

ROBERT BUCHWALDT

EMPLOYMENT

Boston University, Boston, MA, USA

Since September 2014

Research Assistant Professor, Department of Earth and Environmental Science

Conducting geological, petrological, geochemical, and geochronological research on different scientific projects and responsible for the courses (including lectures, laboratories, and fieldtrips): *Introduction to Geochemistry, Natural Disasters, Introduction to Structural Geology, Quantitative Methods for the Earth Sciences II, Oceanography, Earth History, and Geodynamics.*

Research projects include:

- Detrital-zircon geochronology and provenance of the El Oro Metamorphic Complex, Ecuador: Geodynamic implications for the evolution of the western Gondwana margin during the Paleozoic
- Terrane amalgamation at mid crustal levels, using Rhode Island's Avalon Terrane as example
- Exploring the sedimentation rates of the Late Jurassic Morrison formation using the Trail of Time section

Massachusetts Institute of Technology, Cambridge, MA, USA

May 2013-2016

Visiting Scientist, Radiogenic Isotope Laboratory

Continuation of projects started as a Research Associate as well as new projects.

Boston College, Boston, MA, USA

January 2013- June 2014

Adjunct Professor, Department of Earth and Environmental Science

Responsible for the courses (including lectures, laboratories, and fieldtrips): *Earth Materials, Oceanography, Mobile Earth, and Earth Processes and Risks.*

Massachusetts Institute of Technology, Cambridge, MA, USA

May 2008 – May 2013

Research Associate, Radiogenic Isotope Laboratory

Responsible for safe and efficient daily operation of the laboratory and mass spectrometers, as well as contract work and support data for proposals.

Research projects included:

- Calibrating the geologic timescale by using high-precision geochronology in the Cambrian time period.
- Understanding the timing and transition between opening and closing of oceanic basins in supercontinent cycles using petrology, geochemistry, and high-precision geochronology.
- Exploring the evolution of the northern Proto-Andean margin in Ecuador using high-precision geochronology, petrology, and geochemistry.
- Interpretation of surface expressions and their timing due to slab dynamics within the Central Anatolian plateau, Turkey.
- Exploring the timing of the Messinian Salinity Gap and its influence to climate change in the mediterianian area.

- Crystallization ages and thermal histories of Anorthosites and Anatectites: ‘Implications for Anorthosite emplacement and thermal contributions to Precambrian crustal evolution.’
- Emplacement timing of Granites and Pegmatites within the Caledonian/Appalachian Orogeny: a window into the thermo-tectonic processes during orogenic evolution using Nashoba terrane as example.

Washington University in St. Louis, MO, USA

September 2006 – May 2008

Lecturer, Department of Earth and Planetary Sciences

- Responsible for undergraduate and graduate-level geology courses (including lectures, laboratories, and fieldtrips): *Earth and the Environment, Human Use of the Earth, Structural Geology, Regional Geology, Geologic Field Methods, and Environmental Geology.*

St. Louis University, St. Louis, MO, USA
2004

January 2004 – May

Adjunct Professor, Department of Earth and Atmospheric Science

Responsible for the courses (lectures, laboratories, and fieldtrips): *Introduction to Mineralogy and Petrology.*

EDUCATION

Washington University in St. Louis, MO, USA

1999-2006

- **Doctor of Philosophy**, thesis title: ‘Petrology and geochemistry of magmatic rocks from Northern Madagascar.’ Supervisors: Dr. Robert D. Tucker, Dr. Robert F. Dymek (May 2006).
- **Master of Science**, thesis title: ‘Geothermobarometry and U-Pb geochronology of metapelitic granulites and pelitic migmatites from the Lokoho region, Northern Madagascar.’ Supervisors: Dr. Robert D. Tucker, Dr. Robert F. Dymek (September 2001).

Research projects included:

- Application and development of GIS applications to assess volcanic hazards, using the Tungurahua volcano in Ecuador as an example.
- A petrological, geochemical, and geochronological investigation of the alkaline igneous rocks in the Cameroon Volcanic Line focused on understanding the dynamic difference between volcanic emplacement in crustal versus oceanic environments.
- Neoproterozoic crust formation and terrane suturing in the East African orogen: a geological, geochemical, and geochronological investigation in northern Madagascar.
- Lithosphere asthenosphere interaction, using Cenozoic volcanism of northern Madagascar as an example.

Johannes Gutenberg University, Mainz, Germany

1998–1999

Max Planck Institute for Geochemistry in Mainz, Germany

- **Co-investigator** on the DAAD-PROBRAL Cooperation Project entitled: ‘Isotopic studies for the understanding of the geologic evolution of the São Francisco basin and its mineralization.’

- **Diplom** (Master of Science equivalent), Geology major. Thesis topic: ‘Geochemical, geochronological and isotopic analysis of the Galway Granite, Eire.’ Supervisors: Dr. Alfred Kröner, Dr. Wolfgang Todt, and Dr. Martin Feely. (December 1998)

Research projects included:

- Timing of Neoproterozoic glaciation and its implication for the ‘snowball earth’ hypothesis.
- Understanding the emplacement of the Galway granite using petrology, geochemistry, and geochronology.

University College Galway, Galway, Ireland *1994–1995*

- **Bachelor of Science**, Honors, Geology major. Thesis topic: ‘Numerical Analysis of features of the Shannawonna fault system.’ Supervisors: Dr. Alfred Kröner, Dr. Martin Feely. (June 1995)

Johannes Gutenberg University, Mainz, Germany *1990–1994*

- **Vordiplom** (Pre-diploma) in the Department of Geology, Mineralogy, Mathematics and Physics. (April 1994)

INTERNSHIPS

Geochimica et Cosmochimica Acta, St. Louis, MO, USA *2001-2002*

- **Editorial Assistant.** Duties included manuscript management and communication with authors, associate editors, and reviewers.

European Union of Geoscience, Strasbourg, France *1996-1997*

- **Scientific Secretary** for the ‘European Union of Geoscience’ meeting in Strasbourg, France. Duties included meeting logistics regarding the scientific program.

TNO Institute of Applied Geoscience, Delft, Netherlands *January, 1996*

- **Research Intern.** Efor and production of geothermal energy, underground energy storage, and large-scale underground storage of waste materials.

BEB Erdöl und Erdgas GmbH, Hanover, Germany *August-September, 1994*

- Oil and gas exploration in East Germany and seismic data processing using VMS and UNIX computer systems.

INVITED SEMINAR TALKS

Boston University, USA, Departmental Seminar *November, 2017*

Title: Rates of Change: Understanding Climate Change in Deep Time

Wellesley College, USA, Departmental Seminar *April, 2017*

Title: Clocks in Rocks: Timing the evolution of mountains

Stony Brook University, USA, Departmental Seminar *April, 2016*

Title: Age of the earliest Paleolithic sites in Eastern Africa using High precision geochronology of zircons from volcanic ashes, an inside in the rates of Hominide evolution.

University of New Mexico, USA, Departmental Seminar *October, 2013*

Title: Rates and Dates, using High-Precision Zircon Geochronology, Petrology, and Geochemistry to understand the Evolution of Granite Plutons and their influence in Crustal Evolution

Boston College, USA, Departmental Faculty Colloquium *September, 2013*

Title: Geochronology: the Science of Rates of Change

Massachusetts Institute of Technology, USA, Departmental Seminar *September, 2012*

Title: Understanding the timing within Metamorphic Core Complexes: Using The Paparoa Complex, New Zealand, as a natural laboratory

University of Otago, New Zealand, Departmental Seminar *February, 2011*

Title: Change we can believe in: how high-precision geochronology changed our understanding of the dynamic earth

University Christchurch, New Zealand, Departmental Seminar *March, 2010*

Title: Understanding the dynamics of the continental Lithosphere: Insights from the usage of High Precision Geochronology within Orogenic Belts

Lunar and Planetary Institute, USA, Lecture Series *February, 2008*

Title: Petrogenetic understanding of felsic magmatism of Madagascar, Cameroon, and Canada: A planetary approach

COMMUNITY/CAMPUS PARTICIPATION

- Peer Reviewer for several ranking journals, including *Nature* (Impact Factor 8.1), *Earth and Planetary Science Letters* (4.0), *Geology* (4.3), *Metamorphic Petrology* (4.1), and *American Mineralogist* (2.1).
- Session Convenor for several sessions during GSA and AGU Meetings
- Peer Reviewer for NSF and NASA proposals
- Interviews with TV, radio, and local and national newspapers
(recently, PBS: *Couriosity Desk*, *Couriosity Cruise (Fund raiser)* and *Science Friday*, *Boston Globe*, *Frankfurter Allgemeine Zeitung*)
- Scientific Advisor for BBC for the series “Madagascar” and “Earth” by David Attenborough
- Member of the EARTHTIME Outreach Program to reach high school students in the Boston metropolitan area
- Talks at local Mineral and Rock clubs
- Faculty Advisor for Geological Student Society at Boston University
- Mentor and tutor for Geology at High Schools in cooperation with Cambridge School Volunteers and Science Olympia

ACHIEVEMENTS

- 2006 German - Cameroon Cooperation Fellowship
2004 Carl Tolman Award for outstanding work as Teaching Assistant in the course *Earth and the Environment*
2002–2003 The Otto E. Gansow Memorial Scholarship
2003 Carl Tolman Award for outstanding work as Teaching Assistant in the courses: *Evolution of the Earth and Solar System*
2002 GSA Graduate Student Fellowship
2002 Award for outstanding work as Teaching Assistant in Petrology
1998 IGRM Young Scientist Award for the presentation “Single zircon Ages and Sm/Nd isotope analyses of the Galway Granite Batholith, Westen Ireland”
1994–1995 Scholarship from Deutsche Industriegemeinschaft for young scientist
1994–1995 BDG ‘Förderungsstipendium’ scholarship for geologic studies
1990–1994 ‘Herzogtum Nassau’ scholarship

GRANT SUPPORT

Submitted

(NSF) PI for P1660327: What are the implications of anorthosite emplacement and anatectite formation in the thermal evolution of the Precambrian crust? (238,000 Pending)

(NSF) PI for P1650190: Revisiting the role and timing of the exotic Hope Valley Zone in the southeastern New England Appalachians during orogenic amalgamation (\$ 298,000 Pending)

Active

(Universidad de las Fuerzas Armadas-ESPE, Ecuador) Co-PI, PI- Toulkeridis, Theofilos (2010): How did the northern proto-Andean margin in Ecuador form? (50,000)

Expired

(NSF) Co-author for 1411552; PI-Bowring (2014): Collaborative Research: Toward a global timeline of biological and ocean geochemical change during the early Cambrian (\$358,426)

(DFG) Co-author for DFG: STR373/25–1(2011); PI-SChildgen, Taylor (2011): Anatolian plateau climate and tectonic hazards, ITN ALerT.

(NSF) Co-author for 0931839; PI-Bowring, Samuel (2009): Acquisition of a Thermal Ionization Mass Spectrometer for EARTHTIME (\$496,411)

PUBLICATIONS

Citation indices

Google: Citation, 1034; h-index, 17; i10-index, 22

Research Gate: 27.09 (100% Publications)

Peer Review Papers

Currano, E. D., Pinheiro, E. R.S., **Buchwaldt, R.**, Clyde, W. C., Miller, I. M.: Endemism in Wyoming plant and insect herbivore communities during the early Eocene hothouse.- *Paleobiology*, in Review (2018)

Owens, B. E., **Buchwaldt, R.**, Bailey, C. M.: New U-Pb Zircon Ages for the Petersburg Batholith, Piedmont Province, Virginia.- *Geology*, in Review (2018)

Buchwaldt, R., Tucker, R. D., Dymek, R. F., Criss, R. E.: Petrogenesis of a Phonolite-Trachyte Succession from Massif du Tsaratanana, N-Madagascar, a example for Lithosphere asthenosphere interaction.- *Precambrian Research*, in review (2018).

Buchwaldt, R.: Geologic and Geochronological Investigation in Madagascar: A key to understand the behaviour of an ancient Mountain belt.- In: Murck, B. and Skinner, B.: *Geology Today*, John Wiley & Son, 2, in press (2018).

Buchwaldt, R., Kröner, A., Feely, M., Todt, W., Toulkeridis, T.: Geochronology and Nd-Sr systematics of Caledonian Granites: New implication on the Caledonian Orogeny.- *J. Geol. Soc. London*, in press (2018).

Buchwaldt, R. and Feely, M.: Application of statistical analysis to the mapping in apparently homogeneous Megacrystic Granite, Eire.- *Irish J. Earth Sci.*, in press (2018)

Galli, K. G., **Buchwaldt, R.**, Lucas Spencer G., Tanner, L. (2018): New CA-TIMS dates from the Brushy Basin Member, Morrison Formation, Western Colorado, USA: Implication for Rates of Sedimentation and Dinosaur Evolution.- *Geological Journal*, 126(5): 473-486, doi: 10.1086/699208

Keenan, T.E., Encarnación, J., **Buchwaldt, R.**, Fernandez, D., Mattinson, J., Rasoazanamparany, C., Luetkemeyer, B. P. (2016): Rapid conversion of an oceanic spreading center to a subduction zone inferred from high-precision geochronology.- *PNAS*, 113 (47) E7359-E7366, doi:10.1073/pnas.1609999113

Bradley, D., Shea, E., **Buchwaldt, R.**, Bowring, R., Benowitz, J., O'Sullivan, P., McCauley, A. (2016): Geochronology and Tectonic Context of Lithium-Cesium-Tantalum Pegmatites in the Appalachians.- *Canadian Minerologist*, 54, doi: 10.3749/canmin.1600035.

Bold, U., Smith, E. F., Rooney, A. D., Bowering, S.A., **Buchwaldt, R.**, Dudas, F. O., Ramezani, J., Crowley, J. L., Schrag, D. P., MacDonald, F. A.. (2015): Neoproterozoic stratigraphy of Zavkhan terrane of Mongolia: the DOI: 10.2475/01.2016.01 backbone for Cryogenian and Early Ediacaran chemostratigraphic records.- *American Journal of Science*, 316, 1-63,

Jacob, K. H., Farmer, L. G., **Buchwaldt, R.**, Bowring, S. A (2015): Deep crustal anatexis, magma mixing, and the generation of epizonal plutons in the Southern Rocky Mountains, Colorado.- *Contribution to Mineralogy and Petrology*, 169, 7, doi:10.1007/s00410-014-1094-3.

Landing, E., Geyer, G., **Buchwaldt, R.**, Bowring, S. A. (2015): Geochronology of the Cambrian: a precise Middle Cambrian U-Pb zircon date from the German margin of West Gondwana.- *Geological Magazine*, <http://dx.doi.org/10.1017/S0016756814000119>.

Dorais, M. J., Bothner, W. A., **Buchwaldt, R.** (2014): The Appledore Island Diorite Of The Rye Complex, Coastal New Hampshire and Maine: Determining The Identity Of An Enigmatic Terrane.- *Atlantic Geology*, 50, doi: 10.4138/atgeol.2014.009.

- Kuiper, Y. D., Shields, C. D., Tubrett, M. N., Bennett, V., **Buchwaldt, R.** (2014): Age and provenance of a Paleoproterozoic to Devonian Canadian Cordilleran sequence of metasedimentary rocks, Thor–Odin dome, southeastern British Columbia.- *GSA Bulletin*, doi: 10.1130/B31031.1.
- Hildebrand, R. S., **Buchwaldt R.**, and Bowring, S. A (2014): On the allochthonous nature of auriferous greenstones, Guayana shield, Venezuela.- *Gondwana Research*, 26, 1129-1140.
- Roberts, E. M., Sampson, S. D., Deino, A., Bowring, S. A., **Buchwaldt, R.** (2013): The Kaiparowits Formation: a remarkable record of Late Cretaceous terrestrial environments, ecosystems and evolution in Western North America.- in A. L. Titus and M. A. Loewen, eds., *At the Top of the Grand Staircase: The Late Cretaceous in Utah*, p.85-106, Bloomington: Indiana University Press.
- Bookhagen, B., McLean, N., **Buchwaldt, R.**, Rioux, M., Dudas, F., Bowring, S. (2013): EARTHTIME: Teaching geochronology to high school students in the US.- In: Tong, V. C. H. (ed.), *Geoscience Research and Education: Teaching at Universities*, p.171-189. Springer, Heidelberg.
- Losiak, A., Schulz, T., **Buchwaldt, R.**, Koeberl, C. (2013): Characteristics of granitic intrusions from the vicinity of the Bosumtwi impact crater, Ghana.- *Lithos*, 177, 297–313.
- Powerman, V., Shatsillo, A., Coe, R., Zhao, X., Gladkochub, D., **Buchwaldt, R.**, Pavlov, V. (2013): Palaeogeography of the Siberian platform during middle Palaeozoic (ca. 450-400 Ma): new palaeomagnetic evidence from Lena and Nyuya rivers.- *Geophysical Journal International*, 194, 1412-1440.
- Buchwaldt, R.** (2013): Pyroclastic Flows.- In: Bobrowsky, P.: *Encyclopedia of Natural Hazards*, p. 791-796, Springer, Heidelberg.
- Buchwaldt, R.** (2013): Pahoehoe Lava.- In: Bobrowsky, P.: *Encyclopedia of Natural Hazards*, p. 748, Springer, Heidelberg.
- Buchwaldt, R.** (2013): Aa Lava.- In: Bobrowsky, P.: *Encyclopedia of Natural Hazards*, p. 1, Springer, Heidelberg.
- Buchwaldt, R.** (2013): Lava.- In: Bobrowsky, P.: *Encyclopedia of Natural Hazards*, p. 623-624, Springer, Heidelberg.
- Mechor, R., **Buchwaldt, R.**, Bowring, S. A. (2013): Late Triassic bird-like tracks reported from northwest Argentina are now considered of Late Eocene age on the basis of a new date of a tuff bed of the sedimentary succession containing the fossil tracks.- *Nature*, 495, E1-E2, doi:10.1038/nature11931.
- Cosentino, D., **Buchwaldt, R.**, Sampalmieri, G., Iadanza, A., Cipollari, P., Schildgen, T. F., Hinnov, L., Ramezani, J., Bowring, S. A. (2013): Refining the Mediterranean “Messinian gap” with high-precision U-Pb zircon geochronology, central and northern Italy.- *Geology*, v. 41, p. 323-326, doi:10.1130/G33820.1.
- Schildgen, T. F., Cosentino, D., Caruso, A., **Buchwaldt, R.**, Yıldırım, Y., Bowring, S. A., Rojay, B., Echter, H., Strecker, M. R. (2012): Surface expression of Eastern Mediterranean slab dynamics: Neogene topographic and structural evolution of the SW margin of the Central Anatolian Plateau, Turkey.- *Tectonics*, 31, TC2005, doi:10.1029/2011TC003021.
- Thomson, S. N., Gehrels, G. E., Ruiz, J., **Buchwaldt, R.** (2012): Routine U-Pb dating of apatite using laser-ablation-multicollector-ICPMS.- *Geochemistry, Geophysics, Geosystems*, 13, Q0AA21, doi:10.1029/2011GC003928.
- Thompson, C. K., Kah, L. C., Astini, R., Bowring, S. A., **Buchwaldt, R.** (2012): Bentonite Geochronology, Marine Geochemistry, and the Great Ordovician Biodiversification Event (GOBE).- *Palaeogeography, Palaeoclimatology, Palaeoecology*, 321-322, 88-101.
- Hoffman, P. F., Bowring, S. A., **Buchwaldt, R.**, Hildebrand, R. S. (2011): Birthdate for the Coronation paleocean: age of initial rifting in Wopmay orogen, Canada.- *Canadian Journal of Earth Sciences*, 48, 281–293.
- Owens, B. E., **Buchwaldt, R.**, Shirvell, C. R. (2010): Geochemical and geochronological evidence for Devonian magmatism revealed in the Maidens gneiss, Goochland terrane, Virginia.- *Geological Society of America Memoirs*, 206, 725-738.
- Buchwaldt, R.**, Toulkeridis, T., Ucakuwun, E., Todt, W. (2008): Crustal age Domains in the Kibaran Belt of SW-Uganda: Combined Zircon geochronology and Sm-Nd isotopic investigation.- *Journal of African Earth Sciences*, 51, 4-20.

Tucker R. D., Kusky T. M., **Buchwaldt R.**, and Handke M. J. (2007): Neoproterozoic nappes and superposed folding of the Itremo Group, west-central Madagascar.- *Gondwana Research*, 12, 4, 356-379.

Toulkeridis T., **Buchwaldt R.**, Addison A. (2007): When Volcanoes Threaten, Scientists Warn.- *Geotimes*, 52, 11, 36-39.

Buchwaldt R. and Thornhill, R. (2006): Symmetry of faces and sexual attractiveness: The Mathematical background, a Mineralogical approach.- *Psychology Today*, 3, 62-65.

Ring, U., **Buchwaldt R.**, Gessner, K. (2004): Pb/Pb dating of garnet from the Anatolide belt in western Turkey: Pan-African metamorphism related to the collision of Angara with Gondwana. *Zeitschrift Deutsche Geologische Gesellschaft*, 154, 154, 537-555.

Buchwaldt R., Tucker, R. D., Dymek, R. F. (2004): Geothermobarometry and U-Pb Geochronology of metapelitic granulites and pelitic migmatites from the Lokoho region, Northern Madagascar.- *American Mineralogist*, 88, 1751-1764.

Ring, U., Kröner, A., **Buchwaldt R.**, Toulkeridis, T., Layer, P. (2002): Shear-zone patterns and eclogite-facies metamorphism in the Mozambique belt of northern Malawi, eastern-central Africa: implications for the assembly of Gondwana.- *Precambrian Research*, 116, 19-56.

Oliver, G. J. H., Chen, F., **Buchwaldt R.**, Hegner, E. (2000): Fast tectonometamorphism and exhumation in the type area of the Barrovian and Buchan zones.- *Geology*, 28, 459-462.

Buchwaldt R., Toulkeridis, T., Babinski, M., Noce, C. M., Martins Neto, M., Hercos, C. M. (1999): Age determination and age related Provenance Analysis of the Proterozoic glaciation in central eastern Brazil.- *An. Acad. Ci.*, 71(3), 527-548.

Ring, U., Kröner, A., Layer, P., **Buchwaldt R.**, Toulkeridis, T. (1999): Pre- or syntectonic? Mylonitic A-type granites in strike-slip and reverse-slip shear zones, northern Malawi, east-central Africa.- *J. Geol. Soc. London*, 156, 695-714.

Papers in Preparation

Buchwaldt R., Tucker, R. D., Dymek, R. F.: Magma Mixing indicated by Feldspar zonation patterns in Miocene Rhyolitic and Trachytic flows from the Monangorivo volcanic sequence, Northern Madagascar.- in preparation.

El-Shafei, M., Kusky, T., **Buchwaldt R.**, Tucker, R.D.: Structural and Tectonic Evolution of the Neoproterozoic Feiran-Solaf Metamorphic Belt, Sinai Peninsula: Implications for the closure of the Mozambique Ocean.- in preparation.

Buchwaldt R., Tucker, R. D., Dymek, R. F: The geochemistry and petrology of a volcanic alkaline suite from the Cenozoic Mt. Tsaratanana Volcano, Northern Madagascar: Implication to understanding of the Daly gap.- in preparation.

Buchwaldt R., Tucker, R. D., Dymek, R. F: Magmatism during Arc-Continent collision in northern Madagascar: implication for the reconstruction of the Pan-African Orogen.- in preparation.

Buchwaldt R., Toulkeridis, T., Kröner, A., Todt, W., Babinski, M., Neves, B. B., Santos, R.: Snowball Earth: A geochronological approach.- in preparation.

Bau, M., Toulkeridis, T., Ebeling, I., Glasmacher, U., Dulshi, P., **Buchwaldt R.**, Walter, R., Todt, W.: Geochemistry and Nd isotopic composition of Paleozoic shales from Rhenohertzynian Rhenish Massif, Germany.- in preparation.

Abstracts

Buchwaldt R. (2016): Refined ages of Paleozoic rocks in Rhode Island as constraints on the formation of the Appalachian Hope Valley Terrane in southeastern New England.- *Geological Society of America*, Denver, November 2015.

Buchanan, W. J., Kuiper, Y. D., **Buchwaldt, R.** (2016): New advances on the deformation and deformation and anatexis history of the Nashoba Terrane, New England Appalachians.- Geological Society of America, Denver, November 2015.

Buchwaldt, R., Toulkeridis, T., Todt, W. (2013): Rates of magma evolution in three different granitic complexes: An inside into the petrology of granite pluton construction and thermal evolution of upper crustal Magmas.- Geological Society of America, Denver, October 2013.

Shervais, J. W., Andreasen, K., **Buchwaldt, R.**, Hanan, B. B. W. (2013): The Farmington Canyon Complex, Utah: An obduction mélange on the margin of the Wyoming province.- Geological Society of America, Denver, October 2013.

Buchwaldt, R., Toulkeridis, T. (2013): Tectonomagmatic evolution of the proto-Andean Margin: Geochemical characterization and zircon U-Pb geochronologic constraints from the Ecuadorian Eastern Cordilleran granitoids.- AGU Meeting of the Americas, Cancun, Mexico, May 2013.

Rankin, D., Tucker, R. D., **Buchwaldt, R.** (2013): The Emsian Piscataquis Magmatic Belt in the Upper Connecticut Valley, New Hampshire and Vermont.- Geological Society of America Northeastern Section, Bretton Woods, New Hampshire, March 2013.

Dabrowski, D. R., Hepburn, J. C., Kuiper, Y. D., **Buchwaldt, R.** (2013): Geochronological Constraints on the Origin of the Andover Granite in the Context of the Tectonic History of the Nashoba Terrane, Eastern Massachusetts.- Geological Society of America Northeastern Section, Bretton Woods, New Hampshire, March 2013.

Bradley, D., **Buchwaldt, R.**, Shea, E., Bowring, S., O'Sullivan, P., Benowitz, J. McCauley, A., Bradley, L. (2013): Geochronology and Orogenic Context of Northern Appalachian Lithium-Cesium-Tantalum Pegmatites.- Geological Society of America Northeastern Section, Bretton Woods, New Hampshire, March 2013.

Bradley, D. C., McCauley, A., **Buchwaldt, R.**, Shea, E. K., Bowring, S. A. (2012): Lithium-Cesium-Tantalum Pegmatites Through Time, Their Orogenic Context, and Relationships to the Supercontinent Cycle.- Geological Society of America, Charlotte, November 2012.

Buchwaldt, R., Owens, B. (2012): Decoding the Multiscale Magmatic Cyclicity of Magmatic Pluton Constructions, Using the Petersburg Granite, Virginia, USA, as an Example.- Geological Society of America, Charlotte, November 2012.

Toulkeridis, T., Roudriguez, M., Martin, H., Perez, N., **Buchwaldt, R.** (2012): Reactivation of the Dormant Cuicocha Caldera Lake, Northern Ecuadorian Andes.- Geological Society of America, Charlotte, November 2012.

Kaufman, A. J., Peek, S., Martin, A. J., Cui, H., Grazhdankin, D., Rogov, V., Xiao, S., **Buchwaldt, R.**, Bowring, S. A. (2012): A Shorter Fuse For The Cambrian Explosion.- Geological Society of America, Charlotte, November 2012.

Kuiper, Y. D., **Buchwaldt, R.**, Lillydahl-Schroeder, H. G., Castle, J. W. (2011): Post-(?)Trans-Hudsonian Folding in the Foxe Fold Belt, Melville Peninsula, Nunavut, Canada.- Geological Society of America, Minnesota, October 2011.

Buchwaldt, R., Ring, U., Tulloch, A. (2011): Decoding the Timing within the Paparoa Metamorphic Core Complex, New Zealand: New Insights of the Break-Up of Eastern Gondwana.- Geological Society of America, Minnesota, October 2011.

Bradley, K. E., **Buchwaldt, R.**, Royden, L. H., Burchfiel, B. C. (2011): The Role of Extensional-Parallel Folding in the Tectono-Sedimentary Development of the Early to Middle Miocene Kymi-Aliveri Basin, Evia, Greece.- Geological Society of America, Minnesota, October 2010.

Buchwaldt, R., Toulkeridis, T. (2010): Evolution of the northern proto-Andean margin in Ecuador, based on new Zircon Geochronology and whole rock geochemistry.- Geological Society of America, Denver, October 2010.

Buchwaldt, R., Bookhagen, B., McLean, N. M., Bowring, S. A. (2009): An EARTHTIME program to teach the science of geochronology to high school students using a "hands-on" approach.- Geological Society of America, 41, 7, 422-423.

Owens, B. E., **Buchwaldt, R.** (2009): The taste of Crow; a revised age for a metaigneous variety of the Raleigh Gneiss, southeastern Virginia Piedmont.- Geological Society of America, 41, 1, 47-48.

- Bothner, W. A., Blackburn, T., Bowring, S. A., **Buchwaldt, R.**, Hussey, A. M. (2008): Temporal constraints on Paleozoic plutonism in southwestern Maine and southeastern New Hampshire; revisions and implications.- Geological Society of America, 41, 3, 32.
- Buchwaldt, R.**, Toulkeridis, T., Addison, A. (2007): Volcanic Risk Map for Tunguruha, Ecuador: What can Risk Maps Contribute to Volcanic Hazard Communications?-Geological Society of America, Denver, October 2007.
- Buchwaldt R.**, Dymek, R. F., Feininger, T. (2007): Zircon Geochronology of the Lac Piche Anorthosite, Foret Montmorency Complex, Grenville Province, Quebec: Implications for Massif Anorthosite Development in the CRUML Belt.-Geological Society of America, Denver, October 2007.
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