.M., Pepper, M.B. George, S.W.M., and White, A.M. (2020), *AgeCalcML*: An open-source MATLAB-based data reduction platform for LA-ICP-MS geochronology and geochemistry data from the Arizona LaserChron Center, Geological Society of America Annual Meeting.

[49] Saylor, J.E. and **Sundell, K.E.** (2020), Characterization of sediment source petrochronology via non-negative matrix factorization of bivariate detrital data sets, Geological Society of America Annual Meeting.

[48] Smith, T.M., Lapen, T.J., Saylor, J.E., Hatfield, K., and **Sundell, K.E.** (2020), Petrochronological discrimination of sources for Cambrian detrital zircons in late Paleozoic strata of the Central Colorado Trough during Ancestral Rocky Mountain orogenesis, Geological Society of America Annual Meeting.

[47] Quinn, D.P., Linzmeier, B.J., **Sundell, K.E.**, Bruck, B.T., Ye, S., Gehrels, G.G., Goring, S.M., Marcott, S.A., Meyers, S.R., Peters, S.E., Ross, J.I., Schmitz, M.D., Singer, B.S., and Williams, J.W. (2020), The Sparrow laboratory information management system – A tool for connecting geochemical data to context and community, Geological Society of America Annual Meeting.

[46] Quinn, D.P., Linzmeier, B.J., **Sundell, K.E.**, Bruck, B.T., Ye, S., Gehrels, G.G., Goring, S.M., Marcott, S.A., Meyers, S.R., Peters, S.E., Ross, J.I., Schmitz, M.D., Singer, B.S., and Williams, J.W. (2020), The Sparrow software interface for linking analytical data and metadata in laboratory archives, EarthCube Annual Meeting, San Diego, CA.

[45] **Sundell, K.E.**, Ducea, M., Carrapa, B., and Saylor, J.E. (2019), Crustal growth of the Cenozoic Central Andes from zircon trace and rare Earth element concentrations, American Geophysical Union, Fall Meeting, San Francisco, CA.

[44] **Sundell, K.E.**, Blum, M., Gehrels, G., Pecha, M., and Pettit, B. (2019), Application of rapid U-Pb acquisition (3s/analysis) to combat lithofacies bias in detrital zircon age distributions: Example from the Book Cliffs, UT (Invited), GSA Annual Meeting, Phoenix, AZ.

[43] Quinn, D.P., Schaen, A., **Sundell, K.E.**, Gehrels, G., Goring, S., Marcott, S.A., Meyers, S.R., Peters, S.E., Ross, J., Schmitz, M.D., Singer, B.S., and Williams, J.W. (2019), *Sparrow*: A data management system and cyberinfrastructure component targeted at geochronology laboratories, GSA Annual meeting, Phoenix, AZ.

[42] Smith, T.M., Lapen, T.J., **Sundell, K.E.**, Hatfield, K., Saylor, J.E., and Leary, R. (2019), Central Colorado trough sediment source isolation: Petrochronologic source discrimination applied to an Ancestral Rocky Mountain basin, GSA Annual meeting, Phoenix, AZ.

[41] Nolan, T., Gehrels, G., Pecha, M., and **Sundell, K.E.** (2019), Age mapping of complex zircon crystals from the Catalina Core Complex (Arizona), GSA Annual meeting, Phoenix, AZ.

[40] Eden, R.P. ******, **Sundell, K.E.**, Carrapa, B., and Ducea., M. (2019), Zircon U-Pb – Lu-Hf petrochronology of the late Cenozoic Central Andes of southern Peru, GSA Annual meeting, Phoenix, AZ.

[39] **Sundell, K.E.,** Gehrels, G., and Pecha, M. (2019). Collecting large-n U-Pb detrital geochronology data via rapid acquisition (300–1,200 analyses/h) laser ablation multicollector ICP-MS, GSA Annual meeting, Phoenix, AZ.

[38] Quinn, D.P., Schaen, A.J., Sundell, K.E., Gehrels, G., Goring, S., Myers, S.R., Peters, S., Ross, J., Schmitz, M., Singer, B.S., and Williams, J. (2019), Sparrow: a laboratory management software tool and distributed data infrastructure component for geochronology, EarthCube Annual Meeting, Denver, CO.

[37] Schaen, A.J., Quinn, D.P., Sundell, K.E., Gehrels, G., Marcott, S., Peters, S., Ross, J., Schmitz, M., and Singer, B.S. (2019), Cyberinfrastructure for data management and sharing in geochronology laboratories, EarthCube Annual Meeting, Denver, CO.

[36] **Sundell, K.E.**, Saylor, J.E., and Pecha, M. (2018), Documenting sediment recycling during Andean mountain building using combined U-Pb geochronology and Lu-Hf geochemistry of detrital zircons from Peruvian Altiplano strata (Invited), American Geophysical Union, Fall Meeting, Washington D.C.

[35] Saylor, J.E., **Sundell, K.E.**, Perez, N., Karsky, N., Lapen, T.J., and Cárdenas, J. (2018), Sedimentary response to exhumation of the central Andean retro-arc foreland during flat slab subduction, American Geophysical Union, Fall Meeting, Washington D.C.

[34] **Sundell, K.E.,** Saylor, J. E., Lapen, T.J., Villarreal, D., Styron, R., H., Usnayo, P., and Cárdenas, J. (2018), Paleogene foreland basin formation and Neogene surface uplift in the Peruvian central Andes, American Geophysical Union, Fall Meeting, Washington D.C.

[33] **Sundell, K.E.**, Saylor, J.E., Horton, B.K., and Lapen, T.J. (2018), Variable late Cenozoic surface uplift across the Peruvian central Andes documents multiple uplift mechanisms, GSA Annual meeting, Indianapolis, IN.

[32] Gehrels, G., McLelland, W., Thomas, W., and **Sundell, K.E.** (2018), Detrital zircon constraints on North American tectonism and sediment dispersal during Paleozoic time, GSA Annual meeting, Indianapolis, IN.

[31] Saylor, J.E. and **Sundell, K.E.** (2018), Quantitative interpretation of detrital geochronology: Synthetic examples and applied case studies, European Geosciences Union General Assembly, Vienna, Austria.

[30] **Sundell, K.E.**, Saylor, J.E., Horton, B.K., and Lapen, T.J. (2018), Geodynamic drivers of surface uplift, foreland basin formation, and Miocene aridity in the Peruvian central Andes, European Geosciences Union General Assembly, Vienna, Austria.

[29] **Sundell, K.E.,** Saylor, J. E., Lapen, T.J., Styron, R.H., Villarreal, D., Usnayo, P., and Cárdenas, J. (2017), Implications of Western-sourced Paleogene Flexural Foreland Basin Development in the Peruvian Altiplano on Andean Geodynamics, American Geophysical Union, Fall Meeting, New Orleans, T027.

[28] Saylor, J.E., **Sundell, K.E.**, Perez, N., Karsky, N., Lapen, T.J., and Cárdenas, J. (2017), Eocene Unification of Peruvian and Bolivian Altiplano Basin Depocenters American Geophysical Union, Fall Meeting, New Orleans, T027.

[27] Smith, T.M., Saylor, J.E., **Sundell, K.E.**, and Lapen, T.J. (2017), Tectonic isolation from regional sediment sourcing of the Paradox Basin, American Geophysical Union, Fall Meeting, New Orleans, T020.

[26] **Sundell, K.E.** and Saylor, J.E. (2017), Unmixing detrital U-Pb age distributions, GSA Annual Meeting in Seattle, WA, Session 15, T89.

[25] **Sundell, K.E.,** Saylor, J.E., Lapen, T.J., Villarreal, D., Styron, R., H., Usnayo, P., and Cárdenas, J. (2016), Paleoenvironmental change in the Peruvian central Andes recorded by stable isotopes in volcanic glass and modern water: Implications for late Miocene uplift and aridification, American Geophysical Union, Fall Meeting, San Francisco.

[24] **Sundell, K.E.,** Saylor, J.E., Jadamec, M., Lapen, T.J., Styron, R.H., and Cárdenas, J. (2016), Paleogene uplift and geodynamics of the Peruvian central Andes inferred from sediment provenance, detrital geochronology, and flexural modeling of Altiplano stratigraphy, GSA Annual Meeting in Denver, CO, Session 203, T221.

[23] **Sundell, K.E.,** Saylor, J.E., Villarreal, D., Styron, R.H., and Horton, B.K. (2015), Geodynamic Drivers of Vertical Crustal Motion: Integrating Paleoaltimetry with Basin Development in the Central Andean Plateau of Southern Peru, paper presented at American Geophysical Union, Fall Meeting, San Francisco, T33G-03.

[22] Saylor, J.E. and **Sundell, K.E.** (2015), Quantifying comparison of large detrital geochronology data sets, paper presented at American Geophysical Union, Fall Meeting, San Francisco, V52C-02.

[21] **Sundell, K.E.,** Saylor, J.E., and Villarreal, D. (2014), Basin evolution and surface uplift of the Huacochullo and Puquio regions in southern Peru through zircon U-Pb geochronology and volcanic glass paleoaltimetry, paper presented at the GSA Annual Meeting in Vancouver, British Columbia.

[20] Taylor, M., Styron, R., Murphy, M., **Sundell, K.E.**, McCallister, A., Gosse, J., and Whipp, D. (2014), Dynamics of east-west extension in the region of the Indo-Asian collision zone, paper presented at the GSA Annual Meeting in Vancouver, British Columbia.

[19] Saylor, J.E., **Sundell, K.E.**, and Villarreal, D. (2014), Constraints on geodynamic models of surface uplift from hydrogen isotopes of volcanic glass in southern Peru, paper presented at the GSA Annual Meeting in Vancouver, British Columbia.

[18] **Sundell, K.E.,** Saylor, J.E. Villarreal, D., and Horton, B.K. (2014), Testing geodynamic models for surface uplift of the central Andean plateau through volcanic glass paleoaltimetry and basin analysis in southern Peru, paper presented at American Geophysical Union, Fall Meeting, San Francisco.

[17] Saylor, J.E. and **Sundell., K.E**. (2014), Statistics of large detrital geochronology data sets, paper presented at American Geophysical Union, Fall Meeting, San Francisco.

[16] **Sundell, K.E.** (2014), Cenozoic Basin Evolution and Uplift History of the Central Andean Plateau, Southern Peru, 2014 Bob F. Perkins Research Conference, Gulf Coast Section 2014 poster abstract and honorable mention.

[15] **Sundell, K.E.** (2014), Cenozoic Basin Evolution and Uplift History of the Central Andean Plateau, Southern Peru, 2014 Dobrin Lecture, UH Hilton, Shamrock Ballroom, poster abstract, University of Houston.

[14] Taylor, M., Styron, R., and **Sundell, K.E.** (2013) Active structures in the Himalayan-Tibetan orogen and implications for lithospheric and seismogenic processes, Tectonics Observatory, California Institute of Technology.

[13] **Sundell, K.E**., Taylor, M., Styron, R., Stockli, D., Kapp, P., Liu, D., and Ding, L. (2013), Evidence for constriction and Pliocene acceleration of east-west extension in the North Lunggar rift region of west-central Tibet, AGU abstract.

[12] **Sundell, K.E.**, Taylor, M., Styron, R., Stockli, D., Kapp, P., Liu, D., and Ding, L. (2013), Constriction and Pliocene acceleration of east-west extension in the North Lunggar rift region of west-central Tibet, paper presented at Geological Society of America, Abstracts with Programs Volume 45.

[11] **Sundell, K.E.**, Taylor, M., Styron, R., Stockli, D., Kapp, P., Liu, D., and Ding, L. (2011), Late Miocene–Pliocene development of the North Lunggar Rift: Implications for the onset of strike-slip faulting and constrictional strain in central Tibet, AGU abstract, session T19.

[10] Styron, R., Taylor, M., **Sundell, K.E.**, Stockli, D., McCallister, A., Liu, D., and Ding, D. (2011), Along-strike variations in extensional style for the Lunggar Rift, Southern Tibet: the role of gravitational potential energy and basal shear tractions, AGU abstract, session T19.

[9] Styron, R., Taylor, M., Stockli, D., **Sundell, K.E.**, McCallister, A., Ding, L., and Liu, D. (2011), The South Lunggar Rift, western Tibet: Rates, timing and evolution of an active detachment system from structural mapping and (U-Th)/He thermochronology, GSA Abstracts.

[8] Stockli, D., Horton, B., Taylor, M., **Sundell, K.E.**, Woodruff, W., Kapp, P., Hager, C., and Ding, L. (2011), Reconstruction of the tectonic and exhumation history of the North Lunggar Rift, southern Tibet, through integrated footwall and detrital hanging wall thermochronometry, GSA Annual Meeting.

[7] **Sundell, K.E.**, Taylor, M., Stockli, D., Styron, R., Kapp, P., Liu, D., and Ding, L. (2011), Low-temperature thermochronology of the North Lunggar Rift, west-central Tibet. 2011 Annual AAPG SEG Spring Break Student Expo Norman, OK.

[6] Taylor, M., Styron, R. Stockli, D., **Sundell, K.E.**, and Ding, L. (2010), Preliminary Structural and thermochronological Observations from the South Lunggar Rift, Western Tibet, American Geophysical Union, Fall Meeting, abstract T43C-2243.

[5] Styron, R., Taylor, M., **Sundell, K.E.**, Stockli, D., Liu, D., and Ding, L. (2010), The South Lunggar Rift: A juvenile detachment in western Tibet?, GSA Abstracts with Programs Vol. 42, No. 5.

[4] **Sundell, K.E.**, Taylor, M., Stockli, D., Styron, R., Kapp, P., Liu, D., and Ding, L. (2010), Low-temperature thermochronology of the North Lunggar Rift, west-central Tibet, GSA Abstracts with Programs Vol. 42, No. 5.

[3] **Sundell, K.E.**, Taylor, M., Stockli, D., Styron, R., Kapp, P., Liu, D., and Ding, L. (2010), Low-temperature thermochronology of the Lunggar Shan extensional system, west-central Tibet. Thermo2010 12th International Conference on Thermochronology, Glasgow, Scotland, Abstract.

[2] **Sundell, K.E.**, Taylor, M., Stockli, D., Kapp, P., Styron, R., Liu, D., and Ding, L. (2010), Low-temperature thermochronology of the North Lunggar Rift, western Tibet, G-Hawker Student Symposium, University of Kansas, Lawrence, KS.

[1] **Sundell, K.E.**, Taylor, M., Kapp, P., Stockli, D., and Styron, R. (2009), A field test of the rolling hinge model: Example from the Lunggar extensional system, AGU Abstract, p. 2112.

MINOR WORKS

Sundell., K.E. (2017), Cenozoic surface uplift and basin formation in the Peruvian central Andes, Ph.D. Dissertation, University of Houston.

Sundell., K.E. (2011), Thermochronometric analysis of the North Lunggar Rift: Implications for the timing of extension initiation and structural style of deformation in southern Tibet, MS Thesis, University of Kansas.

**Professional affiliations, references, and additional work experience available upon request.*