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## ANDREW A. NYBLADE

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### EDUCATION

<b>Ph.D.</b>	Geology	1992	University of Michigan
<b>M.S.</b>	Geophysics	1985	University of Wyoming
<b>B.A.</b>	Geology	1982	Wittenberg University
<b>B.A.</b>	Earth Science Education	1982	Wittenberg University

### PROFESSIONAL EXPERIENCE

2019-2024	Head, Department of Geosciences, Pennsylvania State University
2007-present	Professor, Department of Geosciences, Pennsylvania State University
2004-present	Honorary Professor, School of Geosciences, The University of the Witwatersrand, Johannesburg, South Africa
2002-2007	Associate Professor, Department of Geosciences, Pennsylvania State University
2001-present	Faculty Affiliate, Graduate Program in Acoustics, Pennsylvania State University
2003	Cox/Blaustein Visiting Professor, Department of Geophysics, Stanford University
1997-2002	Assistant Professor, Department of Geosciences, Pennsylvania State University (tenure-track)
1994-1997	Assistant Professor, Department of Geosciences, Pennsylvania State University (fixed term appointment)
1995	Visiting Scientist, US Geological Survey, Branch of Seismology, Menlo Park, CA
1992-1993	National Science Foundation Postdoctoral Fellow, Department of Geosciences, Pennsylvania State University
1988-1991	Teaching and Research Assistant, Department of Geological Sciences, University of Michigan
1986-1988	High School Math and Physics Teacher, International School Moshi, Moshi, Tanzania
1985-1986	Exploration Geophysicist, Exxon Co. U.S.A., Denver, Colorado
1982-1985	Teaching and Research Assistant, Department of Geology and Geophysics, University of Wyoming

### AWARDS AND HONORS

2018	Wilson Award for Outstanding Service, College of Earth and Mineral Sciences, Pennsylvania State University
2017	President's Award for Excellence in Academic Integration, Pennsylvania State University
2015-2016	GeoPRISMS Distinguished Lectureship
2013	Elected Fellow of the American Geophysical Union
2012	Paul G. Silver Award for Outstanding Scientific Service, American Geophysical Union
2009	Diversity Recognition Award, Pennsylvania State University
2003	Cox/Blaustein Visiting Professorship, Department of Geophysics, Stanford University
1991	National Science Foundation Postdoctoral Fellowship
1983	Hill Foundation and Conoco Fellowships, University of Wyoming
1981	Phi Beta Kappa and Wittenberg Honor Society, Wittenberg University

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

- American Geophysical Union
- Seismological Society of America
- Geological Society of America

## **EDITORIAL RESPONSIBILITIES**

- **Associate Editor**, Lithosphere, Geological Society of America, 2008-2010
- **Tectonics Editor**, Books Board, American Geophysical Union, 2003-2010
- **Associate Editor**, Journal of Geophysical Research, American Geophysical Union, 1997-2000
- **Guest Editor**, South African Journal of Geology, special AfricaArray issue, 2009
- **Reviewed papers** for Bulletin Seismological Society of America, Earth and Planetary Science Letters, Geological Society of America Bulletin, Geology, Geophysical Journal International, Geophysical Research Letters, Gondwana Research, Journal of African Earth Sciences, Journal of Arid Environments, Journal of Geophysical Research, Journal of Volcanology and Geothermal Research, Marine and Petroleum Geology, Nature, Nature Communication, Petroleum Geoscience, Lithos, Physics of the Earth and Planetary Interiors, Science, Tectonophysics, The Journal of Geology, Lithosphere, South African Journal of Geology.
- **Reviewed book chapters** for Geological Society of London Special Publications, Geological Society of America Special Papers, Elsevier books, American Geophysical Union.
- **Reviewed proposals** for National Science Foundation, National Environmental Research Council (UK), Institute of Geophysics and Planetary Physics (University of California), Civilian Research and Development Foundation, Defense Threat Reduction Agency, National Nuclear Security Administration, Air Force Research Laboratory, National Research Foundation (South Africa), Department of Energy, Deutsche Forschungsgemeinschaft (DFG), American Chemical Society – Petroleum Research Fund, Swiss National Science Foundation, Australian Antarctic Science Division, Netherlands Organization for Scientific Research

## **AFRICAARRAY (2005-2022)**

A. Nyblade is a founder and was the co-director of AfricaArray ([www.africaarray.net](http://www.africaarray.net)), a multifaceted initiative supporting science capacity building in Africa and the U.S. with a strong emphasis on enhancing diversity in the geosciences. The AfricaArray network of 53 permanent geophysical observatories in 17 African countries provides seismic, GPS and weather data openly to the community.

## **PENNSYLVANIA STATE SEISMIC NETWORK (PASEIS; 2006-2024)**

With support from the Pennsylvania Bureau of Topographic and Geologic Survey and Department of Environmental Protection, A. Nyblade constructed and operated a seismic network for the state of Pennsylvania (<http://paseis.geosc.psu.edu>). In 2016 the network was expanded from 10 to 30 stations and event location services were added.

## **MARCELLUS CENTER FOR OUTREACH AND RESEARCH (MCOR; 2016-2022)**

A. Nyblade was a co-director of MCOR (<http://www.marcellus.psu.edu>) and focused his efforts on promoting geological, geophysical and environmental research related to shale gas and oil exploitation in the Appalachian Basin.

## STUDENTS AND POSTDOCS SUPERVISED

**Postdocs:** Sampath Rathnayaka (current), Maryam Yousefi (2020-2022), Fenitra Andriampenanana Ny Ony (2018-2022), Wei Wang (2019-2021), David Oakley (2019-2020), Natalie Accardo (2018-2019), Erica Emry (2012-2016), Sharim Shamsalsadati (2014-2016), John Paul O'Donnell (2011-2015), Ranto Raveloson (2011-2014), Gabriel Mulibo (2012-2013), Brian Bagley (2011-2012), Jordi Julià (2007-2011), Angela Reusch (2009-2010), Samantha Hansen (2008-2010), Mulugeta Dugda (2007-2009), Yongcheol Park (2007), Alemayehu Jemberi (2006-2007), Audrey Huerta (2005-2007), Richard Brazier (1996-1998)

**PhD students at Penn State:** Kyle Homman (2023), Erica Lucas (2022), Austin White-Gaynor (2020), David Yoxtheimer (2019), Cristo Ramirez (2017), Gabriel Mulibo (2012), Fred Tugume (2011), Aubreya Adams (2010), Angela Reusch (2009), Mulugeta Dugda (2007), Yongcheol Park (2007), Margaret Benoit (2005)

**PhD students at the University of the Witwatersrand co-supervised with Ray Durrheim:** Tsiriandriamanana Rakotondraibe (2022), Fenitra Andriampenanana Ny Ony (2017), Nada Ahmed El Tahir (2015), Eldridge Kgaswane (2013)

**PhD students at other African universities:** Ofonime Akpan, University of Calabar, Nigeria (2016); Alain Tokam, University of Yaounde, Cameroon (2010)

**MS students at Penn State:** Alexandra Sabbattier (2023), Kaelie Contreras (2021), Lisa Ma (2020), Cate Bressers (2019), David Soto (2018), Kameron Ortiz (2018), Ashley Grijalva (2017), David Borrego (2016), Gabriella Arroyo (2015), Austin White-Gaynor (2015), Kyle Homman (2015), Marsella Kachingwe (2014), Priscilla Brownlow (2013), Katie Boyle (2012), Alysa Young (2012), Andrew Lloyd (2011), Stewart Rouse (2010), Marco Finotello (2009), Gabriel Mulibo (2008), Fred Tugume (2008), Timothy Watson (2005), Juliette Florentin (2002), Ronald Knox (1999), Robert Last (1996)

**MS students at the University of the Witwatersrand co-supervised with Ray Durrheim:** Helio Iguane (2017), Azangi Mongongolo (2011)

**BS students at Penn State (senior theses supervised):** Frank Santini (2023), Kenneth Wasiulewski (2023), Cameron Brown (2022), Porraket Dechdacho (2020), Al Reem Alshimmari (2020), Alexandra Sabbattier (2020), Chad Cole (2019), Chris Markle (2019), Nick Schuler (2019), Joey Grant (2019), Alonso Alzua (2018), Robby Miles (2018), Terrance Delisser (2018), Christian Falzone (2017), Tyler Betz (2016), Brandon Clark (2016), Mercedes Gainor (2016), Calvin Johnson (2013), Daniel Kluskiewicz (2010), Candra Gross (2010), Timothy Watson (2002), Edwin Leech (2001), Daniella Shore (1999), David Miller (1999), Andrew McIlhenny (1998), Stuart Humber (1997), Timothy Fives (1997), Stacey Geyer (1996), Brian Vacchiano (1996), Scott Anderson (1995), Scott Robinson (1994)

**Students at other universities with one or more thesis chapter supervised:** Seongryong Kim (Seoul National University, PhD, 2012); Ewenet Gashawbeza (Stanford University, PhD, 2004); Kristopher Walker (Stanford University, PhD, 2003); Christopher Birt (University of Leicester, PhD, 1996); Aloyce Tesha (University of Texas - El Paso, MS, 1995)

## PEER-REVIEWED PAPERS AND BOOK CHAPTERS

(\* Student advisee + Postdoc advisee)

### 2024

(2014) Gomez, N., M. Yousefi, D. Pollard, R. DeConto, S. Sadai, A. Lloyd, K. Latychev, A. Nyblade, D. Wiens, R. Aster, T. Wilson, The role of the solid Earth in Antarctica's contribution to future global sea levels, *Science Advances*, in press.

- (213) <sup>+</sup>Andriampenanana, F., **A. Nyblade**, R. Durrheim, M. van der Meijde, H. Paulssen, M. Kwadiba, O. Ntibinyane, N. Titus, and M. Sitali, Coherent seismic anisotropy across southern Africa revealed by shear wave splitting measurements, *Earth and Space Science*, doi.org/10.1029/2023EA003469.
- (212) Wiens, D.A., R. C. Aster, **A. A. Nyblade**, P. D. Bromirski, P. Gerstoft, and R. A. Stephen, Ross Ice Shelf Displacement and Elastic Plate Waves Induced by Whillans Ice Stream Slip Events, *Geophysical Research Letters*, doi: 10.1029/2023GL108040.
- (211) Saeidi, H., S. E. Hansen, and **A. A. Nyblade**, and R. Haag, Mantle Structure Beneath the Damara Belt in South-central Africa Imaged Using Adaptively Parameterized P-wave Tomography, *Journal of Geophysical Research*, doi: 10.1029/2023JB027965.
- (210) <sup>+</sup>Rathnayaka, S., **A. Nyblade**, B. Lund, C. Ammon, R. Durrheim, R. Masethe, Testing the P/S amplitude seismic source discriminant at local distances using seismic events within and surrounding the Kloof gold mine, South Africa and the Kiruna iron ore mine, northern Sweden, *Bulletin Seismological Society of America*, doi: 10.1785/0120230215.
- (209) Zhou, Z., D. A. Wiens, **A. A. Nyblade**, R. C. Aster, T. Wilson, W. Shen, Crustal and uppermost mantle azimuthal seismic anisotropy of Antarctica from ambient noise tomography, *Journal of Geophysical Research*, doi: 10.1029/2023JB027556.

## 2023

- (208) <sup>+</sup>Rathnayaka, S., C. Gustafson, D. Yoxheimer, **A. Nyblade**, Imaging freshwater and saline aquifers beneath Bradford County, Pennsylvania, USA, using Audio-Magnetotelluric (AMT) data, *Journal of Applied Geophysics*, doi: 10.1016/j.jappgeo.2023.105255.
- (207) \*Homman, K., and **A. Nyblade**, Crustal Structure Beneath and Surrounding the Appalachian Basin Region of Eastern North America Imaged by Joint Inversion of P-wave Receiver Functions and Surface Wave Dispersion, *Geophysical Journal International*, doi: 10.1093/gji/ggad296.
- (206) \*Yoxheimer, D., D. Oakley, **A. Nyblade**, and G. Mount, Geo-electrical anisotropy corrections derived from square array data to improve Earth resistivity models of the Shale Hills' critical zone, *Journal of Applied Geophysics*, doi: 10.1016/j.jappgeo.2023.105113.
- (205) \*Lucas, E. M., **A. A. Nyblade**, R. C. Aster, D. A. Wiens, T.J. Wilson, J. P. Winberry, and A. D. Huerta, Tidally Modulated Glacial Seismicity at the Foundation Ice Stream, West Antarctica, *Journal of Geophysical Research*, doi: 10.1029/2023JF007172.
- (204) Rajaonarison, T. A., D. S. Stamps, J. Naliboff, **A. Nyblade**, and E. A. Njinju, A Geodynamic Investigation of Plume-Lithosphere Interactions Beneath the East African Rift, *Journal of Geophysical Research*, doi: 10.1029/2022JB025800.
- (203) Saeidi, H., S. E. Hansen, and **A. A. Nyblade**, Deep Mantle Influence on the Cameroon Volcanic Line, *Geochemistry, Geophysics and Geosystems*, doi: 10.1029/2022GC010621

## 2022

- (202) Chaput, J., R. Aster, M. Karplus, N. Nakata, P. Gerstoft, P. Bromirski, **A. Nyblade**, R. Stephen, D. Wiens, Near-surface seismic anisotropy in Antarctic snow and ice revealed by high frequency ambient noise, *Journal of Glaciology*, doi: 10.1017/jog.2022.98
- (201) \*Homman, K., **A. Nyblade**, K. Schmid, R. Anthony, K. Carter, Basement structure of the Appalachian Basin in Pennsylvania, *Tectonophysics*, doi: 10.1016/j.tecto.2022.229451.
- (200) \*Lucas, E. M., **A. A. Nyblade**, N. Accardo, A. J. Lloyd, D. A. Wiens, R. C. Aster, T.J. Wilson, I. Dalziel, G. W. Stuart, J. P. O'Donnell, J. P. Winberry, and A. D. Huerta, Shear wave splitting across Antarctica: Implications for upper mantle seismic anisotropy, *Journal of Geophysical Research*, doi: 10.1029/2021JB023325.
- (199) Zhou, Z., D. A. Wiens, W. Shen, R. Aster, **A. Nyblade**, T. J. Wilson, Radial Anisotropy and sediment thickness of West and Central Antarctica estimated from Rayleigh and Love wave velocities, *Journal of Geophysical Research*, doi: 10.1029/2021JB02285.
- (198) Afonso, J.C., W. Ben-Mansour, S. Y. O'Reilly, W. L. Griffin, F. Salajeghegh1, S. Foley, G. Begg, K. Selway, A. Macdonald, N. Januszczak, I. Fomin, **A. A. Nyblade**, and Yingjie Yang, Thermochemical structure and evolution of cratonic lithosphere in Central and South Africa, *Nature Geoscience*, doi: 10.1038/s41561-022-00929-y.

## 2021

- (197) <sup>+</sup>Wang, W., **A. Nyblade**, G. Mount, S. Moon, P. Chen, N. Accardo, X. Gu, B. Forsythe, S. L. Brantley, 3D seismic anatomy of a watershed reveals climate-topography coupling that drives water flowpaths and bedrock weathering, *Journal of Geophysical Research - Earth Surface*, doi: 10.1029/2021JF006281.
- (196) \*Ma, L., D. Oakley, **A. Nyblade**, S. Moon, N. Accardo, W. Wang, X. Gu, K. Brubaker, G. J. Mount, B. Forsythe, B. J. Carr, and S. L. Brantley, Seismic imaging of a shale landscape under compression shows limited influence of topography-induced fracturing, *Geophysical Research Letters*, doi: 10.1029/2021GL093372.
- (195) <sup>+</sup>Andriampenanana, F., **A. Nyblade**, R. Durrheim, F. Tugume, and J. Nyago, Shear wave splitting measurements in northeastern Uganda and southeastern Tanzania: Corroborating evidence for sublithospheric mantle flow beneath eastern Africa, *Geophysical Journal International*, doi: 10.1093/gji/ggab167.
- (194) Kintner, J., K.M. Cleveland, C. J. Ammon, and **A. Nyblade**, Local-distance seismic event relocation and relative magnitude estimation: Applications to mining related seismicity in the Powder River Basin, Wyoming, *Bulletin Seismological Society of America*, doi: 10.1785/0120200369.
- (193) Aster, R. C., B. P. Lipovsky, H. M. Cole, P. D. Bromirski, P. Gerstoft, **A. Nyblade**, D. Wiens, R. Stephen, Swell-Triggered seismicity in the near-edge damage zone of the Ross Ice Shelf, *Seismological Research Letters*, doi: 10.1785/0220200478.
- (192) \*White-Gaynor, A., **A. Nyblade**, R. Durrheim, R. Raveloson, M. van der Meijde, I. Fadel, H. Paulssen M. Kwadiba, O. Ntibinyane, N. Titus, and M. Sitali, Shear-wave velocity structure of the southern African upper mantle: Implications for craton structure and plateau uplift, *Geophysical Research Letters*, doi: 10.1029/2020GL091624
- (191) <sup>+</sup>Raveloson, R., **A. Nyblade** and R. Durrheim, Joint inversion of surface wave and gravity data reveals sub-basin architecture of the Congo Basin, *Geology*, doi:10.1130/G48408.1
- (190) <sup>+</sup>Oakley, D., B. Forsythe, X. Gu, **A. Nyblade**, and S. L. Brantley, Seismic ambient noise analyses reveal changing temperature and water signals to 10s of meters depth in the critical zone, *Journal of Geophysical Research - Earth Surface*, doi: 10.1029/2020JF005823.
- (189) \*Lucas, E. M., **A. A. Nyblade**, A. J. Lloyd, R. C. Aster, D. A. Wiens, J.P. O'Donnell, G. W. Stuart, T.J. Wilson, I. Dalziel, J. P. Winberry, and A. D. Huerta, Seismicity and Pn velocity structure of central West Antarctica, *Geochemistry, Geophysics and Geosystems*, doi: 10.1029/2020GC009471.

## 2020

- (188) <sup>+</sup>Andriampenanana, F., **A. A. Nyblade**, M. E. Wysession, R. J. Durrheim, F. Tilmann, G. Barruol, M. Pratt, G. Rambolamanana, and T. Rakotondraibe, Seismic velocity and anisotropy of the uppermost mantle of Madagascar from Pn tomography, *Geophysical Journal International*, doi: 10.1093/gji/ggaa458.
- (187) \*White-Gaynor, A., **A. Nyblade**, R. Durrheim, R. Raveloson, M. van der Meijde, I. Fadel, H. Paulssen M. Kwadiba, O. Ntibinyane, N. Titus, and M. Sitali, Lithospheric boundaries and upper mantle structure beneath southern Africa imaged by P- and S-wave velocity models, *Geochemistry, Geophysics and Geosystems*, doi: 10.1029/2020GC008925.
- (186) Baker, M. G, R. C. Aster, D. A. Wiens, **A. Nyblade**, P. D. Bromirski, P. Gerstoft, R. A. Stephen, Teleseismic Earthquake Wavefields Observed on the Ross Ice Shelf, *Journal of Glaciology*, 1–17, doi: 10.1017/jog.2020.83.
- (185) Dunham, C.K., J.P. O'Donnell, G. W. Stuart, A. M. Brisbourne, S. Rost, T. A. Jordan, **A. A. Nyblade**, D. A. Wiens, and R. Aster, A joint inversion of receiver function and Rayleigh wave phase velocity dispersion data to estimate crustal structure in West Antarctica, *Geophysical Journal International*, doi: 10.1093/gji/ggaa398.
- (184) \*Lucas, E. M., \*D. Soto, **A. A. Nyblade**, A. J. Lloyd, R. C. Aster, D. A. Wiens, J.P. O'Donnell, G. W. Stuart, T.J. Wilson, I. Dalziel, J. P. Winberry, and A. D. Huerta, P- and S-wave velocity structure of central West Antarctica: Implications for solid earth-ice interactions and the tectonic evolution of the West Antarctic Rift System, *Earth and*

- Planetary Science Letters*, doi: 10.1016/j.epsl.2020.116437
- (183) \*Rakotondraibe, T., **A. A. Nyblade**, M. E. Wyssession, R. J. Durrheim, G. Rambolamanana, G. Aleqabi, P. J. Shore, M. J. Pratt, F. Andriampenanana, G. Rümper, and E. Rindraharisaona, Seismicity and seismotectonics of Madagascar revealed by 2011-2013 island-wide MACOMO broadband seismic array, *Tectonophysics*, doi: 10.1016/j.tecto.2020.228547
- (182) Hopper, E., J. Gaherty, D. Shillington, N. Accardo, **A. Nyblade**, C. A. Scholz, P. Chindindali, R. Ferdinand, G. Mgboni, G. Mulibo, B. Holtzman, and C. Havlin, Preferential localized thinning of lithospheric mantle in the melt-poor Malawi Rift, *Nature Geoscience*, doi: 10.1038/s41561-020-0609-y
- (181) Gu, X., G. Mavko, L. Ma, D. Oakley, N. Accardo, B. J. Carr, **A. A. Nyblade**, and S. L. Brantley, Seismic imaging maps clay reactions and CO<sub>2</sub> production under a ridge and valley landscape, *Proceedings of the National Academy of Sciences*, doi: 10.1073/pnas.2003451117
- (180) Shen, W., D. Wiens, A. Lloyd, and **A. Nyblade**, A Geothermal heat flux map of Antarctica empirically constrained by seismic structure, *Geophysical Research Letters*, doi:10.1029/2020GL086955.
- (179) Accardo, N., J. B. Gaherty, D. J. Shillington<sup>2</sup>, E. Hopper, **A. A. Nyblade**, C. J. Ebinger, C. A. Scholz, P.R.N. Chindandali, R. Wambura-Ferdinand, G. Mbogoni, J.B. Russell, B.K. Holtzman, C. Havlin, and C. Class, Thermo-chemical modification of the Upper Mantle beneath the Northern Malawi Rift Constrained from Shear Velocity Imaging, *Geochemistry, Geophysics and Geosystem*, doi: 10.1029/2019GC008843.
- (178) <sup>+</sup>Emry, E.L., **A. A. Nyblade**, A. Horton, S. E. Hansen, J. Julià, R. C. Aster, A. D. Huerta, J. P. Winberry, D.A. Wiens, S. Anandakrishnan, and T. J. Wilson, Prominent thermal anomalies in the mantle transition zone beneath the Transantarctic Mountains, *Geology*, doi: 10.1130/G47346.1.
- (177) Shillington, D, C. A. Scholz, P. R.N. Chindandali, J. B. Gaherty, N. J. Accard, E. Onyango, C. J. Ebinger, and **A. A. Nyblade**, Controls on intrarift faulting in the North Basin of the Malawi (Nyasa) Rift, East Africa, *Tectonics*, doi: 10.1029/2019TC005633.
- (176) Fadel, I., H. Paulssen, M. van der Meijde, M. Kwadiba, O. Ntibinyane, **A. Nyblade**, and R. Durrheim, Crustal and upper mantle shear wave velocity structure of Botswana: the April, 3, 2017, central Botswana earthquake linked to the East African Rift System, *Geophysical Research Letters*, doi: 10.1029/2019GL085598.
- (175) Winberry, J. P., A. D. Huerta, S. Anandakrishnan, R. Aster, **A. Nyblade**, and D. Wiens, Glacial Earthquakes and Precursory Seismicity Reveal Thwaites-Glacier Calving Behavior, *Geophysical Research Letters*, doi:10.1029/2019GL086178.
- (174) Kintner, J., K.M. Cleveland, C. J. Ammon, and **A. Nyblade**, Testing A Local Distance Rg/Sg Discriminant Using Observations from the Bighorn Region, Wyoming, *Bulletin Seismological Society of America*, doi: 10.1785/ 0120190188.
- (173) Kintner, J., C. J. Ammon, K. Homman, and **A. Nyblade**, Precise Relative Magnitude and Relative Location Estimates of Low-Yield Mine Blasts in Pennsylvania, *Bulletin Seismological Society of America*, doi: 10.1785/ 012019163
- 2019**
- (172) Lloyd, A. J., D. A. Wiens, H. Zhu, J. Tromp, **A. A. Nyblade**, R. C. Aster, S. E. Hansen, I. W. D. Dalziel, T. J. Wilson, and E. R. Ivins, Seismic Structure of the Antarctic Upper Mantle Based on Adjoint Tomography, *Journal of Geophysical Research*, doi: 10.1029/2019JB017823.
- (171) O'Donnell, J.P., A. M. Brisbourne, G.W. Stuart, C.K. Dunham, Y. Yang, G.A. Nield, P.L. Whitehouse, **A.A. Nyblade**, D.A. Wiens, R.C. Aster, S. Anandakrishnan, A.D. Huerta, T. Wilson; J.P. Windberry, Mapping crustal shear wave velocity structure and radial anisotropy beneath West Antarctica using seismic ambient noise, *Geochemistry, Geophysics and Geosystems*, doi: 10.1029/2019GC008459.
- (170) \*Ortiz, K., **A. Nyblade**, M. van der Meijde, H. Paulssen, M. Kwadiba, O. Ntibinyane, R.

- Durrheim and I. Fadel, Upper mantle P- and S-wave velocity structure of the Kalahari Craton and surrounding Proterozoic terranes, southern Africa, *Geophysical Research Letters*, doi: 10.1029/2019GL08405.
- (169) Chen, Z., P. D. Bromirski, P. Gerstoft, R. A. Stephen, W. S. Lee, S. Yun, S. D. Olinger, R. C. Aster, D. A. Wiens, and **A. A. Nyblade**, Ross ice shelf icequakes associated with ocean gravity wave activity, *Geophysical Research Letters*, doi: 10.1029/2019GL084123.
- (168) O'Donnell, J.P., G.W. Stuart, A. M. Brisbourne, K. Selway, Y. Yang, G.A. Nield, P.L. Whitehouse, **A.A. Nyblade**, D.A. Wiens, R.C. Aster, S. Anandakrishnan, A.D. Huerta, T. Wilson; J.P. Windberry, The uppermost mantle seismic velocity structure of West Antarctica from Rayleigh wave tomography: insights into tectonic structure and geothermal heat flow, *Earth and Planetary Science Letters*, 522 (2019) 219–233, doi: 10.1016/j.epsl.2019.06.024
- (167) Ebinger, C., S. Oliva, S., T-Q Pham, K. Peterson, P. Chindandali, F. Illsley-Kemp, C. Drooff, D. Shillington, N. Accardo, R. Gallacher, J. Gaherty, **A. Nyblade**, G. Mulibo, Kinematics of Active Deformation in the Malawi Rift and Rungwe volcanic province, Africa, *Geochemistry, Geophysics and Geosystems*, doi: 10.1029/2019GC008354
- (166) Baker, M.G., R.C. Aster, R.E. Anthony, J. Chaput, D.A. Wiens, **A. Nyblade**, P. Bromirski, R. Stephen, P. Gerstoft, Seasonal and spatial variations in the ocean-coupled ambient wavefield of the Ross Ice Shelf, *Annals of Glaciology*, doi: 10.1017/jog.2019.64
- (165) Olinger, S., D.A. Wiens, B. P. Lipovsky, R. Aster, **A. Nyblade**, R. Stephen, P. Bromirski, P. Gerstoft, Z. Chen, Tidal and thermal stresses drive seismicity along a major Ross Ice Shelf rift, *Geophysical Research Letters*, doi: 10.1029/2019GL082842
- (164) \*White-Gaynor, A.L., **A. A. Nyblade**, R. C. Aster, D. A. Wiens, P. D. Bromirski, P. Gerstoft, R. A. Stephen, S. E. Hansen, T. Wilson, I. W. Dalziel, A. D. Huerta, J. P. Winberry, and S. Anandakrishnan, Heterogeneous upper mantle structure beneath the Ross Sea Embayment and Marie Byrd Land, West Antarctica, revealed by P-wave tomography, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2019.02.013
- (163) West, N., E. Kirby, **A. Nyblade** and S. Brantley, Climate preconditions the Critical Zone: Elucidating the role of subsurface fractures in the evolution of asymmetric topography, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2019.01.039
- (162) <sup>+</sup>Emry, E., Y. Shen, **A. Nyblade**, A. Flinders, and X. Bao, Upper mantle earth structure in Africa from full-wave ambient noise tomography, *Geochemistry, Geophysics and Geosystems*, doi: 10.1029/2018GC007804
- 2018**
- (161) Accardo, N. J., D. J. Shillington, J. B. Gaherty, C. A. Scholz, **A. A. Nyblade**, P.R.N. Chindandali, G. Kamihanda, T. McCartney, D. Wood, and R. Wambura Ferdinand, Constraints on rift basin structure and border fault growth in the northern Malawi Rift from 3-D seismic refraction imaging, *Journal of Geophysical Research*, doi: 10.1029/2018JB016504.
- (160) \*Grijalva, A., **A. Nyblade**, K. Homman, N. J. Accardo, J. B. Gaherty, C. J. Ebinger, D. J. Shillington, P. R. N. Chindandali, G. Mbogoni, R. W. Ferdinand, G. Mulibo, J. P. O'Donnell, M. Kachingwe, and G. Tepp, Seismic evidence for plume- and craton-influenced upper mantle structure beneath the northern Malawi rift and the Rungwe volcanic province, East Africa, *Geochemistry, Geophysics and Geosystems*, doi: 10.1029/2018GC007730
- (159) Chen, Z., P. D. Bromirski, P. Gerstoft, R. A. Stephen, D. A. Wiens, R. C. Aster, and **A. A. Nyblade**, Ocean-excited plate waves in the Ross and Pine Island Glacier Ice Shelves, *Journal of Glaciology*, doi: 10.1017/jog.2018.66.
- (158) \*Ramirez, C., **A. Nyblade**, M. Wyssession, M. Pratt, F. Andriampenanana, and T. Rakotondraibe, Complex seismic anisotropy in Madagascar revealed by shear wave splitting measurements, 215, 1718-1727, *Geophysical Journal International*, doi: 10.1093/gji/ggy367.
- (157) Chaput, J., R.C. Aster, D. McGrath, M. Baker, R. Anthony, P. Gerstoft, P. Bromirski , **A.**

- Nyblade**, R.A. Stephen, D. Wiens, S. Das, and L. Stevens, Near-surface environmentally forced changes in the Ross Ice Shelf observed with ambient seismic noise, *Geophysical Research Letters*, 45, doi: 10.1029/2018GL079665.
- (156) Shen, W., D. Wiens, S. Anandakrishnan, R. Aster, P. Gerstoft, P. Bromirski, S. Hansen, I. Dalziel, D. Heeszel, A. Huerta, **A. Nyblade**, R. Stephen, T. Wilson, and P. Winberry, The crust and upper mantle structure of central and West Antarctica from Bayesian inversion of Rayleigh wave and receiver function data, *Journal of Geophysical Research*, 123, doi: 10.1029/2017JB015346
- (155) \*Borrego, D., **A. A. Nyblade**, N. J. Accardo, J. B. Gaherty, C. J. Ebinger, D. J. Shillington, P. R. N. Chindandali, G. Mbogoni, R. W. Ferdinand, G. Mulibo, J. P. O'Donnell, M. Kachingwe, and G. Tepp, Crustal structure surrounding the northern Malawi rift and beneath the Rungwe volcanic province, East Africa, *Geophysical Journal International*, 215, 1410–1426, doi: 10.1093/gji/ggy331
- (154) Tepp, G., C. J. Ebinger, H. Zal, R. Gallacher, N. Accardo, D. J. Shillington, J. Gaherty, D. Keir, **A. A. Nyblade**, G. J. Mbogoni, P. R. N. Chindandali, R. Ferdinand-Wambura, G. D. Mulibo, G. Kamihanda, Seismic anisotropy of the upper mantle below the Western rift, East Africa, *Journal of Geophysical Research*, doi: 10.1029/2017JB015409.
- (153) Barletta, V., M. Bevis, B. Siming, T. Wilson, A. Brown, A. Bordoni, M. Willis, S. Khan, M. Rovira-Navarro, I. Dalziel, R. Smalley, E. Kendrick, S. Konfal, D. Caccamise, R. Aster, **A. Nyblade**, D. Wiens, Observed rapid bedrock uplift in Amundsen Sea Embayment promotes ice-sheet stability, *Science*, 360, 1335–1339, doi: 10.1126/science.aao1447
- (152) Lough, A., D. Wiens, and **A. Nyblade**, Intraplate earthquakes reactivate ancient rift zones in East Antarctica, *Nature Geoscience*, doi: 10.1038/s41561-018-0140-6.
- (151) +O'Donnell, J.P., S. Shamsalsadati, R. A. Brazier, and **A. A. Nyblade**, Locations and source parameters for calibration events in Turkey, Saudi Arabia, Ethiopia and Tanzania, *Bulletin Seismological Society of America*, 108, 145-154, doi: 10.1785/0120170180.
- 2017**
- (150) Shen, W., D. A. Wiens, T. Stern, S. Anandakrishnan, R. Aster, I. Dalziel, S. Hansen, D. Heeszel, A. Huerta, **A. Nyblade**, T. J. Wilson, and J. P. Winberry, Seismic evidence for lithospheric foundering beneath the southern Transantarctic Mountains, *Geology*, doi:10.1130/G39555.1
- (149) \*Ramirez, C., **A. Nyblade**, E. Emry, J. Julià, X. Sun, S. Anandakrishnan, D. Wiens, R. Aster, A. Huerta, P. Winberry, P. Shore, and T. Wilson, Crustal structure of the Transantarctic Mountains, Ellsworth Mountains and Marie Byrd Land, Antarctica: New constraints on shear wave velocities, Poisson's ratios and Moho depths, *Geophysical Journal International*, doi: 10.1093/gji/ggx333.
- (148) Bromirski, P.D., Z. Chen, R.A. Stephen, P. Gerstoft, D. Arcas, A. Diez, R. Aster, D.A. Wiens, **A. Nyblade**, Tsunami and infragravity waves impacting ice shelves, *Journal of Geophysical Research – Earth Surface*, doi: 10.1002/2017JC012913.
- (147) \*Andriampenanana F., **A. A. Nyblade**, M. E. Wysession, D. A. Wiens, R. J. Durrheim, G. Rambolamanana, F. Tilmann, G. Aleqabi, P. J. Shore, M. J. Pratt, T. Rakotondraibe, R. D. Tucker, and J. Julia, The structure of the crust and uppermost mantle beneath Madagascar, *Geophysical Journal International*, 201, 1525-1544, doi: 10.1093/gji/ggx243.
- (146) +O'Donnell, J.P., K. Selway, **A.A. Nyblade**, R. A. Brazier; D. A. Wiens, S. Anandakrishnan, R. C. Aster, A. D. Huerta, T. Wilson, and J. P. Winberry, The uppermost mantle velocity and viscosity structure of central West Antarctica, *Earth and Planetary Science Letters*, 472, 38–49, doi: 10.1016/j.epsl.2017.05.016
- (145) Poggi, V., R. Durrheim, G. Tuluka, G. Weatherill, M. Pagani, **A. Nyblade**, and D. Delvaux, Assessing Seismic Hazard of the East African Rift: a pilot study from GEM and AfricaArray, *Bulletin of Earthquake Engineering*, doi: 10.1007/s10518-017-0152-4.
- (144) Accardo, N., J. Gaherty, D. Shillington, C. Ebinger, **A. Nyblade**, G. Mbogoni, P. Chindandali, R. Ferdinand-Wambura, G. Mulibo, G. Kamihanda, D. Keir, C. Scholz, J. O'Donnell, G. Tepp, K. Selway, K. Mtelela, J. Salima, and A. Mruma, Surface-wave



- imaging of the weakly-extended Malawi Rift from ambient-noise and teleseismic Rayleigh waves from onshore and lake-bottom seismometers, *Geophysical Journal International*, 209, 1892-1905, doi: 10.1093/gji/ggx133.
- (143) \*White-Gaynor, A. L., and **A. A. Nyblade**, Shear-wave splitting across the mid-Atlantic region of North America: A fossil anisotropy interpretation, *Geology*, doi: 10.1130/G38794.1
- (142) Chai, C., C. Ammon, S. Anandakrishnan, C. Ramirez, and **A. Nyblade**, Estimating subglacial structure using P-wave receiver functions, *Geophysical Journal International*, 209, 1064-1079, doi: 10.1093/gji/ggx075.
- (141) Pratt, M. J., M. Wyssession, G. Aleqabi, D. Wiens, **A. Nyblade**, P. Shore, G. Rambolamanana, F. Andriampenanana ny Ony, T. Rakotondraibe, R. Tucker, G. Baruol, K. Sigloch, and F. Tilmann, Shear velocity structure of the crust and upper mantle of Madagascar derived from surface wave tomography, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2016.10.041
- 2016**
- (140) Shillington, D., J. Gaherty, C. Ebinger, C. Scholz, K. Selway, **A. Nyblade** and 38 others, Acquisition of a unique onshore/offshore geophysical and geochemical dataset in the northern Malawi (Nyasa) Rift, *Seismological Research Letters*, 87, doi: 10.1785/0220160112
- (139) Hosny, A. and **A. Nyblade**, The crustal structure of Egypt and the northern Red Sea region, *Tectonophysics*, doi: 10.1016/j.tecto.2016.06.003.
- (138) Ma, X., X. Sun, D. A. Wiens, L. Wen, **A. Nyblade**, S. Anandakrishnan, R. Aster, A. Huerta, T. Wilson, Strong seismic scatterers near the core-mantle boundary north of the Pacific Anomaly, *Physics of the Earth and Planetary Interiors*, doi: 10.1016/j.pepi.2016.01.007
- (137) \*Mulibo, G. and **A. Nyblade**, The seismotectonics of southeastern Tanzania: Implications for the propagation of the Eastern Branch of the East African Rift, *Tectonophysics*, doi: 10.1016/j.tecto.2016.02.009.
- (136) \*Ofonime, A., **A. Nyblade**, C. S. Okereke, M. I. Oden, E. Emry, J. Julia, Crustal structure of Nigeria and southern Ghana, West Africa from P-wave receiver functions, *Tectonophysics*, doi: 10.1016/j.tecto.2016.02.005.
- (135) Heeszel, D., D. Wiens, S. Anandakrishnan, R. Aster, I. Dalziel, A. Huerta, **A. Nyblade**, T. Wilson, P. Winberry, Upper mantle structure of central and west Antarctica from array analysis of Rayleigh wave phase velocities, *Journal of Geophysical Research*, 121, doi: 10.1002/2015JB012616.
- (134) Diez, A., P. Bromirski, P. Gerstoft, R. Stephen, R. Anthony, R. Aster, C. Chen, **A. Nyblade**, D. Wiens, Ice shelf structure derived from dispersion curve analysis of ambient noise, Ross Ice Shelf, Antarctica, *Geophysical Journal International*, 205, 785–795, doi: 10.1093/gji/ggw036.
- (133) Hansen, S. E., L. M. Kenyon, J. H. Graw, Y. Park, and **A. Nyblade**, Crustal structure beneath the northern Transantarctic Mountains and Wilkes subglacial basin: Implications for tectonic origins, *Journal of Geophysical Research*, 121, doi: 10.1002/2015JB012325.
- (132) \*Ramirez, C., **A. Nyblade**, S. Hansen, D. Wiens, S. Anandakrishnan, R. Aster, A. Huerta, P. Shore, T. Wilson, Crustal and upper mantle structure beneath ice-covered regions in Antarctica from S-wave receiver functions and implications for heat flow, *Geophysical Journal International*, doi: 10.1093/gji/ggv542.
- (131) \*O'Donnell, J.P., K. Selway, **A. Nyblade**, R. Brazier, N. Tahir and R. Durrheim, Thick lithosphere, deep crustal earthquakes and no melt: A triple challenge for understanding extension in the western branch of the East African Rift, *Geophysical Journal International*, 204, 985-998, doi: 10.1093/gji/ggv492.
- 2015**
- (130) Meijian, A., D. A. Wiens, Y. Zhao, M. Feng, **A. A. Nyblade**, M. Kanao, Y. Li, A. Maggi, J-J. L ev eque, Temperatures, lithosphere-asthenosphere boundary, and heat flux beneath

- the Antarctic Plate inferred from seismic velocities, *Journal of Geophysical Research*, doi: 10.1002/2015JB011917.
- (129) Lloyd, A., D. Wiens, **A. Nyblade**, S. Anandakrishnan, R. Aster, A. Huerta, T. Wilson, I. Dalziel, P. Shore, D. Zhao, A seismic transect across West Antarctica: Evidence for mantle thermal anomalies beneath the Bentley Subglacial Trench and the Marie Byrd Land Dome, *Journal of Geophysical Research*, doi: 10.1002/2015JB012455.
- (128) Lough, A., C. D. A. Wiens, **A. Nyblade**, and S. Anandakrishnan, A previously unreported type of seismic source in the firn layer of the East Antarctic Ice Sheet, *Journal of Geophysical Research*, doi: 10.1002/2015JF003658.
- (127) Bromirski, P., A. Diez, P. Gerstoft, R. Stephen, T. Bolmer, D. Wiens, R. Aster, **A. Nyblade**, Ross ice shelf vibrations, *Geophysical Research Letters*, doi: 10.1002/2015GL065284
- (126) \*Kachingwe, M., **A. Nyblade**, and J. Julia, Crustal structure of Precambrian terranes in the southern African subcontinent with implications for secular variation in crustal genesis, *Geophysical Journal International*, 202, 533–547; doi: 10.1093/gji/ggv136.
- (125) Adams, A., D. Wiens, **A. Nyblade**, G. Euler, P. Shore and R. Tibi, Lithospheric instability and the source of the Cameroon Volcanic Line: Evidence from Rayleigh wave phase velocity tomography, *Journal of Geophysical Research*, doi: 10.1002/2014JB011580.
- (124) Meijian, A., D. A. Wiens, Y. Zhao, M. Feng, **A. A. Nyblade**, M. Kanao, Y. Li, A. Maggi, J.-J. L  v  que, S-velocity model and inferred Moho topography beneath the Antarctic Plate from Rayleigh Waves, *Journal of Geophysical Research*, doi: 10.1002/2014JB011332.
- (123) <sup>+</sup>Emry, E., **A. Nyblade**, J. Julia, S. Anandakrishnan, R. Aster, D. Wiens, A. Huerta, T. Wilson, The mantle transition zone beneath West Antarctica: Seismic evidence for hydration and thermal upwellings, *Geochemistry, Geophysics and Geosystems*, doi: 10.1002/2014GC005588
- (122) Anthony, R., R. Aster, D. Wiens, **A. Nyblade**, S. Anandakrishnan, A. Huerta, J. Winberry, T. Wilson, and C. Rowe, The seismic noise environment of Antarctica, *Seismological Research Letters*, doi: 10.1785/0220140109.
- (121) <sup>+</sup>Raveloson, A., **A. Nyblade**, S. Fishwick, A. Mangongolo, and S. Master, The upper mantle seismic velocity structure of south-central Africa and the seismic architecture of Precambrian lithosphere beneath the Congo Basin, in *The Geology and Resource Potential of the Congo Basin*, edited by M.J. de Wit, and F. Guillocheau, Springer-Verlag, doi: 10.1007/978-3-642-29482-2\_1.
- 2014**
- (120) Hansen, S., J. Graw, L. Kenyon, **A. Nyblade**, D. Wiens, R. Aster, A. Huerta, S. Anandakrishnan, and T. Wilson, Imaging the Antarctic mantle using adaptively parameterized P-wave tomography: Evidence for heterogeneous structure beneath West Antarctica, *Earth and Planetary Science Letters*, 408, 66-78, doi: 10.1016/j.epsl.2014.09.043
- (119) Kanao, M., D. Wiens, S. Tanaka, **A. Nyblade**, G. Toyokuni, P. Shore, S. Tsuboi, D., Heeszel, Y. Usui, T. Parker, Broadband seismic deployments in East Antarctica: IPY contribution to monitoring the Earth’s interiors, *Annals of Geophysics*, 57, doi: 10.4401/ag-6379
- (118) Peng, Z., J.I. Walter, R. Aster, **A. Nyblade**, D. Wiens, and S. Anandakrishnan, Icequakes in Antarctica triggered by the 2010 Mw 8.8 Maule, Chile earthquake, *Nature Geoscience*, doi: 10.1038/NGEO2212.
- (117) Accardo, N. D. Wiens, S. Hernandez, R. Aster, **A. Nyblade**, A. Huerta, S. Anandakrishnan, T. Wilson, D. Heeszel and I. Dalziel, Upper mantle seismic anisotropy beneath the West Antarctic Rift System and surrounding region from shear wave splitting analysis, *Geophysical Journal International*, doi: 10.1093/gji/ggu117.
- (116) Euler, G., D. Wiens, and **A. Nyblade**, Evidence for bathymetric control on body wave microseism generation from temporary seismic arrays in Africa, *Geophysical Journal International*, doi: 10.1093/gji/ggu105.

- (115) Chaput, J., R. Aster, A. Huerta, X. Sun, A. Lloyd, D. Wiens, **A. Nyblade**, S. Anandakrishnan, J. P. Winberry, T. Wilson, The crustal thickness of West Antarctica, *Journal of Geophysical Research*, 119, 1–18, doi: 10.1002/2013JB010642.
- (114) <sup>+</sup>O'Donnell, J.P. and **A. Nyblade**, Antarctica's hypsometry and crustal thickness: Implications for the origin of anomalous topography in East Antarctica, *Earth and Planetary Science Letters*, 388, 143–155, doi: 10.1016/j.epsl.2013.11.051.
- (113) Hosny, A., and **A. Nyblade**, Crustal structure in southeastern Egypt: Symmetric thinning of the northern Red Sea rifted margins, *Geology*, doi: 10.1130/G34726.1.

## 2013

- (112) van der Meijde, M., and **A. Nyblade**, Comment on "A crustal thickness map of Africa derived from a global gravity field model using Euler deconvolution", *Geophysical Journal International*, doi: 10.1093/gji/ggt450.
- (111) Lough, A., D. Wiens, C. Barcheck, S. Anandakrishnan, R. Aster, A. Huerta, **A. Nyblade**, D. Young, T. Wilson, Seismic detection of an active subglacial magmatic complex in Marie Byrd Land, Antarctica, *Nature Geoscience*, doi: 10.1038/NGEO1992
- (110) \*Mulibo, G., and **A. Nyblade**, Mantle transition zone thinning beneath eastern Africa: Evidence for a whole-mantle superplume structure, *Geophysical Research Letters*, 40, 1–5, doi: 10.1002/grl.50694
- (109) Heeszel, D., D. Wiens, **A. Nyblade**, S. Hansen, M. Kanao, M. An, Y. Zhao, Rayleigh wave constraints on the structure and tectonic history of the Gamburtsev Subglacial Mountains, East Antarctica, *Journal Geophysical Research*, doi: 10.1002/jgrb
- (108) \*Tugume, F., **A. Nyblade**, J. Julia, and M. van der Meijde, Precambrian crustal structure in Africa and Arabia: Evidence lacking for secular variation, *Tectonophysics*, doi: 10.1016/j.tecto.2013.04
- (107) \*Mulibo, G. and **A. Nyblade**, The P and S wave velocity structure of the mantle beneath eastern Africa and the African superplume anomaly, *Geochemistry, Geophysics and Geosystems*, doi: 10.1002/ggge.20150
- (106) <sup>+</sup>O'Donnell, J. P., A. Adams, **A. Nyblade**, G. Mulibo, F. Tugume, The uppermost mantle shear wave velocity structure of eastern Africa from Rayleigh wave tomography: Constraints on rift evolution, *Geophysical Journal International*, doi: 10.1093/gji/ggt135
- (105) Hansen, S., and **A. Nyblade**, The deep seismic structure of the Ethiopia/Afar hotspot and the African superplume, *Geophysical Journal International*, 194, 118-124, doi: 10.1093/gji/ggt116
- (104) Boomer, K., R. Brazier, J.P. O'Donnell, **A. Nyblade**, J. Kokoska, and S. Liu, From craton to rift: Empirically based ground truth criteria for local events recorded on regional networks, *Bulletin of the Seismological Society of America*, 103, 2295–2304, doi: 10.1785/0120120276
- (103) Julia, J., and **A. Nyblade**, Probing the upper mantle transition zone under Africa with P520s conversions: Implications for temperature and composition, *Earth and Planetary Science Letters*, 368, 151–162, doi: 10.1016/j.epsl.2013.02.021
- (102) <sup>+</sup>Bagley, B., and **A. Nyblade**, Seismic anisotropy in eastern Africa, mantle flow, and the African superplume, *Geophysical Research Letters*, 40, 1-6, doi:10.1002/grl.50315
- (101) \*El Tahir, N., **A. Nyblade**, J. Julia, and R. Durrheim, Crustal structure of the Khartoum Basin, Sudan, *Tectonophysics*, doi: 10.1016/j.tecto.2013.02.032
- (100) \*Lloyd, A., **A. Nyblade**, D. Wiens, S. Hansen, M. Kanao, P. Shore, D. Zhao, Upper mantle seismic structure beneath the East Antarctic Shield from body wave tomography: Implications for the origin of the Gamburtsev Subglacial Mountains, *Geochemistry, Geophysics and Geosystems*, doi: 10.1002/ggge.20098

## 2012

- (99) Kim, S., **A. Nyblade**, J. Rhie, C-E Baag, and T-S Kang, Crustal S-wave velocity structure of the Main Ethiopian Rift from ambient noise tomography, *Geophysical Journal International*, 191, 865–878, doi: 10.1111/j.1365-246X.2012.05664.x
- (98) \*Tugume, F., **A. Nyblade** and J. Julia, Moho depths and Poisson's ratios of Precambrian crust in East Africa: Evidence for similarities in Archean and Proterozoic crustal

- structure, *Earth and Planetary Science Letters*, 355-356, 73–81, doi: 10.1016/j.epsl.2012.08.041
- (97) Zoet, L.K., S. Anandakrishnan, R. B. Alley, **A. Nyblade**, and D. Wiens, Motion of an Antarctic glacier by repeated tidally modulated earthquakes, *Nature Geoscience*, doi: 10.1038/ngeo1555.
- (96) Toyokuni, G., H. Takenaka, M. Kanao, D. Wiens, **A. Nyblade**, Comparison of global synthetic seismograms calculated by the spherical 2.5-D finite-difference method with observed long-period waveforms including data from intra-Antarctic region, *Polar Science*, 6, 155-164, doi: 10.1016/j.polar.2012.06.001.
- (95) \*Kgaswane, E., **A. Nyblade**, R. Durrheim, P. Dirks and S. Webb, Shear wave velocity structure of the Bushveld Complex, South Africa, *Tectonophysics*, 554, 83-104, doi: 10.1016/j.tecto.2012.06.003.
- (94) Koch, F, D. Wiens, **A. Nyblade**, P. Shore, R. Tibi, B. Ateba, C. Tabod, J. Nnange, Upper mantle anisotropy beneath the Cameroon Volcanic Line and Congo craton from shear wave splitting measurements, *Geophysical Journal International*, doi: 10.1111/j.1365-246X.2012.05497.x
- (93) Kanao, M., S. Hansen, K. Kamiyama, D. Wiens, T. Higashi, **A. Nyblade**, A. Watanabe Crustal structure from the Lützow-Holm Bay to the inland plateau of East Antarctica, based on onshore gravity surveys and broadband seismic deployments, *Tectonophysics*, 572-573, 100–110, doi: 10.1016/j.tecto.2012.01.014
- (92) \*Adams, A., **A. Nyblade**, D. Weeraratne, Upper mantle shear wave velocity structure beneath the East African Plateau: Evidence for a deep, plateau-wide low velocity anomaly, *Geophysical Journal International*, doi: 10.1111/j.1365-246X.2012.05373
- (91) \*Hansen, S., **A. Nyblade**, and M. Benoit, Mantle structure beneath Africa and Arabia from adaptively parameterized P-wave tomography: Implications for the origin of Cenozoic Afro-Arabian tectonism, *Earth and Planetary Science Letters*, 319-320, doi: 10.1016/j.epsl.2011.12.023, 23–34.
- 2011**
- (90) Brandt, M, S. Grand, **A. Nyblade**, and P. Dirks, Upper mantle seismic structure beneath southern Africa: Constraints on the buoyancy supporting the African Superswell, *Pure and Applied Geophysics*, doi: 10.1007/s00024-011-0361-8.
- (89) \*Reusch, A., **A.A. Nyblade**, R. Tibi, D.A. Wiens, P. Shore, A. Bekoa, C.T. Tabod, and J.M. Nnange, Mantle transition zone thickness beneath Cameroon: Evidence for an upper mantle origin for the Cameroon Volcanic Line, *Geophysical Journal International*, 187, doi: 10.1111/j.1365-246X.2011.05239.x
- (88) \*Tedla, G., M. van der Meijde, **A. Nyblade** and F. van der Meer, A crustal thickness map of Africa derived from a global gravity field model using Euler Deconvolution, *Geophysical Journal International*, 187, 1–9, doi: 10.1111/j.1365-246X.2011.05140.x
- (87) \*Adams, A., and **A. Nyblade**, Shear wave velocity structure of the southern African upper mantle with implications for the uplift of southern Africa, *Geophysical Journal International*, 186, 808–824, doi: 10.1111/j.1365-246X.2011.05072.x
- (86) **Nyblade, A.**, R. Durrheim, P. Dirks, G. Graham, R. Gibson and S. Webb, Geoscience initiative develops sustainable science in Africa, *EOS Trans. AGU*, 92, 161-162
- (85) \*Finotello, M., **A. Nyblade**, J. Julia, D. Wiens, and S. Anandakrishnan, Crustal Vp-Vs ratios and thickness for Ross Island and the Transantarctic Mountain front, Antarctica, *Geophysical Journal International*, 185, 85-92. doi: 10.1111/j.1365-246X.2011.04946.x
- (84) **Nyblade, A.A.**, The upper-mantle low-velocity anomaly beneath Ethiopia, Kenya, and Tanzania: Constraints on the origin of the African superswell in eastern Africa and plate versus plume models of mantle dynamics, in Beccaluva, L., Bianchini, G., and Wilson, M., eds., *Volcanism and Evolution of the African Lithosphere: Geological Society of America Special Paper 478*, p. 1–14, doi: 10.1130/2011.2478(03).
- 2010**
- (83) <sup>+</sup>Hansen, S., **A. Nyblade**, and D. Wiens, Crustal structure of the Gamburtsev Mountains, East Antarctica, from S-wave receiver functions and Rayleigh wave phase velocities,

- Earth and Planetary Science Letters*, 300, 395–401, doi: 10.1016/j.epsl.2010.10.022.
- (82) Pyle, M., D.A. Wiens, **A.A. Nyblade**, S. Anandkrishnan, Crustal structure of the Transantarctic Mountains near the Ross Sea from ambient seismic noise tomography, *Journal of Geophysical Research*, 115, B11310, doi: 10.1029/2009JB007081.
- (81) \*Tokam, A., C. T. Tabod, **A.A. Nyblade**, J. Julia, and D. A. Wiens, Structure of the crust beneath Cameroon, West Africa, from the joint inversion of Rayleigh wave group velocities and receiver functions, *Geophysical Journal International*, doi: 10.1111/j.1365-246.2010.04776.
- (80) \*Reusch, A., **A.A. Nyblade**, D.A. Wiens, B. Ateba, C.T. Tabod, and J.M. Nnange, Upper mantle structure beneath Cameroon from body wave tomography and the origin of the Cameroon Volcanic Line, *Geochemistry, Geophysics and Geosystems*, 11, Q10W07, doi: 10.1029/2010GC003200.
- (79) Boomer, K., R. Brazier, and **A. Nyblade**, Empirically based ground truth criteria for seismic events recorded at local distances on regional networks with application to southern Africa, *Bulletin of the Seismological Society of America*, 1785-1791, doi: 10.1785/0120090237.
- 2009**
- (78) Kim, S. **A. Nyblade**, and C. Baag, Crustal structure of the Rukwa Rift, Tanzania from regional waveform modeling, *South African Journal of Geology*, 112, 251-260.
- (77) +Julia, J., **A. Nyblade**, R. Durrheim, L. Linzer, R. Gok, P. Dirks, and W. Walter, Source mechanisms of mine-related seismicity, Savuka Mine, South Africa, *Bulletin of the Seismological Society of America*, 99, 2801-2814.
- (76) \*Dugda, M., **A. Nyblade** and J. Julia, S-wave velocity structure of the crust and upper mantle beneath Kenya in comparison to Tanzania and Ethiopia: Implications for the formation of the East African and Ethiopian Plateaus, *South African Journal of Geology*, 112, 241-250.
- (75) +Hansen, S., **A. A. Nyblade**, and J. Julia, Estimates of crustal and lithospheric thickness in Sub-Saharan Africa from S-wave receiver functions, *South African Journal of Geology*, 112, 229-240.
- (74) +Julia, J., **A. Nyblade**, R. Durrheim, L. Linzer, R. Gok, W. Walter, S. Spottiswoode, and P. Dirks, A Wadati filter for mine-induced seismicity, *South African Journal of Geology*, 112, 371-380.
- (73) +Jemberie, A., and **A. Nyblade**, Lateral variations in intrinsic and scattering Q near 1 Hz in the crust of the Tanzanian craton and adjacent mobile belts, *Bulletin of the Seismological Society of America*, 99, 3516-3524; doi: 10.1785/0120090062.
- (72) \*Kgaswane, E. M., **A. A. Nyblade**, J. Julia, P. H. G. M. Dirks, R. J. Durrheim, and M. E. Pasyanos, Shear wave velocity structure of the lower crust in southern Africa: Evidence for compositional heterogeneity within Archaean and Proterozoic terrains, *Journal of Geophysical Research*, 114, B12304, doi: 10.1029/2008JB006217.
- (71) \*Mulibo, G. D., and **A. Nyblade**, The 1994-1995 Manyara and Kwamtoro earthquake swarms: Variation in the depth extent of seismicity in northern Tanzania, *South African Journal of Geology*, 112, 387-404.
- (70) \*Tugume, F., and **A. Nyblade**, The depth distribution of seismicity at the northern end of the Rwenzori Mountains: Implications for heat flow in the Western Branch of the East African Rift System in Uganda, *South African Journal of Geology*, 112, 261-276.
- (69) +Hansen, S.E., Julia, J., **Nyblade, A.**, Pyle, M.L., Wiens, D.A., and Anandkrishnan, S. Using S-wave receiver functions to estimate crustal structure beneath ice sheets: An application to the Transantarctic Mountains and East Antarctic Craton, *Geochemistry, Geophysics and Geosystems*, 10, Q08014, doi: 10.1029/2009GC002576.
- (68) +Hansen, S., **A. Nyblade**, J. Julia, P. Dirks and R. Durrheim, Upper-mantle low-velocity zone structure beneath the Kaapvaal craton from S-wave receiver functions, *Geophysical Journal International*, 178, 1021-1027.

- (67) <sup>+</sup>Huerta, A., **A. Nyblade**, and A. Reusch, Mantle transition zone structure beneath Kenya and Tanzania: More evidence for a deep-seated thermal upwelling in the mantle, *Geophysical Journal International*, 177, 1249-1255.
- (66) Keranen, K., S. Klemperer, J. Julia, J. Lawrence, **A. Nyblade**, Low lower-crustal velocity across Ethiopia: is the Main Ethiopian Rift a narrow rift in a hot craton?, *Geochemistry, Geophysics and Geosystems*, 10, Q0AB01, doi: 10.1029/2008GC002293.
- (65) Barklage, M., D. Wiens, **A. Nyblade**, and S. Anandkrishnan, Upper mantle seismic anisotropy of South Victoria Land and the Ross Sea coast, Antarctica from SKS and SKKS splitting analysis, *Geophysical Journal International*, 178, 729-741.
- (64) \*Adams, A., R. Brazier, **A. Nyblade**, A. Rodgers, and A. Al-Amri, Source parameters for moderate earthquakes in the Zagros Mountains with implications for the depth extent of seismicity, *Bulletin of the Seismological Society of America*, 99, 2044-2049.

## 2008

- (63) \*Reusch, A. M., **A. A. Nyblade**, M. H. Benoit, D. A. Weins, S. Anandkrishnan, D. Voigt, and P. J. Shore, Mantle transition zone thickness beneath Ross Island, the Transantarctic Mountains, and East Antarctica, *Geophysical Research Letters*, 35, L12301, doi: 10.1029/2008GL033873.
- (62) \*Park, Y., **A. A. Nyblade**, A. J. Rodgers, and A. Al-Amri, S wave velocity structure of the Arabian Shield upper mantle from Rayleigh wave tomography, *Geochemistry, Geophysics and Geosystems*, 9, Q07020, doi: 10.1029/2007GC001895.
- (61) Brazier, R., Q. Miao, **A. Nyblade**, A. Ayele, C. Langston, Local magnitude scale for the Ethiopian Plateau, *Bulletin of the Seismological Society of America*, 98, 2341–2348, doi: 10.1785/0120070266.
- (60) Bastow, I. D., **A. A. Nyblade**, G. W. Stuart, T. O. Rooney, and M. H. Benoit, Upper mantle seismic structure beneath the Ethiopian hot spot: Rifting at the edge of the African low-velocity anomaly, *Geochemistry, Geophysics and Geosystems*, 9, Q12022, doi: 10.1029/2008GC002107.

## 2007

- (59) \*Dugda, M. T., **A. A. Nyblade**, and J. Julia, Thin lithosphere beneath the Ethiopian Plateau revealed by a joint inversion of Rayleigh wave group velocities and receiver functions, *Journal of Geophysical Research*, 112, B08305, doi: 10.1029/2006JB004918.
- (58) \*Park, Y., **A. A. Nyblade**, A. J. Rodgers, and A. Al-Amri, Upper mantle structure beneath the Arabian Peninsula and northern Red Sea from teleseismic body wave tomography: Implications for the origin of Cenozoic uplift and volcanism in the Arabian Shield, *Geochemistry, Geophysics and Geosystems*, 8, Q06021, doi: 10.1029/2006GC001566.
- (57) Pasyanos, M. E., and **A. A. Nyblade**, A top to bottom lithospheric study of Africa and Arabia, *Tectonophysics*, 444, 27–44.

## 2006

- (56) \*Benoit, M., **A. Nyblade**, T. Owens, and G. Stuart, Mantle transition zone structure and upper mantle S velocity variations beneath Ethiopia: Evidence for a broad, deep-seated thermal anomaly, *Geophysics, Geochemistry and Geosystems*, 7, Q11013, doi: 10.1029/2006GC001398.
- (55) Lawrence, J. F., D. Wiens, **A. Nyblade**, S. Anandkrishnan, P. Shore, and D. Voigt, Crust and upper mantle structure of the Transantarctic Mountains and surrounding regions from receiver functions, surface waves, and gravity: Implications for uplift models, *Geophysics, Geochemistry and Geosystems*, 7, Q10011, doi: 10.1029/2006GC001282.
- (54) \*Watson, T., **A. Nyblade**, D. Wiens, S. Anandkrishnan, M. Benoit, P. Shore, D. Voigt, and J. VanDecar, P and S velocity structure of the upper mantle beneath the Transantarctic Mountains, East Antarctic Craton and Ross Sea from travel time tomography, *Geophysics, Geochemistry and Geosystems*, 7, Q07005, doi: 10.1029/2005GC001238.
- (53) \*Benoit, M., **A. Nyblade**, and M. Pasyanos, Crustal thinning between the Ethiopian and East African Plateaus from modeling Rayleigh wave dispersion, *Geophysical Research Letters*, 33, L13301, doi: 10.1029/2006GL025687.
- (52) Lawrence, J. F., D. Wiens, **A. Nyblade**, S. Anandkrishnan, P. Shore, and D. Voigt,



- Rayleigh wave phase velocity analysis of the Ross Sea, Transantarctic Mountains, and East Antarctica from a temporary seismograph array, *Journal of Geophysical Research*, 111, B06302, doi: 10.1029/2005JB003812.
- (51) \*Benoit, M. H., **A. A. Nyblade**, and J. C. VanDecar, Upper mantle P wave speed variations beneath Ethiopia and the origin of the Afar Hotspot, *Geology*, 34, 329–332, doi: 10.1130/G22281.
- (50) \*Park, Y. and **A. A. Nyblade**, P-wave tomography reveals a westward dipping low velocity zone beneath the Kenya Rift, *Geophysical Research Letters*, 33, L07311, doi: 10.1029/2005GL025605.
- (49) Ayele, A, **A. A. Nyblade**, C. A. Langston, M. Cara, J. Leveque, New evidence for Afro-Arabian plate separation in southern Afar, in *The Structure and Evolution of the East African Rift System in the Afar Volcanic Province*, edited by G. Yirgu, C.J. Ebinger, and P.K.H. Maguire, *Geological Society, London, Special Publication*, 259, 254–263.
- (48) \*Dugda, M.T., and **A. A. Nyblade**, New constraints on crustal structure in eastern Afar from the analysis of receiver functions and surface wave dispersion in Djibouti, in *The Structure and Evolution of the East African Rift System in the Afar Volcanic Province*, edited by G. Yirgu, C.J. Ebinger, and P.K.H. Maguire, *Geological Society, London, Special Publication*, 259, 241–253.
- (47) Lawrence, J. F., D. Wiens, **A. Nyblade**, S. Anandkrishnan, P. Shore, and D. Voigt, Upper mantle thermal variations beneath the Transantarctic Mountains inferred from teleseismic S-wave attenuation, *Geophysical Research Letters*, 33, L03303, doi: 10.1029/2005GL024516.

## 2005

- (46) Pollard, D., R.M. DeConto, and **A. A. Nyblade**, Sensitivity of Cenozoic Antarctic ice sheet variations to geothermal heat flux, *Global and Planetary Change*, 49, 63-74.
- (45) Walker, K., G. Bokelmann, S. Klemperer, and **A. Nyblade**, Shear wave splitting around hotspots: Evidence for upwelling-related mantle flow?, in *Plates, plumes, and paradigms*, edited by G. Foulger, J. Natland, D. Presnall, and D. Anderson, *Geological Society of America Special Paper* 388, 171–192.
- (44) <sup>+</sup>Julia, J., C. J. Ammon, and **A.A. Nyblade**, Evidence for mafic lower crust in Tanzania, East Africa, from joint inversion of receiver functions and Rayleigh wave dispersion velocities, *Geophysical Journal International*, 162, 555-569.
- (43) Brazier, R.A., **A. A. Nyblade** and J. Florentin, Focal mechanisms and the stress regime in NE and SW Tanzania, *Geophysical Research Letters*, 32, L14315, doi: 10.1029/2005GL023156.
- (42) \*Dugda, M.T., **A. A. Nyblade**, J. Julia, C. Langston, C. Ammon, and S. Simiyu, Crustal structure in Ethiopia and Kenya from receiver function analysis: Implications for rift development in eastern Africa, *Journal of Geophysical Research*, 110, B01303, doi: 10.1029/2004JB003065.

## 2004

- (41) Mareschal, J.C., **A. Nyblade**, H.K.C. Perry, J. Jaupart, and G. Bienfait, Heat flow and deep lithospheric thermal structure at Lac de Gras, Slave Province, Canada, *Geophysical Research Letters* 31, L12611, doi: 10.1029/2004GL020133.
- (40) Venkataraman, A., **A. A. Nyblade**, and J. Ritsema, Upper mantle Q and thermal structure beneath Tanzania, East Africa from teleseismic P wave spectra, *Geophysical Research Letters*, 31, L15611, doi: 10.1029/2004GL020351.
- (39) Gashawbeza, E. M, S. L. Klemperer, **A. A. Nyblade**, K. T. Walker, and K. M. Keranen, Shear-wave splitting in Ethiopia: Precambrian mantle anisotropy locally modified by Neogene rifting, *Geophysical Research Letters*, 31, doi: 10.1029/2004GL020471.
- (38) Walker, K., **A. Nyblade**, G. Bokelmann, S. Klemperer, and T. Owens, Anisotropic complexity in Tanzania and Kenya from teleseismic shear-wave splitting, *Journal of Geophysical Research*, 109, B080302, doi: 10.1029/2003JB002866.

## 2003

- (37) **Nyblade, A.A.**, and N.H. Sleep, Long lasting epeirogenic uplift from mantle plumes and the origin of the Southern African Plateau, *Geophysics, Geochemistry and Geosystems*, 4, doi: 10.1029/2003/GC000573.
- (36) Weeraratne, D.S., D.W. Forsyth, K.M. Fisher, and **A.A. Nyblade**, Evidence for an upper mantle plume beneath the Tanzanian Craton from Rayleigh wave tomography, *Journal of Geophysical Research*, 108, doi: 10.1029/2002JB002273.
- (35) \*Benoit, M., **A.A. Nyblade**, J. VanDecar, and H. Gurrola, Upper mantle P velocity structure and mantle transition zone thickness beneath the Arabian Shield, *Geophysical Research Letters*, 30, 1153, doi: 10.1029/2002GL016436.
- (34) Brazier, R.A., and **A.A. Nyblade**, Upper mantle P velocity structure beneath the Baikal Rift from modeling regional seismic data, *Geophysical Research Letters*, 30, 1531, doi: 10.1029/2002GL016116.

## 2002

- (33) **Nyblade, A.A.**, Crust and upper mantle structure in East Africa: Implications for the origin of Cenozoic rifting and volcanism and the formation of magmatic rifted margins, in *Volcanic Rifted Margins*, edited by M.A. Menzies, S.L. Klemperer, C.J. Ebinger, and J. Baker, *Geological Society of America, Special Paper 362*, 15-26.
- (32) **Nyblade, A.A.**, and C. A. Langston, Broadband seismic experiments probe the East African rift, *EOS Trans. AGU*, 83, 405-408.
- (31) **Nyblade, A.A.**, and R.A. Brazier, Precambrian lithospheric controls on the development of the East African rift system, *Geology*, 30, 755-758.
- (30) Langston, C.A., **A.A. Nyblade** and T.J. Owens, Regional wave propagation in Tanzania, East Africa, *Journal of Geophysical Research*, 107, doi: 10.1029/2001JB000176, ESE 1-18.

## 2000

- (29) Brazier, R.A., **A.A. Nyblade**, C.A. Langston, and T.J. Owens, Pn wave velocities beneath the Tanzania Craton and adjacent rifted mobile belts, East Africa, *Geophysical Research Letters*, 27, 2365-2368.
- (28) **Nyblade, A.A.**, T.J. Owens, H. Gurrola, J. Ritsema, and C. Langston, Seismic evidence for a deep upper mantle thermal anomaly beneath East Africa, *Geology*, 28, 599-602.
- (27) **Nyblade, A.A.**, R.P. Knox, and H. Gurrola, Mantle transition zone thickness beneath Afar: Implications for the origin of the Afar hotspot, *Geophysical Journal International*, 142, 615-619.
- (26) Owens, T.J., **A.A. Nyblade**, H. Gurrola, and C.A. Langston, Mantle transition zone structure beneath Tanzania, East Africa, *Geophysical Research Letters*, 27, 827-830.

## 1999

- (25) Rudnick, R. L., and **A.A. Nyblade**, The thickness and heat production of Archean lithosphere: constraints from xenolith thermobarometry and surface heat flow, in *Mantle Petrology: Field observations and high-pressure experimentation: A Tribute to Francis R. (Joe) Boyd*, edited by Y. Fei, C. Bertka, and B. Mysen, The Geochemical Society, 3-12.
- (24) **Nyblade, A.A.**, Heat flow and the structure of Precambrian lithosphere, *Lithos*, 28, 81-91.  
**Nyblade, A.A.**, Heat flow and the structure of Precambrian lithosphere, in *Composition, Deep Structure, and Evolution of Continents*, edited by R. Van der Hilst and W. McDonough, Elsevier, 81-91. (same paper as published in *Lithos*)
- (23) Zhao, M., C.A. Langston, **A.A. Nyblade** and T.J. Owens, Upper mantle velocity structure beneath southern Africa from modeling regional seismic data, *Journal of Geophysical Research*, 104, 4783-4794.

## 1998

- (22) \*Knox, R.P., **A.A. Nyblade**, and C.A. Langston, Upper mantle S velocities beneath Afar and western Saudi Arabia from Rayleigh wave dispersion, *Geophysical Research Letters*, 25, 4233-4236.



- (21) **Nyblade, A.A.**, and C.A. Langston, Upper mantle P wave velocities beneath southern Africa and the origin of the African superswell, *Southern African Geophysical Review*, 2, special issue: *Geophysical Framework of the Kaapvaal Craton*, 55-61.
- (20) Ritsema, J., **A. A. Nyblade**, T.J. Owens, and C. A. Langston, Upper mantle seismic velocity structure beneath Tanzania: Implications for the stability of cratonic lithosphere, *Journal of Geophysical Research*, 103, 21,201 - 21,214.
- (19) Langston, C.A., R.A. Brazier, **A. A. Nyblade**, and T.J. Owens, Local magnitude scale and seismicity rate for Tanzania, East Africa, *Bulletin Seismological Society of America*, 88, 712-721.

#### 1997

- (18) \*Last, R.J., **A.A. Nyblade**, C.A. Langston, and T.J. Owens, Crustal structure of the East African Plateau from receiver functions and Rayleigh wave phase velocities, *Journal of Geophysical Research*, 102, 24,469-24,483.
- (17) Tesha, A.L., **A.A. Nyblade**, G.R. Keller, and D.I. Doser, Rift localization in suture-thickened crust: Evidence from Bouguer gravity anomalies in northeastern Tanzania, *Tectonophysics*, 287, 315-328.
- (16) Zhao, M., C.A. Langston, **A.A. Nyblade**, and T.J. Owens, Lower crustal rifting in the Rukwa Graben, East Africa, *Geophysical Journal International*, 129, 412-420.
- (15) **Nyblade, A.A.**, Heat flow across the East African Plateau, *Geophysical Research Letters*, 24, 2083-2086.

#### 1996

- (14) **Nyblade, A.A.**, C. Birt, C.A. Langston, T.J. Owens, and R.J. Last, Seismic experiment reveals rifting of craton in Tanzania, *Eos, Trans. AGU*, 77, 517-521.
- (13) Koepenick, K.W., S.L. Brantley, J.M. Thompson, G.L. Rowe, **A.A. Nyblade**, and C. Moshy, Volatile emissions from the crater and flank of Oldoinyo Lengai volcano, Tanzania, *Journal of Geophysical Research*, 101, 13,819-13,830.
- (12) **Nyblade, A.A.**, I.S. Suleiman, R.F. Roy, B. Pursell, A.S. Suleiman, D.I. Doser and G. R. Keller, Terrestrial heat flow in the Sirt Basin, Libya and the pattern of heat flow across northern Africa, *Journal of Geophysical Research*, 101, 17,737-17,746.
- (11) **Nyblade, A.A.**, K.S. Vogfjord, and C.A. Langston, P wave velocity structure of Proterozoic upper mantle beneath central and southern Africa, *Journal of Geophysical Research*, 101, 11,159-11,171.

#### 1995

- (10) **Nyblade, A.A.**, and C.A. Langston, East African earthquakes below 20 km depth and their implications for crustal structure, *Geophysical Journal International*, 121, 49-62.

#### 1994

- (9) **Nyblade, A.A.**, and S.W. Robinson, The African superswell, *Geophysical Research Letters*, 21, 765-768.

#### 1993

- (8) **Nyblade, A.A.**, Y. Lei, P.N. Shive, and A. Tesha, Paleomagnetism of Permian sedimentary rocks from Tanzania and the Permian paleogeography of Pangea, *Earth and Planetary Science Letters*, 118, 181-194.
- (7) **Nyblade, A.A.**, and H.N. Pollack, A global analysis of heat flow from Precambrian terrains: Implications for the thermal structure of Archean and Proterozoic lithosphere, *Journal of Geophysical Research*, 98, 12,207-12,218.
- (6) **Nyblade, A.A.**, and H.N. Pollack, A comparative study of parameterized and full thermal convection in the interpretation of heat flow from cratons and mobile belts, *Geophysical Journal International*, 113, 747-751.
- (5) **Nyblade, A.A.**, and H.N. Pollack, Can differences in heat flow between east and southern Africa be easily interpreted?: Implications for understanding regional variability in continental heat flow, *Tectonophysics*, 219, 257-272.

#### 1992

- (4) **Nyblade, A.A.**, and H.N. Pollack, gravity model for the lithosphere in western Kenya and northeastern Tanzania, *Tectonophysics*, 212, 257-267.

## 1990

- (3) Shive, P.N., **A.A. Nyblade**, and J. Wittke, Magnetic properties of some carbonatites from Tanzania, East Africa, *Geophysical Journal International*, 103, 103-109.
- (2) **Nyblade, A.A.**, H.N. Pollack, D.L. Jones, F. Podmore, and M. Mushayandebvu, Terrestrial heat flow in east and southern Africa, *Journal of Geophysical Research*, 95, 17,371-17,384.

## 1986

- (1) **Nyblade, A.A.**, P.N. Shive, and K.P. Furlong, Rapid secular variation in thick Eocene flows from the Absaroka Mountains of northwest Wyoming, *Earth and Planetary Science Letters*, 81, 419-424.

## PAPERS PUBLISHED WITHOUT PEER REVIEW AND OTHER PUBLICATIONS

### 2019

- (44) Emry, E., **A. Nyblade**, Y. Shen, Complex upper mantle structure beneath the East African Rift System, *GeoPRISMS Newsletter*, Spring 2019, 6-9.

### 2015

- (43) Webb, S., M. Manzi, S. Scheiber-Enslin, B. Chinamora, A. Naidoo, S-A Lee, A. Isiaka, S. Mngadi, K. Tshitlho, **A. Nyblade**, E. Emry, AfricaArray International Geophysics Field School: Diversity and training come together in Africa, *The Leading Edge*, 34, October 2015.

### 2012

- (42) **Nyblade, A.**, J. Amundson, S. Hansen, E. Ivins, M. Lazzara, M. Nettle, C. Raymond, L. Stearns, A facility plan for polar seismic and geodetic science: Meeting community needs through IRIS and UNAVCO polar services, A report for the Office of Polar Programs, National Science Foundation, pp. 42.
- (41) **Nyblade, A.** and R. Durrheim, 5<sup>th</sup> AfricaArray newsletter, ([www.africaarray.psu.edu/publications](http://www.africaarray.psu.edu/publications)).
- (40) Brazier, R., K. Boomer, J.P. O'Donnell, **A. Nyblade**, S. C. Myers, J. Kokosak, and S. R. Liu, From Craton to rift: Empirically based ground truth criteria for regional networks, *Proceedings of the 34th Research Review on Nuclear Explosion Monitoring*, Albuquerque, NM paper 2-03, p. 211- 220.
- (39) **Nyblade, A.**, Developing regionalized models of lithospheric thickness and velocity structure across Eurasia and the Middle East from jointly inverting P-wave and S-wave receiver functions with Rayleigh wave group and phase velocities, *Proceedings of the 34th Research Review on Nuclear Explosion Monitoring*, Albuquerque, NM paper 1-08, p. 66-74

### 2011

- (38) Brazier, R., K. Boomer, and **A. Nyblade**, J.P. O'Donnell, S. C. Myers, J. Kokosak, Establishing and validating empirically-based ground truth criteria for seismic events located using regional networks *Proceedings of the 33<sup>rd</sup> Research Review on Nuclear Explosion Monitoring*, Tucson, AZ, Paper 2-03, p. 249-257.
- (37) Julia, J., E. Matzel, **A. Nyblade**, and A. Rodgers, Developing regionalized models of lithospheric thickness and velocity structure across Eurasia and the Middle East from jointly inverting P-wave and S-wave receiver functions with Rayleigh wave group and phase velocities, *Proceedings of the 33<sup>rd</sup> Research Review on Nuclear Explosion Monitoring*, Tucson, AZ paper 1-08, p. 81-90.

### 2010

- (36) Brazier, R., K. Boomer, and **A. Nyblade**, Establishing and validating empirically-based ground truth criteria for seismic events located using regional networks *Proceedings of the 32<sup>nd</sup> Research Review on Nuclear Explosion Monitoring*, Orlando, FL. Paper 3-02, p. 259-267.
- (35) Julia, J., **A. Nyblade**, R. Gok, W. Walter, L. Linzer, R. Durrheim, Developing and exploiting

- a unique dataset from South African gold mines for source characterization and wave propagation, *Proceedings of the 32<sup>nd</sup> Research Review on Nuclear Explosion Monitoring*, Orlando, FL. Paper 4-05, p. 398-407.
- (34) Julia, J., S. Hansen, **A. Nyblade**, A. Rodgers, and E. Matzel, Developing regionalized models of lithospheric thickness and velocity structure across Eurasia and the Middle East from jointly inverting P-wave and S-wave receiver functions with Rayleigh wave group and phase velocities, *Proceedings of the 32<sup>nd</sup> Research Review on Nuclear Explosion Monitoring*, Orlando, FL. paper 2-07, p. 87-96.
- 2009**
- (33) Durrheim, R., **A. Nyblade**, and P. Dirks, AfricaArray Special Volume - Introduction, *South African Journal of Geology*, 112, 209-212.
- (32) Durrheim, R., P. Dirks, **A. Nyblade**, G. Graham, S. Webb, and M. Jones, AfricaArray: Aims, achievements and future activities, *11th South African Geophysical Association Biennial Technical Meeting and Exhibition*, Extended Abstract.
- (31) Julia, J., **A. Nyblade**, R. Gok, W. Walter, L. Linzer, R. Durrheim, Developing and exploiting a unique dataset from South African gold mines for source characterization and wave propagation, *Proceedings of the 31<sup>th</sup> Research Review on Nuclear Explosion Monitoring*, Tucson, AZ. paper 25.
- (30) Julia, J., S. Hansen, **A. Nyblade**, A. Rodgers, and E. Matzel, Developing regionalized models of lithospheric thickness and velocity structure across Eurasia and the Middle East from jointly inverting P-wave and S-wave receiver functions with Rayleigh wave group and phase velocities, *Proceedings of the 31<sup>th</sup> Research Review on Nuclear Explosion Monitoring*, Tucson, AZ. paper 26.
- (29) Kassa, B., J. Julia, **A. Nyblade**, and R. Durrheim, Source mechanisms of mining-related seismic events in the Far West Rand, South Africa, *11th South African Geophysical Association Biennial Technical Meeting and Exhibition*, Extended Abstract.
- (28) **Nyblade, A.**, and P. Dirks, 4<sup>th</sup> AfricaArray newsletter, ([www.africaarray.psu.edu/publications](http://www.africaarray.psu.edu/publications)).
- 2008**
- (27) **Nyblade, A.**, P. Dirks, R. Durrheim, S. Webb, M. Jones, and G. Cooper, AfricaArray: Developing a geosciences workforce for Africa's natural resource sector, *The Leading Edge*, vol. 27, pages 1358-1361.
- (26) **Nyblade, A. A.**, A. Adams, R. A. Brazier, Y. Park, and A. Rodgers, Ground truth, magnitude calibration and regional phase propagation and detection in the middle east and horn of Africa, *Proceedings of the 30<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Virginia Beach, VA.
- (25) Julia, J., **Nyblade, A. A.**, R. Gok, W. Walter, L. Linzer and R. Durrheim, Developing and exploiting a unique seismic data set from South African gold mines for source characterization and wave propagation, *Proceedings of the 30<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Virginia Beach, VA.
- (24) **Nyblade, A.**, and P. Dirks, 3<sup>rd</sup> AfricaArray newsletter, ([www.africaarray.psu.edu/publications](http://www.africaarray.psu.edu/publications)).
- 2007**
- (23) Pyle, M.L., D. A. Wiens, **A. Nyblade**, and S. Anandkrishnan, Short period Rayleigh wave group velocities in Antarctica determined by the cross-correlation of ambient seismic noise from the TAMSEIS array, *U.G. Geol. Survey and The National Academies; USGS OF-2007-1047*, Extended Abstract 035.
- (22) Barklage, M., D. A. Wiens, **A. Nyblade**, and S. Anandkrishnan, Upper mantle seismic anisotropy of South Victoria Land/Ross Island, Antarctica from SKS and SKKS splitting analysis, *U.G. Geol. Survey and The National Academies; USGS OF-2007-1047*, Extended Abstract 027.
- (21) **Nyblade, A. A.**, R. A. Brazier, A. Adams, Y. Park, A. Rodgers and A. Al-Amri, Ground truth, magnitude calibration and regional phase propagation and detection in the middle

- east and horn of Africa, *Proceedings of the 29<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Denver, CO, paper 2-07.
- (20) **Nyblade, A. A.**, W. Walter, R. Gok, L. Linzer and R. Durrheim, Developing and exploiting a unique seismic data set from South African gold mines for source characterization and wave propagation, *Proceedings of the 29<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Denver, CO, paper 1-19.
- (19) **Nyblade, A.**, and P. Dirks, 2<sup>nd</sup> AfricaArray newsletter, (www.africaarray.psu.edu/publications).
- 2006**
- (18) **Nyblade, A.**, Y. Park, A. Rodgers, and A. Al-Amri, Seismic structure of the Arabian shield lithosphere and Red Sea margin, *Margins Newsletter No. 17*, Fall issue.
- (17) **Nyblade, A.**, A. Adams, R. Brazier, Y. Park, and A. Rodgers, Ground truth, magnitude calibration and regional phase propagation and detection in the middle east and horn of Africa, *Proceedings of the 28<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Orlando, FL, 156-165.
- (16) **Nyblade, A.**, Developing and exploiting a unique seismic data set from South African gold mines for source characterization and wave propagation, *Proceedings of the 28<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Orlando, FL, 166-175.
- (15) **Nyblade, A.**, and P. Dirks, 1<sup>st</sup> AfricaArray newsletter, (www.africaarray.psu.edu/publications).
- 2005**
- (14) Richardson, E., **A.A. Nyblade**, W.R. Walter, and A.J. Rodgers, Source characteristics of mining-induced seismicity from moment-tensor analysis and spatio-temporal relationships, in *Controlling Seismic Risk*, edited by Y. Potvin and M. Hudyma, 123-129, Australian Centre for Geomechanics, Perth, 2005.
- (13) Richardson E., **A. A. Nyblade**, W. R. Walter, K. Mayeda and L. Lowe, Seismic source characterization and energy partitioning from in-mine and regional broadband data in South Africa, *Proceedings of the 27<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Rancho Mirage, CA 622-631.
- (12) Brazier, R., M. Benoit, Y. Park, **A. Nyblade**, and M. Pasyanos, Ground truth events, magnitude scale, velocity models and travel time correction surfaces for northeastern Africa, *Proceedings of the 27<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Rancho Mirage, CA 308-317.
- 2004**
- (11) Brazier, R.A., Y. Park, **A.A. Nyblade**, and M. Pasyanos, Ground truth events from northeastern Africa, *Proceedings of the 26<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Orlando, FL, 227-237.
- (10) Richardson, E., **A.A. Nyblade**, W. R. Walter, and A.J. Rodgers, Seismic source characterization and energy partitioning from in-mine and regional broadband data in South Africa, *Proceedings of the 26<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Orlando, FL, 467-474.
- 2003**
- (9) Brazier, R.A., Y. Park, **A.A. Nyblade**, and M. Pasyanos, Ground truth events from northeastern Africa, *Proceedings of the 25<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Tucson, AZ, 203-210.
- (8) Richardson, E., **A.A. Nyblade**, W. R. Walter, and A.J. Rodgers, Seismic source characterization and energy partitioning from in-mine and regional broadband data in South Africa, *Proceedings of the 25<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Tucson, AZ, 445-449.
- 2002**
- (7) **A.A. Nyblade**, R.A. Brazier, C. Schultz, and M. Pasyanos, Ground truth events from regional seismic networks in northeastern Africa, *Proceedings of 24<sup>th</sup> Seismic Research Review on Nuclear Explosion Monitoring*, Ponte Vedra Beach, FL, 361-367.

## 2001

(6) **Nyblade, A.A.**, Hard-cored continents, *Nature*, 411, (News and Views), 38-39.

## 1997

(5) T.J. Owens, H.P. Crotwell, **A.A. Nyblade**, R. Brazier, and C.A. Langston, Data report for the 1994-95 Tanzania Passive-Source Seismic Experiment, *PASSCAL Data Report #97-005*, IRIS Data Management Center.

## 1996

(4) Langston, C.A., **A.A. Nyblade**, and M. Zhao, Seismic wave propagation in southern and central Africa, *Proceedings of the 18th Annual Seismic Research Symposium on Monitoring a Comprehensive Test Ban Treaty*, 371-379.

## 1995

(3) Owens, T.J., **A.A. Nyblade**, and C.A. Langston, The Tanzania Broadband Experiment, *Irish Newsletter*, 14, 5-7.

(2) **Nyblade, A.A.**, K.S. Vogfjord, and C.A. Langston, Implications for lithospheric reheating beneath the African superswell from  $P_n$  wave propagation in central and southern Africa, *Proceedings of the 17th Annual Seismic Research Symposium on Monitoring a Comprehensive Test Ban Treaty*, Phoenix, AZ, 271-280.

## 1994

(1) Vogfjord, K.S., **A.A. Nyblade**, C.A. Langston, Regional wave propagation in central and southern Africa, *Proceedings of the 16th Annual Seismic Research Symposium*, Thornwood, NY, 338-344.

## INVITED TALKS, COLLOQUIA AND OTHER PRESENTATIONS

### 2021

- **AfricaArray workshop**, keynote lecture, Johannesburg, South Africa, December
- **American Geophysical Union Fall Meeting**, invited talk, New Orleans, LA, December

### 2019

- **IRIS/ UNAVCO SAGE/GAGE Workshop**, invited talk, Portland, OR, October
- **NSF workshop on Broadening Participation of URMs in STEM Research Abroad**, invited talk, Washington D.C., May
- **Susquehanna Shale Hills Critical Zone Observatory, Annual All-Hands meeting**, invited talk, State College, PA, May

### 2018

- **University of Twente, International Training Center**, invited talk, Enschede, Netherlands, January
- **The Village at Penn State**, invited talk, State College, PA, April
- **Shale Network workshop**, invited talk, State College, PA, May

### 2017

- **Penn State University**, Symposium on Human Rights, Fracking and the Struggle for Representation, invited talk, University Park, PA, December
- **Virginia Tech University**, Department colloquium, November
- **Shale Network workshop**, invited talk, State College, PA, May
- **Geophysical Society of Pittsburgh**, invited talk, Pittsburgh, PA, April
- **Pennsylvania Department of Environmental Protection Citizens Advisory Council**, invited talk, Harrisburg, PA, April

### 2016

- **Montclair State University**, GeoPRISMS Distinguished Lecture, Department of Earth Sciences, February
- **University of Arkon**, GeoPRISMS Distinguished Lecture, Department of Earth Sciences, February

- **Eastern Kentucky University**, GeoPRISMS Distinguished Lecture, Department of Earth Sciences, March
  - **Penn State University, Extension office Webinar**, Williamsport, PA, May
  - **Pennsylvania Department of Environmental Protection**, invited talk, Harrisburg, PA, August
  - **HGS-PESGB Africa conference**, Keynote Lecture, Houston, TX, September
  - **Shell**, invited talk, Houston, TX, October
  - **Columbia University**, Department of Earth and Environmental Sciences colloquium, December
- 2015**
- **Southern Methodist University**, GeoPRISMS Distinguished Lecture, Department of Earth Sciences, February
  - **Scripps Institution of Oceanography**, GeoPRISMS Distinguished Lecture, March
  - **Utah Valley University**, GeoPRISMS Distinguished Lecture, Department of Earth Sciences, March
  - **Thanksgiving Point Institute**, GeoPRISMS Distinguished Lecture, Lehi, Utah, March
  - **Future Seismic and Geodetic Facility Needs in the Geosciences Workshop**, invited talk, Leesburg, VA, May
  - **HGS/PESGB Conference on African Exploration and Production**, Keynote Lecture, London, September
- 2014**
- **IRIS Webinar**, February
  - **NE GSA meeting**, invited talk, Lancaster, PA, March
  - **University of Michigan**, Department of Earth and Environmental Sciences colloquium, April
  - **Penn State University**, Department of Geosciences colloquium, December
- 2013**
- **IRIS Array Seismology Workshop**, 2 invited talks, Raleigh, NC, May
- 2012**
- **U.S. State Department**, presentation on AfricaArray, Washington D.C., January
  - **University of Maryland**, Department of Geology colloquium, January
  - **University of Alabama**, Department of Geological Sciences colloquium, February
  - **GeoPRISMS planning workshop** for the East African rift system, invited talk, Morristown, NJ, October
  - **Johns Hopkins University**, invited talk, Workshop on Climate Dynamics of Tropical Africa, November
- 2011**
- **National Science Foundation**, invited talk, PIRE meeting, Washington, DC. February
  - **ExxonMobil Upstream Research Company**, invited talk, Houston, TX, March
  - **SSA annual meeting**, invited talk, Memphis, TN, April
  - **Lamont-Doherty Earth Observatory**, invited talk, Workshop on New Insights into Ice Sheets, Climate and Mountain Formation from Dome A, May
  - **Boston University**, Department of Earth Sciences colloquium, September
- 2010**
- **SAMPLE workshop**, invited talk, Kiel, Germany, June
  - **Autonomous Polar Observing Systems Workshop**, invited talk, Washington, D.C., September
  - **UNAVCO**, invited talk, Boulder, CO, October
  - **National Center for Atmospheric Research**, invited talk, Boulder, CO, October
- 2009**
- **American Association for the Advancement of Science Annual Meeting**, invited talk, Chicago, February

- **Harvard Kennedy School of Government**, Conference on Geospatial Science for Development in Africa, invited talk, May.
  - **Margins Program Rifting Continental Lithosphere Workshop**, invited talk, Charleston, SC, May
  - **Workshop on evaluating and monitoring seismic hazards in Africa**, invited talk, Trieste, Italy, August
  - **USAID Climate Change Group**, presentation on AfricaArray, Washington D.C., October
  - **National Science Foundation**, Geosciences Directorate, presentation on AfricaArray, October
  - **ExxonMobil Upstream Research Company**, invited talk, Houston, TX, November
  - **AGU meeting**, invited talk, San Francisco, CA, December
- 2008**
- **Northwestern University**, Department of Earth and Planetary Science colloquium, January
  - **Incorporated Research Institutions for Seismology Workshop: Out of Africa**, invited talk, Boston, February
  - **Seismic Research Review on Nuclear Explosion Monitoring**, invited talk, Virginia Beach, VA, September
  - **Southeastern Section of American Physics Society**, invited talk, Raleigh, NC, October
  - **U.S. State Department, Africa Bureau**, briefing on AfricaArray, Washington, D.C., November
- 2007**
- **IUGG meeting**, invited talk, Perugia, Italy, June
  - **National Science Foundation**, invited talk, PIRE workshop, Washington, D.C., February
  - **U.S. State Department**, briefing on AfricaArray, Washington, D.C., November
- 2006**
- **Rutgers University**, Department of Earth and Planetary Sciences colloquium, April
  - **Cornell University**, Department of Earth and Atmospheric Sciences colloquium, May
  - **Annual IRIS Workshop**, Keynote Lecture, Tucson, AZ, June
  - **Consultation session on developing the Indian Ocean Tsunami Warning System**, invited talk, **Council for Geoscience, Pretoria, South Africa**, July
  - **Penn State University**, Department of Geosciences colloquium, September
  - **North Carolina A&T University**, Department of Physics colloquium, September
  - **University of Texas, Austin**, Department of Geological Sciences colloquium, November
  - **AGU meeting**, invited talk, San Francisco, CA, December
- 2005**
- **National Science Foundation**, presentation on AfricaArray, Geosciences Directorate, January
  - **United States Geological Survey**, invited talk, International Workshop on the Utilization of Seismographic Networks within the Global Earth Observation System of Systems Washington D.C., August
- 2004**
- **ExxonMobil Upstream Research Company**, invited talk, Houston, TX, January
  - **Lamont-Doherty Earth Observatory**, invited talk, March
  - **North Carolina A&T University**, invited talk, Department of Physics, September
  - **University of Michigan**, invited talk, Department of Geological Sciences, October
- 2003**
- **Stanford University**, Department of Geophysics colloquium, February
  - **Lawrence Livermore National Lab**, invited talk, Earth Science Division, February
  - **University of Colorado**, SEAP (Structure and Evolution of the Antarctic Plate) workshop, invited talk, Boulder, CO, March

- **University of California, Berkeley**, Department of Earth and Planetary Science colloquium, May
  - **US Geological Survey**, invited talk, Menlo Park, CA, June
  - **AGU meeting**, invited talk, San Francisco, CA, December
- 2002**
- **Princeton University**, invited talk, Department of Geosciences, September
  - **Rensselaer Polytechnic Institute**, Department of Earth and Environmental Sciences colloquium, September
- 2001**
- **University of Memphis**, Center for Earthquake Research and Information colloquium, April
  - **SUNY Stony Brook**, Department of Geosciences colloquium, April
  - **Syracuse University**, Department of Earth Sciences colloquium, May
- 2000**
- **AGU meeting**, invited talk, Washington, D.C., June
  - **International Geological Congress**, invited talk, Rio de Janeiro, Brazil, August
  - **Carnegie Institution, Division of Terrestrial Magnetism** colloquium, Washington, DC, November
- 1999**
- **SSA Annual meeting**, invited talk, Seattle, WA May
  - **Workshop on Scientific drilling in Lakes Malawi and Tanganyika**, invited talk, Club Makakola, Malawi, October
  - **Washington University**, Department of Earth and Planetary Science colloquium, St. Louis, MO, November
- 1998**
- **AGU meeting**, invited talk, Baltimore, MD, May
  - **Europrobe workshop on the evolution of Paleoproterozoic and Archean lithosphere (Svekalapko)**, Keynote Lecture, St. Petersburg, Russia, November
- 1997**
- **Dublin Institute for Advanced Studies**, invited talk, Ireland, March.
  - **Cambridge University**, invited talk, Department of Earth Sciences, U.K., March
  - **Annual IRIS Workshop**, Keynote Lecture, Breckenridge, Colorado, June
  - **Binghamton University, invited talk**, Department of Geological Sciences and Environmental Studies, September
  - **AGU meeting**, invited talk, San Francisco, CA, December
- 1996**
- **Cornell University**, Department of Earth and Atmospheric Sciences colloquium, February
  - **University of Leeds**, Department of Earth Sciences colloquium, Leeks, U.K., October
  - **Penn State University**, Department of Geosciences colloquium, November
- 1995**
- **Stanford University**, invited talk, Department of Geophysics, January
  - **US Geological Survey**, invited talk, Menlo Park, CA, February
  - **University of California, Santa Cruz**, Department of Earth and Planetary Science colloquium, February
  - **Stanford University**, Department of Geophysics colloquium, March
  - **Lawrence Livermore National Lab**, invited talk, Earth Science Division, April
  - **University of Texas - El Paso**, Department of Geological Sciences colloquium, April
- 1994**
- **University of South Carolina**, Department of Geological Sciences colloquium, April



## **COURSES TAUGHT**

Geosc 001 Physical Geology  
Geosc 002 Historical Geology  
Geosc 20 Planet Earth  
EMSC100S First-year Seminar  
Earth 106 Continent Africa  
Earth 109/Geosc 297/Geosc 397 Fundamentals of Shale Energy  
Geosc 109H Nuclear Explosions, Earthquakes and Society  
Geosc 483 Environmental Geophysics  
Geosc 497C Tectonics and Solid Earth Structure  
Geosc 597 Precambrian Orogenic Belts

## **MS THESIS COMMITTEES (\*current)**

Eliana Arias, Greg Brenn (U. Alabama), Peter Burkett, Louanne Christopher, Jacob Cipar, Joe Cominsky, Chira Endris, Dannie Hidayat, Cristy Ho, Aaron Jansen, Curtis Kennedy, Lindsey Kenyon (U. Alabama), Kelly Knight, Megan Koehane, Mike O'Driscoll, James Pippin, John Simmons, Joseph Valenti, Rhiannon Vicceli, Daniel Wheaton

## **PHD THESIS COMMITTEES (\*current)**

Thamer Alotaibi, Shelby Bowden, Chengping Chai, Jaocb Cipar, Michael Cleveland, Chanel Deane, Islam Fadel (U. Twente, Netherlands), John Hammer, Dannie Hidayat, Daejin Kang, Jonas Kintner, Monica Maceira, Rocco Malsevisi, Geoff Moret, Wendy Nelson, Tahiry Rajaonarison (Virginia Tech U.), Tyrone Rooney, \*Hesam Saeidi (U. Alabama), \*Junzhu Shen, Ryan Swanson, Yunhui Tan, Guangchi Xing, Tianji Zhang, Ming Zhao

## **SERVICE TO PENN STATE**

### **Department of Geosciences:**

- **Department Head**, 2019-2024
- **Executive committee**, 2008-2010, 2012-2014, 2016-2018
- **Promotion and Tenure committee**, 2010-2011, 2015-2016, 2018-2020
- **Chair, search committee**, Associate Head for Undergraduate Programs, 2011
- **Undergraduate program committee**, 1996-2000, 2010-2012, 2018-2020
- **Chair, CO<sub>2</sub> faculty search committee**, 2009-2010
- **CO<sub>2</sub> faculty search committee**, 2007
- **Graduate program committee**, 2004-2006
- **Geophysics faculty search committee**, 2004-2005
- **Chair, Computer committee**, 2002
- **Chair, Geophysics curricular group**, 2002, 2005
- **Geophysics faculty search committee**, 2001-2002
- **Chair, Admissions committee**, 2001-2002
- **Chair, Seismology faculty search committee**, 2000-2001
- **Admissions committee**, 2000-2001
- **Geodynamics faculty search committee**, 1999-2000
- **Rover for candidacy exams**, 1997-1999; 2017-2019
- **Computer committee**, 1997-2001

### **Colleges:**

- **Chair, search committee**, Department Head, Department of Meteorology and Atmospheric Sciences, 2022-2023
- **Search committee**, Associate Dean for Educational Equity, College of Earth and Mineral Sciences, 2015

- **Search committee**, Program Head, Acoustics program, College of Engineering, 2015
- **Search committee**, Director of Human Resources, College of Earth and Mineral Sciences, 2014
- **Chair, search committee**, Associate Dean for Educational Equity, College of Earth and Mineral Sciences, 2011
- **Diversity Council**, College of Earth and Mineral Sciences, 2008-2018
- **Computer committee**, College of Earth and Mineral Sciences, 2001-2002
- **Task force** to create an African Research and Educational focus within the College of Earth and Mineral Sciences, 2002

## **SERVICE TO THE PROFESSION**

### **AfricaArray ([www.africaarray.net](http://www.africaarray.net)):**

AfricaArray is a capacity building initiative for the geosciences in Africa and the U.S., with a strong emphasis on enhancing diversity in the geosciences. As a co-director, I had oversight of the following major activities.

- A network of 53 geophysical observatories spanning 17 countries in western, eastern and southern Africa containing seismic, GPS and weather sensors
- An educational and research program with undergraduate and graduate students at several universities in Africa and the U.S.
- A diversity program with activities in Africa and the U.S.
- Fundraising for all aspects of AfricaArray
- Annual workshops in Johannesburg, South Africa and Houston, Texas

### **Incorporated Research Institutions for Seismology (IRIS):**

- **Member**, Board of Directors, 2015-2017
- **Chair**, Polar Networks Science Committee, 2014-2015
- **Vice-Chair**, Polar Networks Science Committee, 2011-2013
- **Member**, International Development Seismology Committee, 2008-2011
- **Member**, International Seismology Working Group, 2006-2008
- **Member**, Planning Committee, 2006-2009
- **Member**, Board of Directors, 2005
- **Secretary**, Executive Committee, 2002-2005
- **Membership Committee**, 2002-2005

### **Geological Society of America:**

- **Chair**, Geological Society of America, Geophysics Division, 1999-2000
- **First vice-Chair**, Geological Society of America, Geophysics Division, 1998-1999
- **Second vice-Chair**, Geological Society of America, Geophysics Division, 1997-1998

### **Other:**

- **Member**, AGU seismology section award canvassing committee, 2020-2021
- **Member**, AGU selection committee for the Whitten medal, 2018-2019, 2020-2021
- **Member**, AGU selection committee for Africa Awards for Research Excellence in Earth and Space Science, 2016-2017, 2019
- **Member**, U.S. National Committee for Geodesy and Geophysics, National Academy of Sciences, 2011-2014
- **Member**, Special Emphasis Review Panel for IRIS, National Science Foundation, 2010
- **Member**, Review panel for grant proposals, PIRE program, National Science Foundation, 2007

- **Member** of the IGCP working group (482/489) on the East African Rift System, 2006 - 2009
- **Member**, U.S. Subglacial Antarctic Lake Environment (SALE) Program, 2005 - 2009
- **Special sessions organized at AGU meetings 1995, 1998, 2000, 2003, 2005, 2006, 2011**

**Workshops organized:**

- **2005-2019: Annual AfricaArray workshops (14 total)**, University of the Witwatersrand, Johannesburg, South Africa
- **2008-2018: Annual AfricaArray diversity forum (11 total)**, Houston, Texas
- **2014: Technical requirements for supporting long-term geodetic and seismological stations in Antarctica**, Washington, D.C., September
- **2011: Building a framework for facility support for polar seismic and geodetic science**, Washington, D.C., September
- **2010: Workshop on Expanding AfricaArray**, Howard University, Washington D.C.
- **2008: Out of Africa – Adapting the AfricaArray Model – Building Capacity Around the World**, Boston, February
- **2008: Workshop on Building Diversity in the Geosciences through AfricaArray**, North Carolina A&T University, February
- **2005: Antarctic Seismic and GPS Technologies, Challenges, and Opportunities Workshop**, Washington D.C., September