

Nicole K. Davi, Ph.D.

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EDUCATION:

Ph.D. 2009, Physical Geography (dendrochronology, paleoclimatology), Department of Geography, Rutgers, The State University of New Jersey, New Brunswick, New Jersey (Dissertation: Reconstructed drought variability across Mongolia based on tree-ring records).

Teachers College, Columbia University, New York. Graduate School of Education. One year toward Science Education Ph.D. 2004-2005.

M.S. 2002, Physical Geography, Department of Geography, Rutgers, The State University of New Jersey, New Brunswick, New Jersey (Thesis: Boreal temperature variability inferred from maximum latewood density and ring-width data from the Wrangell mountain region, Alaska).

B.S. 1996, Environmental Science, Ramapo College of New Jersey.

PROFESSIONAL EXPERIENCE:

2017 Associate Professor, William Paterson University of New Jersey, Department of Environmental Science. 300 Pompton Road, Wayne New Jersey.

2013-2016. Assistant Professor, William Paterson University of New Jersey, Department of Environmental Science. 300 Pompton Road, Wayne New Jersey. Courses taught: General Geology lec/lab, Hydrogeology, Junior Practicum, and Senior Practicum, Environmental Land-use and Planning, Field Experience.

2013-Present. Adjunct Associate Research Scientist, Lamont-Doherty Earth Observatory, Columbia University. Palisades, New York.

2012-2013. National Science Foundation Postdoctoral Research Fellow. Lamont-Doherty Earth Observatory, Columbia University. Palisades, New York.

2011-2015. Course Scientist, American Museum of Natural History, New York, New York. Course: Climate Change.

2009-2012. Postdoctoral Research Scientist. Tree Ring Laboratory, Lamont-Doherty Earth Observatory, Columbia University. Palisades, New York.

2002-2009. Research Associate, Tree Ring Laboratory, Lamont-Doherty Earth Observatory, Columbia University. Palisades, New York.

2004 Adjunct Professor, Department of Earth and Environmental Studies, Montclair State University. Montclair, New Jersey. Course: Introduction to Physical Geography

1997-2002. Research Assistant, Tree Ring Laboratory, Lamont-Doherty Earth Observatory,

Columbia University. Palisades, New York.

2002. Instructor, Department of Geography, Rutgers, State University of New Jersey. New Brunswick, New Jersey. Course: Remote Sensing.

2001. Teaching Assistant, Department of Geography, Rutgers, State University of New Jersey. New Brunswick, New Jersey. Course: Remote Sensing.

OTHER EXPERIENCE AND WORKSHOPS:

2015 ENGAGE: Catalyzing relationships, understandings, and collaborations between early career disciplinary researchers in the earth, atmospheric, ocean, and polar sciences and scientific discipline based education researchers in the geosciences. Arlington VA.

http://www.iris.edu/hq/workshops/2015/01/engage_workshop

2013 Module Developer, InTeGrate, Science Education Resource Center (SERC) Carleton College. Water Sustainability.

2012 Science Consultant, The Civilians, Investigative theater group. The Great Immensity, a play and media project about environmental challenges. <http://thegreatimmensity.org>

2012 Selected Scholar for Dissertations Initiative for the Advancement of Climate Change Research (DISCCRS) Symposium VII. NSF/NASA: <http://discrs.org/>

2012 Selected to participate in the Community Earth System Modeling Tutorial. (CESM). National Center for Atmospheric Research, Boulder, July 2012.

2012 Selected as a Fellow for Reach for Commercialization: A Workshop for Women Faculty and PostDocs in STEM. CEOS/ADVANCE, Columbus, OH, Sept 2012

2011 Selected for “On the Cutting Edge: Preparing for an Academic Career in the Geosciences” Workshop, Supported by NSF and the National Association of Geoscience Teachers.

2005 Science Advisor, Science Bulletins, American Museum of Natural History, New York, New York.

RESEARCH AWARDS AND GRANTS:

Collaborative Research: Calibrating Southeast Asian Proxies: Speleothems and Tree Rings, NSF Paleo-Perspectives on Climate Change P2C2 2016-2019 (PI M Griffiths, Co-PIs B Buckley, K Johnson, **N Davi**), October 2015, ~890K Awarded.

Collaborative Research: Climate, human and ecosystem interactions in the face of a rapidly changing Asian steppe. Arctic Social Science, National Science Foundation (PI Honeychurch, Co-PI Gardner W, Fowell S, **Davi N**), 1.5M, Feb. 2017, Awarded.

Climate Science Art Collaboration: National Endowment of the Arts. (Davi N PI, Evangelista K Co-PI, Johnsen E Co-PI). 60,000K, July 2017

Climate, livestock, and ecosystem interactions in the face of a rapidly changing Asian steppe. NASA Earth and Space Science Fellowship (**Davi N**, PI) Ph.D. Student support award for Mukund Palat Rao DEES, Columbia University, February 2017, \$180,000.

Collaborative Research: Evaluating long-term climate variability and change in Central Asia. Paleoclimate Program, National Science Foundation (PI **Davi N**, Co-PI D'Arrigo R, Lyon B), \$400,000, October 2016, Pending.

OPUS: Collaborative Research: The Tree-Ring Record of Severe Climate Conditions linked to Famine and other Socioeconomic Impacts Across Northern Regions. Division Of Environmental Biology, National Science Foundation (PI R D'Arrigo, Co-Pi **N Davi**). \$195,203, August, 2016, declined.

Investigating the origin of land cover degradation and dust emission in Central Asia. NASA Earth and Space Science Fellowship (**Davi N**, PI) Ph.D. Student support award for Mukund Palat Rao DEES, Columbia University, February 2016, \$90,000 Declined.

CAREER: Generating Ultra-Sensitive Millennial-Length Paleoclimatic Records for Central Asia using Novel Blue Light Intensity Techniques, NSF CAREER (**Davi N**, PI) \$573,176, July 2015, Declined.

Sub-Contract to Chuo University Japan: Research on Evaluation of Mean State and Climate Extremes in The long Meteorological Records in Mongolia (PI **Davi N**, Lall U, D'Arrigo R). \$73,252. November 2015, Awarded.

Student-Led Development of Earth Science Interpretive and Curriculum Materials for The Paterson Great Falls National Historic Park (PIs **Davi N**, Griffiths M). Landsberger Foundation: 2013-2014. \$14,000 Awarded, 2015-2016 \$14,500 Awarded

Toward a deeper understanding of climate induced disaster in Mongolia: Identifying mechanisms, change and vulnerability (PI: **N Davi**). NSF Atmospheric and Geospace Sciences Postdoctoral Research Fellowships. \$172,000. 2012-2015 Awarded

Using tree rings to develop critical scientific and mathematical thinking skills in undergraduate students, (PIs **Davi N**, Lead, Co-PI Wattenberg F) NSF Transforming Undergraduate Education in STEM (TUES), 2014-2016, \$248,392. Awarded

Tree-ring reconstructions of western North Pacific Climate Dynamics (D'arrigo, R, PI; Co-Pis: Anchukaitis, K, **Davi**, N) NSF Paleo-Perspectives on Climate Change 2012-2015, \$685,000. Awarded

Synthesis of three decades of research of tree growth In Northern Forests in relation to global climactic change, (D'arrigo, R, PI; Co-PIs: **N Davi**, Jacoby, G) NSF OPUS, 2010-2014: \$132,000. Awarded

The influence of atmospheric and oceanic forcings on the Southwest and Northeast Monsoon over India: A paleoclimate perspective (PIs Buckley B, **Davi N**). 2013 \$10,069. Lamont Climate Center. Awarded

Elucidating near-term climate change information to guide water resources decisions and foster sustainability, Earth Institute at Columbia University, Cross-Cutting Initiative, (Block P, PI; Co-PIs: **N Davi**, Green A, Marx S) 2010-2011: \$34,000. Awarded

SPrEaD FORESTS: Framing Opportunities in Research and Ecosystem Studies for Teachers and their Students (Degnan N Lead PI, CO-PIs **Davi N**, Meagher M, Newton R, Palmer M) National Science Foundation, Innovative Technology Experiences for Students and Teachers (ITEST), Fall 2014, \$1,838,371 Declined

Acquisition of Stable Isotope Instrumentation for High Precision Paleoclimatic, Environmental, and Biological Research at William Paterson University (Lead PI Griffiths, CO-PIs **Davi**, Becker, Peek, & Slaymaker) Internal William Paterson University New Equipment Competition. \$300,000 Spring 2015, Declined

Collaborative Research: Sub-Annual Reconstruction Of The Southeast Asian Monsoon (WPU PI **Davi N**). National Science Foundation Division of Earth Sciences: Global Change. \$113,616. Fall 2014, Declined

Towards a new understanding of the Dzud and other extreme events in Mongolia: coupling of climatic change and human activities, (**Davi N**, Lead PI, Co-PIs, D'Arrigo R, Anchukaitis K, Cook B, Levy M, Skees, J) NSF CNH \$1,496,826. 2012, Declined

Lamont-Doherty Geoscience High School Research Program (PIs Alcantara, Lead PI, Co-PIs, **Davi N**, and Newton R). Honda Foundation \$60,000. 2013, Declined (re-invited)

SC2OPE-LIT: Studying Climate Change as the Opportunity to Promote Environmental – Literacy (N Degnan, Lead PI, Co-Pis **Davi N** & Newton R). NOAA: Environmental Literacy Grants for Building Capacity of Informal and Formal Educators. 2013, \$699,344. Declined (re-invited)

Collaborative Research: Pathways AISL: Expeditions into Tree-ring Research: A Multimodal and Multimedia Public Outreach Campaign (PIs **N Davi**, F. Fiondella, G. Gould, and R Fowler), NSF AISL, 2013, \$250,000 Declined

PEER-REVIEWED PUBLICATIONS:

In Prep Gerry E*, **Davi N**, Stead C, Oelkers R, DaSilva M, A Dendro-Archaeological Study of Historic Structures from Rockland County, New York. * Undergraduate student-led paper.

In Prep Rao PM*, **Davi N**, Pederson N, Martin Benito D, Buckley B, Kruczkiewicz A, Ceccato P, Causes of early season vegetation, and is it an indicator for tree-growth and canopy type in Eastern North American temperate deciduous forests. PhD. Student-led paper.

In Prep Lyon B and **Davi N**, Recurrent and Anomalous Circulation Patterns Associated with Mongolian Summertime Rainfall Variability and “Dzud” Events.

In Prep Chen Z, Wang X, Wiles G, Pederson N, D'Arrigo R, **Davi N**. Climate Response and Growth of Three Congeneric Tree Species in Northeast Asia and Northeast North America

- In Prep Haraguchi M, Lall U, Wantanabe M, **Davi N**, Rao M, Leland C, Risk analysis of Climate Induced Disaster in Mongolia. *International Journal of Disaster Risk Reduction*
- In Revision Fang K, **Davi N**, Cao C, Wavelet analyses to aid crossdating. *Dendrochronologia*
- In Prep Leland, C, Cook E, Andreu-Hayles L, Pederson N, Hessl A, Anchukaitis K, Byambasuren O, Nachin B, **Davi N**, D'Arrigo R, Griffin K, Bishop K, Rao M, Strip-bark Morphology and Radial Growth Trends in Ancient *Pinus sibirica* Trees from central Mongolia
- In Prep Jesper Björklund, Georg von Arx, Daniel Nievergelt, Loic Schneider, Patrick Fonti, Anne Verstege, Holger Gärtner, Fritz Schweingruber, Rob Wilson, Björn Gunnarson, Björn Günther, Alexander Kirilyanov, Martin Wilmking, Tobias Scharnweber, Neil Loader, Song Huiming, Andrea Hevia, Ryszard Kaczka, Karolina Janecka, Markus Kochbeck, Claudia Hartl-Maier, Jan Esper, Kurt Nicolussi, Yu Liu, Laia Andreu-Hayles, Nicole Davi, Jan van Den Bulcke, Tom De Mil, Valerie Trouet, Danny McCarroll, Rose Oelkers, Jess Greary, Ignacio Mundo, Ricardo Villalba, Matt Meko, Mauri Timonen and David Frank (2018), Intra- and inter-method comparison of wood density measurements for 'global change' research
- Submitted Buckley BM, Hansen K, Griffin K, Schmiede S, Oelkers R, D' Arrigo, Stahle D, **Davi N**, Nguyen T, Le N, and Wilson R, Blue Intensity (BI) from a tropical conifer's growth rings and links to climate, *Dendochronologia*
- 2017 Wilson R; D'Arrigo R, Andreu-Hayles L; Oelkers,R; Wiles G, Anchukaitis K, and **Davi N**. Blue Intensity based experiments for reconstructing North Pacific temperatures along the Gulf of Alaska.
- 2017 Rao MP, Cook BI, Cook ER, D'Arrigo RD, Krusic P, Anchukaitis K, LeGrande A, Buckley BM, **Davi N**, Leland C, Griffin KL, European and Mediterranean hydroclimate response to tropical volcanic forcing over the past millennium. *Geophysical Research Letters*
- 2017 Anchukaitis, K., Wilson, R., Briffa, K., Büntgen, U., Cook, E., D' Arrigo, R., **Davi, N.**, Esper, J., Frank, D.,Gunnarson, B., Hegerl, G., Helama, S., Klesse, S., Krusic, P., Linderholm, H., Myglan, V., Osborn, T., Rydval, M., Schneider, L., Schurer, A., Wiles, G., Zhang, P. and Zorita, E. Last millennium Northern Hemisphere summer temperatures from tree rings: Part II: the spatial context. To be submitted to Quaternary Science Reviews.
- 2017 Sébastien Guillet, Christophe Corona, Markus Stoffel, Myriam Khodri, Franck Lavigne, Pablo Ortega, Nicolas Eckert, Pascal Dkengne Sielenou, Valérie Daux, Olga V. Churakova (Sidorova), **Davi N**, Jean-Louis Edouard, Yong Zhang, Brian H. Luckman, Vladimir S. Myglan, Joël Guiot, Martin Beniston, Valérie Masson-Delmotte & Clive Oppenheimer How exceptional were the climatic impacts of the largest Common Era volcanic eruption? *Nature Geoscience* 10, 123–128 (2017) doi:10.1038/ngeo2875

- 2016 Seim A, Schultz J, Leland C, **Davi N**, Byambasuren O, Liang E, Wang X, Beck C, Linderholm H, Pederson N, Synoptic-scale circulation patterns during summer derived from tree rings in mid-latitude Asia. *Climate Dynamics*
- 2016 Chen F, **Davi N**, et al, Irtysh River flow since 1500 as reconstructed by tree rings, reveals changing hydroclimatic signal of central High Asia. *Climatic Change DOI 10.1007/s10584-016-1814-y*
- 2016 Chen, Z, He X, **Davi N**, Zhang A, and Peng, J., A 258-year reconstruction of precipitation for southern Northeast China and the northern Korean peninsula. *Climate Change DOI 10.1007/s10584-016-1796-9*
- 2016 Esper J, Krusic P, Ljungqvist F, Luterbacher J, Carrer M, Cook E, **Davi N**, Kirilyanov A, Konter O, Myglan V, Salzer M, Timonen M, Treydte K, Trouet V, Villalba V, Wilson R, Yang B, Büntgen U, Review of tree-ring based temperature reconstructions of the past millennium. *Quaternary Science Reviews 145*.
- 2016 Wilson R, Anchukaitis K, Briffa K, Büntgen U, Cook E, D'Arrigo R, **Davi N**, Esper J, Frank D, Gunnarson B, Hegerl G, Klesse S, Krusic P, Linderholm H, Myglan V, Peng Z, Rydval M, Schneider L, Schurer A, Wiles G, and Zorita E, Northern hemispheric millennial temperatures from tree-rings: Part I: the long term context. Invited paper, *Quaternary Science Reviews. DOI: 10.1016/j.quascirev.2015.12.005*
- 2015 Rao PM*, **Davi N**, Wang S, D'Arrigo R, Skees J, Lyon B, Leland, C. Climate, Dzuds, droughts, and livestock mortality in Mongolia. *Environmental Research Letters—*PhD student- led paper.*
- 2015 **Davi N**, D'Arrigo R, Jacoby G, Nachin B. et al. A Central Asian Millennial Temperature Record based on Tree Rings from Mongolia. *Quaternary Science Reviews 121, 89-97*
- 2015 Chen Z, Zhang X, He X, **Davi N**, Bai X, Li L, Response of radial growth to warming and CO₂ enrichment in southern Northeast China: a case of *Pinus tabulaeformis*. *Climatic Change 130, 559-571*.
- 2015 Fang K, Chen D, D'Arrigo R, **Davi N**, Influence of non-climatic factors on the relationships between tree growth and climate over the Chinese Loess Plateau. *Global and Planetary Change*
- 2014 Fang K, Seppa H, He M, **Davi N**, Hydroclimate Variations in Central and Monsoonal Asia over the Past 700 Years. *PLOS ONE*
- 2014 D'Arrigo, R., R. Wilson, G. Wiles, K. Anchukaitis, O. Solomina, **N. Davi**, C. Deser, V Matskovsky, E Dolgova, Tree ring reconstructed temperature index for coastal northern Japan: Implications for western North Pacific variability. DOI: 10.1002/joc.4230 *International Journal of Climatology*
- 2014 Fang K, Wilmking M, **Davi N**, Zhou F, Liu C, An ensemble weighting approach for dendroclimatology: drought reconstructions for the northeastern Tibetan

- 2014 D'Arrigo R, **Davi N**, Jacoby G, Wilson R, Wiles G. Synthesis of Three Decades of Research on Tree Growth in Northern Forests in relation to Global Climatic Change. AGU/Wiley Monograph ISBN-13: 978-1118848722
- 2013 Fang K, **Davi N**, D'Arrigo R, A reconstruction of the Asia-Pacific Oscillation Index for the past 1500 years and its association with the Asian summer monsoon. *International Journal of Climatology* 34 (7).
- 2013 Leland C, Pederson N, Hessel A, **Davi N**, Nachin B. A Hydroclimatic Regionalization of North-central Mongolia as Inferred from Tree Rings. *Dendrochronologia*.
- 2013 **Davi N**, Pederson N, Leland C, Suran B, Nachin B, Jacoby G. Four centuries of hydroclimatic context for the recent drying in east central Mongolia. *Water Resources Research* 118, 1–8, doi:10.1029/2012WR011834
- 2012 Poulter, B., N. Pederson, H. Liu, Z. Zhu, R. D'Arrigo, P. Ciais, **N. Davi**, D. Frank, C. Leland, R. Myneni, S. Piao, and T Wang. Accepted. Recent trends in Inner Asian forest dynamics to temperature and precipitation indicate high sensitivity to climate change. Invited paper for the special issue "Drought threatened Inner Asian Ecosystems" in *Agricultural and Forest Meteorology*
- 2012 Cui M, He X, **Davi N**, Chen Z, Zhang X, Peng J, Chen W, Ding W. Evidence of century environmental changes: trace element in tree-ring of Fuling Mausoleum Shenyang. *Dendrochronologia* <http://dx.doi.org/10.1016/j.dendro.2011.09.003>,
- 2012 Fang K, Chen F, Gou X, **Davi N**, Liu C, Spatiotemporal drought variability for central and eastern Asia over the past seven centuries derived from tree-ring based reconstructions. *Quaternary International*. <http://dx.doi.org/10.1016/j.quaint.2012.03.038>
- 2012 Chen Z, Li J, Fang K, **Davi N**, He X, Cui M, Zhang X, Peng J. Seasonal dynamics of vegetation over the past 100 years inferred from tree rings and climate in Hulunbeier steppe, northern China. *Journal of Arid Environments* <http://dx.doi.org/10.1016/j.jaridenv.2012.03.013>,
- 2012 Peng J, Sun Y, Chen M, He X, **Davi NK**, Zhang X, Li T, Zhu C, Cai C, Chen Z. Tree-ring based precipitation variability since AD 1828 in northwestern Liaoning, China. *Quaternary International* <http://dx.doi.org/10.1016/j.quaint.2012.07.007>
- 2012 Pederson N, Leland C, Nachin B, Hessel A, Saladyga T, Suran B, Brown P M and **Davi N**. Four-hundred Years of Drought History in Mongolia's Breadbasket. *Agricultural and Forest Meteorology*, Special Issue: Drought threatened ecosystems in semi-arid Inner Asia. <http://dx.doi.org/10.1016/j.agrformet.2012.07.003>
- 2012 Chen, Z, Zhang X, Hea, X, **Davi**, N, Cuic, M and Penga, J Extension of summer (June–August) temperature records for northern Inner Mongolia (1715–2008),

China using tree rings. *Quaternary International*
<http://dx.doi.org/10.1016/j.quaint.2012.07.005>

- 2011 Zhang X, He X, Li J, **Davi N**, Chen Z, Cui M, Chen W, Li N. Temperature reconstruction (1750–2008) from Dahurian larch tree-rings in an area subject to permafrost in Inner Mongolia, Northeast China *Inter Research, Climate Research, Vol. 47: 151–159.*
- 2011 Fang K, Gou X, Chen F, Liu C, Zhao Z, **Davi N**, Li Y. Tree-ring based reconstruction of drought variability (1615–2009) in the Kongtong Mountain area, northern China. *Global and Planetary Change. Volume 80, p. 190-197.*
- 2010 Chen Z, He X, Cui M, **Davi, N**, Zhang X, Chen W, Sun Y, The effect of anthropogenic activities on the reduction of urban tree sensitivity to climatic change: dendrochronological evidence from Chinese pine in Shenyang city. *Trees – Structure and Function. DOI 10.1007/s00468-010-0514-x*
- 2010 **Davi N**, Jacoby G, Fang K, Li J, D'Arrigo R, Baatarbileg N. Robinson. Reconstructed drought across Mongolia based on a large-scale tree-ring network: 1520-1993. *Journal of Geophysical Research 15, doi:10.1029/2010JD013907*
- 2010 Fang K, Gou X, Chen F, Li J, D'Arrigo R, Cook E, Yang T, **Davi N**. Reconstructed droughts for the southeastern Tibetan Plateau over the past 568 years and its linkages to the Pacific and Atlantic Ocean climate variability. *Climate Dynamics: DOI 10.1007/s00382-009-0636-2.*
- 2010 **Davi N**, Reconstructed Drought variability across Mongolia based on tree-rings. Dissertation. Rutgers University. 174 pages.
- 2009 Li J, Cook E, Chen F, **Davi N**, D'Arrigo R, Gou X, Wright W, Fang K, Jin L, Shi J, Yang T. Summer Monsoon Moisture Variability over China and Mongolia during the Past Four Centuries. *Geophysical Research Letters 36: DOI 10.1029/2009GL041162*
- 2009 Fang, K., **Davi, N.**, Gou, X., Chen, F., Cook, E., Li, J., D'Arrigo, R. Spatial drought reconstruction for central high Asia based on tree rings. *Climate Dynamics: DOI 10.1007/s00382-009-0739-9*
- 2009 **Davi N**, Jacoby G, D'Arrigo R, Baatarbileg N, Li J, Curtis A. A Tree-Ring Based Drought Index Reconstruction for Far Western Mongolia: 1565-2004. *Int. J. of Climatology 29 (3), 1508-1514.*
- 2008 Nachin, B., Park, W., Jacoby, G.C., **Davi, N.K.** History of Mandal Monastery in Mongolia Based on Tree-Ring Dating. *Dendrochronologia 26 (2).*
- 2006 **Davi, N.K.**, Jacoby, G.C., Curtis, A.E., Nachin, B. Extension of Drought Records for Central Asia using Tree Rings: West Central Mongolia, *Journal of Climate 19: 288-299.*
- 2005 Solomina, O., **Davi, N.**, D'Arrigo, R. and Jacoby, G. Reconstructed Drought Variability on the Crimean Peninsula Over the Past Four Centuries. *Geophysical*

Research Letters 32 19704.

- 2004 Kaufman, R., D'Arrigo, R., Laskowski, C., Myneni, R., Zhou, L., **Davi, N.** The Effect of Growing Season and Summer Greenness on Northern Forests. *Geophysical Research Letters*, Vol. 31 No. 9, Pp.4.
- 2004 D'Arrigo, R., Kaufman, R., **Davi, N.**, Jacoby, G., Myneni, R., and Laskowski, C. Thresholds for Warming-Induced Growth Decline at Elevational Treeline in Yukon Territory, Canada. *Global Biogeochemical Cycles* 18, GB3021, doi:10.1029/2004GB002249.
- 2003 **Davi, N.**, Jacoby, G., and Wiles, G. Boreal Temperature Variability Inferred from Maximum Latewood Density and Tree-Ring Width Data, Wrangell Mountain Region, Alaska. *Quaternary Research* 60, 252-262.
- 2002 Wiles, G., McAllister, R., **Davi, N.**, Jacoby, G. Eolian response to little ice age climate change, Tana Dune, Chugach Mountains, Alaska. *Arctic, Antarctic, and Alpine Res.:* Vol.35, No.1, pp.67-73.
- 2002 **Davi, N.**, D'Arrigo, R., Jacoby, G., Buckley, B., Kobayashi, O. Warm-Season Annual to Decadal Temperature Variability for Hokkaido, Japan Inferred from Maximum Latewood Density (AD 1557-1990) and Ring Width Data (AD 1532-1990). *Climatic Change* 52, 201-217
- 2002 Wiles, G., Jacoby, G., **Davi, N.**, McAllister, R. Late Holocene Glacial Fluctuation in the Wrangell Mountains, Alaska. *Bulletin of Geological Society of America* 114, 896-908.

OTHER PUBLICATIONS AND PRODUCTS:

- In Prep **Davi N.**, Fiondella F, Fowler F, The Scientific Process Through Imagery.
- 2017 Davi N, Sinton C, Turner R, Plank T. *Water, Agriculture and Sustainability, Online education module. InTeGrate, Science Education Resource Center (SERC), Carleton College.*
http://serc.carleton.edu/integrate/teaching_materials/water_sustainability/index.html
- 2015 About Trees an artist book by Katie Holten. **Davi N.**, Chapter contributor "Tree Clocks and Climate Change". Broken Dimanche Press ISBN: 978-3-943196-30-6
- 2015 Davi N, **Pederson N.**, D'Arrigo R, Buckley B, Cook E, Wiles G, Peteet D, Farewell to a Tattooed, Bourbon Drinking, Grudge Holding, Tree-coring, Brilliant Buddhist Badass of a Scientist, Invited Memorial, *Journal of Tree Ring Research.*
- 2015 Davi N, **Pederson N.**, D'Arrigo R, Buckley B, Cook E, Wiles G, Peteet D, Farewell to a Tattooed, Bourbon Drinking, Tree-coring Scientist. Invited memorial, *Dendrochronologia.*

SELECTED ABSTRACTS/PRESENTATIONS:

Leland C, Cook E, Andreu-Hayles L, Pederson N, Hessel A, Anchukaitis K, Byambasuren O, Nachin B, **Davi N**, D'Arrigo R, Griffin K, Bishop D, Palat Rao M, A comparison of radial growth trends from strip-bark and whole-bark Siberian Pine trees and implications for climate reconstruction AGU 2017, New Orleans.

Wiles G, Charlton J, Wilson R, D'Arrigo R, Gaglioti B, Wiesenberg N, Oelkers R, Hayles L, **Davi N**. Progress and promise in reconstructing north pacific climate from ring-width and blue intensity tree ring chronologies. GSA Washington, Nov. 2017.

Davi N, Tree-rings, Mongolian Paleo-Climatology and Undergraduate Research, Silver Tip Ranch, Montana, July 2017.

Davi NK, D'Arrigo R1, Oelker R1&2, Geary J2, Reyes CM2, Leland C1&3, and Rao MP, Developing improved climate reconstructions for Central Asia, Annual Meeting of the American Association of Geographers, Boston April 2017

Geary J, Oelkers R, Reyes C, **Davi N**, Generating new ultra-sensitive temperature reconstructions in Mongolia using blue intensity reflectance. Annual Meeting of the American Association of Geographers, Boston April 2017

Wilson R, D'Arrigo R, Andreu-Hayles L, Oelkers R, Wiles G, Anchukaitis K, **Davi N**, Blue Intensity based experiments for reconstructing North Pacific temperatures along the Gulf of Alaska, EGU 2017

Leland C, Cook E, Pederson, Hessel A, Andreu-Hayles A, Anchukaitis A, Nachin B, Byambasuren O, **Davi N**, D'Arrigo R, Palat Rao M, Strip bark morphology and radial growth trends of Ancient Pinus sibirica trees in Mongolia: Considerations for dendroclimatic reconstructions. PAGES Young Scientists Meeting, Spain, Spring 2017.

Davi N, Fattal L, Rosenthal J, Tree-ring research through current technologies informs, makes accessible and nurtures scientific inquiry and an aesthetic sensibility to understand climate change, NJ Edge Conference Nov. 2016.

Davi N, Wattenburg F, Pringle P, Caulkins J, Griedanus I, Fiondella F, Oelkers R, Using Tree-Ring data to Develop Critical Scientific and Mathematical Thinking Skills in Undergraduate Students, Envisioning the Future of Undergraduate STEM Education: research and Practice Symposium, Washington DC April 27-29th, 2016 Sponsored by AAAS and NSF.

Davi N, Positioning Research for Competitive Federally Funded Grants. Invited Speaker, Advancing Research, Scholarship and Creative Expression at William Paterson University, April 2016.

Hansen* K, Wiles G, Oelkers R, D'Arrigo R, Andreu-Hayles L, **Davi N**, Strengthening the climate signal in tree-ring records using blue intensity methods: Gulf of Alaska. William Paterson University Research & Scholarship Day April 2016 (*Student Presentation)

Geary J*, Oelkers R, **Davi N**, Björklund J, An International Comparison of Tree-Ring Density. William Paterson University Research & Scholarship Day April 2016 (*Student Presentation)

C Sinton, **N Davi**, R Turner, T Plake, Teaching About Sustainability of Water Resources and Agriculture,. Association of Environmental Studies and Science, April 2016 Washington DC.

MP Rao, BI Cook, R D'Arrigo, AN LeGrande, C Leland, ER Cook, BM Buckley, **NK Davi**, K Anchukaitis, KL Griffin, European hydroclimate response to tropical volcanic forcing over the past millennium, LDEO Volcanic Impacts workshop, 2016.

Davi N, Invited speaker, Testing Blue Light technology on Temperature Sensitive Cores from Mongolia, Ameri-Dendro Conference, March 2016, Mendoza, Argentina.

Björklund J, Wood Densitometry Consortium (includes **N Davi**). Towards an International Benchmarking of Wood Density and Blue Intensity Measurements for Dendroclimatological Research. Ameri-Dendro Conference, March 2016, Mendoza, Argentina.

Wiles, G.; Happ, M.; Oelkers, R.; Wilson, R. ; D'Arrigo, R.; Solomina, O. **Davi, ; N.**; Andreu-Hayles, L.; Anchukaitis, K., Development of Blue Intensity (BI) Chronologies along the North Pacific Rim. Ameri-Dendro Conference, March 2016, Mendoza, Argentina.

Andreu-Hayles, L.; D'arrigo, R.; Oelkers, R.; Anchukaitis, K.J.; Wiles, G., Wilson, R.; Frank, D.; **Davi, N.**, Blue Intensity (BI) and Maximum Latewood Density (MXD) tree-ring chronologies from Alaska and Yukon Territory, Canada, Ameri-Dendro Conference, March 2016, Mendoza, Argentina.

Oelkers*, R.C.; Darrigo, R.; Andreu-Hayles, L. Wiles, G., Wilson. R.; **Davi, N.K.**; Buckley, B., The temperature signal of Blue Light Intensity (BI) tree-ring data sets from trees growing under distinct environmental conditions, Ameri-Dendro Conference, March 2016, Mendoza, Argentina. (***Student Presentation**)

Oelkers R, **Davi N**, D'Arrigo R., A long-term context for rapid warming in Mongolia and introduction to a new climat proxy. Rutgers Regional Climate Symposium, Nov. 2015, (***Student Presentation**)

Davi N, R D' Arrigo, Cook ER, Anchukaitis K, Nachin B, Rao M, Leland C, Oelkers R, A Long-Term Context (931-2005 C.E.) for Rapid Warming Over Central Asia. American Geophysical Union Fall 2015 Conference, San Francisco.

Davi N, F Wattenberg , P Pringle, F Fiondella-I Greidanus, and Rose Oelkers· Using Tree-Ring data to Develop Critical Scientific and Mathematical Thinking Skills in Undergraduate Students. American Geophysical Union Fall 2015 Conference, San Francisco.

Fiondella F, R Fowler, **N Davi**, Picture This: The Art of Using Museum and Science Collaborations to Teach about Climate Change. American Geophysical Union Fall 2015 Conference, San Francisco.

Sanders* R, **N Davi**, I Goldman, M Griffiths, B Balistriri, B Golden and A Aryasz* 2015. Connecting Grade 3-12 Students to Natural Geoscience Processes in Their Local Urban National Park, Geological Society of America, Baltimore, Maryland, Nov. 2015 (***Student Presentation**)

R Sanders*, **N Davi**, I Goldman, M Griffiths, B Balistriri, B Golden and A Aryasz* 2015. Connecting Grade 3-12 Students to Natural Geoscience Processes in Their Local Urban National Park, Re: NJ Science Convention, Princeton NJ Oct. 2015 (***Student Presentation**)

Davi N, Climate Change and the Impact on People Historically, Department of Elementary and Early Childhood Education, William Paterson University, 7th Annual Diversity Conference. June 2015

Davi N, Dzuds, droughts, and livestock mortality during unprecedented warming (931-2005 C.E.) in Mongolia, William Paterson University Research & Scholarship Day April 2015

E Gerry*, **N Davi**, A Dendro-Archaeological Study of Historic Structures from Rockland County, New York, William Paterson University Research & Scholarship Day April 2015 (***Student Presentation**).

R Sanders*, **N Davi**, I Goldman, M Griffiths, B Balistriri, B Golden and A Aryasz* 2015. Connecting Grade 3-12 Students to Natural Geoscience Processes in Their Local Urban National Park, William Paterson University Research & Scholarship Day, April 2015 (***Student Presentation**)

R Wilson, K Anchukaitis, K Briffa, U Büntgen, E Cook, R D' Arrigo, **N Davi**, Jan Esper, Dave Frank, Björn Gunnarson, Gabi Hegerl, S Klesse, P Krusic, Hans Linderholm, Z Peng, M Rydval, I schneider, S Tett, G Wiles and E Zorita, Are tree-ring based estimates for Northern Hemisphere medieval temperatures fit for purpose? European Geophysical Union meeting 2015, Vienna, Austria.

Frederick S, Solomina O, D'arrigo R, Anchukaitis K, Dolgova E, Matskovsky V, Maratovna T, Grabenko E, **Davi N**, Wiles G, Tree-Ring Reconstruction of the Paleoclimatic History for the Russian Far East. GSA Annual Meeting in Vancouver, British Columbia (19–22 October 2014)

Leland C, Pederson N, Seim A, **Davi N**, Hessel A, Nachin B, Climatic Convergence? Recent Synchronicity Among Tree-ring Records Across Mongolia. Tree-Rings in Archaeology, Climatology and Ecology. Aviemore, May 2014

Oelkers R*, Crapella J*, **Davi N**, & D'Arrigo R, Expeditions into Tree-ring Research: Developing a Photo Archive for Public Outreach and Education. William Paterson University Research & Scholarship Day (April 2014) (***Student Presentation**)

Thompson C*, Gerry E*, Nichols D*, Heye M*, Scimeca R*, **Davi N**, Griffiths M, Goldman I, Student-Led Development of Earth Science Curriculum for Paterson Schools Grades 4, 7, and 8: A collaboration between William Paterson University, the Paterson Great Falls National Historic Park and the Paterson Museum. William Paterson University Research & Scholarship Day (April 3rd, 2014) & the 8th Annual Undergraduate Research Symposium in the Biological Sciences at William Paterson University (April 12th, 2014). (***Student Presentation**)

Davi N, Climate reconstruction and livestock mortality in Mongolia. Invited speaker. Center for Arctic Studies, Smithsonian Institution. May 2013

Davi N, Lyon B, D'Arrigo R, Pederson N, Leland C, Curtis A, Climate-Induced Disasters in the Livestock Sector in Mongolia: Reconstructions and Dynamical Insights. AGU Fall 2012.

Davi N, Wattenberg F, Pringle P, Tanenbaum J, O'Brien A, Greidanus I, Perry M. Using tree-ring data, research, and expeditions as an accessible, hands-on “bridge” into climate studies for diverse audiences. AGU Fall 2012.

Davi N, Lyon B, D'Arrigo R, Pederson N, Leland C, Seim A. Recurrent and Anomalous Circulation Patterns Associated with Mongolian Summertime Rainfall Variability and “Dzud” Events. NOAA's 37th Climate Diagnostics and Prediction Workshop. Oct 2012

Leland C, Pederson N, Nachin B, Hessel A, **Davi N**, Bell A, Martin-Benito D, Saladyga T, Brown P, Suran B. Hydroclimatic variability across Mongolia's breadbasket and implications for water resource management. AGU 2012

Davi N, Pederson N, Leland C, Suran B, Nachin B, Jacoby G. Four centuries of hydroclimatic context for the recent drying in east central Mongolia. The 2nd International Asian Dendrochronological Association Conference. China, August 2011.

Leland C, Pederson N, **Davi N**, Hessel A, Assessment of Hydroclimatic Regions across North-central Mongolia as Inferred from Tree-rings. The 2nd International Asian Dendrochronological Association Conference. China, August 2011.

Davi, N. Droughts, Dzud and Archaeology in Mongolia: A Tree Ring Perspective. School of Marine and Atmospheric Sciences, Stony Brook University. October, 2011.

Davi N. Biology and Paleo-Environment Seminar. Drought Reconstruction Across Mongolia. LDEO, Palisades, NY, Jan. 2010

Anchukaitis, K.J., B.M. Buckley, E.R. Cook, R.D. D'Arrigo, G.C Jacoby, W.E. Wright, **N. Davi**, J. Li, 2009. A thousand years of human history and the Asian monsoon from tropical tree rings, Georgetown University, Washington DC, October 2009.

Anchukaitis, K., E. Cook, C. Ammann, B. Buckley, R. D'Arrigo, G. Jacoby, W. Wright, **N. Davi**, and J. Li. Objective spatiotemporal Asian monsoon climate proxy-model comparisons for the last millennium. Presentation, Conference on Climate Variability in the Greater Mekong River Basin: Paleo proxies, instrumental data and model projections. Dalat City, Vietnam, February 16-18, 2009

Davi, N., Jacoby, G. Moisture Variability Across Mongolia. National Science Foundation Project Workshop: Tree-Ring Reconstructions of Asian Monsoon Climate Dynamics. Lamont-Doherty Earth Observatory, Palisades, NY, Sept. 2008.

Anchukaitis, K.J., E.R. Cook, C.M. Ammann, B.M. Buckley, R.D. D'Arrigo, G. Jacoby, W.E. Wright, **N. Davi**, J. Li, Objective spatiotemporal proxy-model comparisons of the Asian monsoon for the last millennium. Eos Trans. AGU, Fall Meet. Suppl., Abstract PP21A-1403, 2008.

Davi, N, Jacoby C. Extension of Drought Records for Central Asia Using Tree-Rings. 7th International Conference on Dendrochronology: Cultural Diversity & Environmental Variability Beijing, China, June 2006.

Davi, N., and Jacoby, G., Mongolian Dendroclimatology. Archaeology and Environmental History of Mongolia Workshop, University Honors College, University of Pittsburgh. Feb.

2005.

Solomina, O., **Davi, N.**, D'Arrigo, R., and Jacoby, G., Summer precipitation reconstructed by pine ring-width chronologies and the Saki lake sediments in Crimea, Ukraine. International Conference on Tree Rings and Climate: Sharpening the Focus. Laboratory for tree ring research, University of Arizona, Tucson. April 5-9, 2004.

D'Arrigo R, **Davi N**, Jacoby G and Wiles G, A Tree-Ring Temperature Reconstruction from the Wrangell Mountains, Alaska (1593-1992): Evidence for Pronounced Regional Cooling During the Maunder Minimum 2002 AGU.

Davi, N., Jacoby, G., Wiles, G., Boreal Temperature Variability Inferred from Maximum Latewood Density and Ring Width Data from the Wrangell Mountain Region Alaska, 6th International Conference on Dendrochronology, Quebec, August 2002.

Davi, N., Jacoby, G., Wiles, G., McAllister, R., Skelly, S. 2000: Dendroclimatic Evidence for Environmental Change from the Wrangell Mountains of Alaska. International Conference on Dendrochronology for the Third Millennium 2-7 April 2000, Mendoza, Argentina.

Wiles, G., McAllister, R., Skelly, S., Jacoby, G., **Davi, N.** 2000: Tree-Ring Dated Little Ice Age Glacier Histories and Regional Comparisons, Wrangell Mountains, Alaska USA. International Conference on Dendrochronology for the Third Millennium 2-7 April 2000, Mendoza, Argentina.

Frank, D., Jacoby, G., Shumilov, O., Lovelius, N., Pederson, N., **Davi, N.**, Karbainov, J., Kirtsidely, I., Raspopov, O. 2000: Temperature Reconstruction From the Taymir Peninsula, Northern Siberia. Intl. Conference on Dendrochronology for the Third Millennium 2-7 April 2000, Mendoza, Argentina.

McAllister, R., Wiles, G., **Davi, N.**, Jacoby, G., 2000: Dendogeomorphology of the Tana Dunes, Alaska: Geological Society of America Abstracts with Programs, Northcentral Meeting, Indianapolis, IN.

SERVICE:

University:

Lead faculty member to re-design the Sustainability Program at WPU

Advisory Committee: Paterson Metropolitan Region Research Center, William Paterson University of NJ. Spring 2015-Present

Research Advisory Committee, William Paterson University. Fall 2015.

Green Team, William Paterson University, Fall 2014- Present

Climate Action Committee, William Paterson University, Fall 2014-Present

Liaison to Passaic County community for student civic engagement in the environmental sciences.

Development of a paleo-climate laboratory and wood shop for undergraduate student research at WPU

Integration of Career Services and resume building into classes at WPU.

Supervisor/trainer of summer research assistants, students and visiting scientists, LDEO, Palisades, New York. 2000-2013.

Discipline:

Professional reviewer of journal manuscripts for *Dendrochronologia*, *Journal of Climate*, *International Journal of Climatology*. *Quaternary Research*, *Quaternary Science Reviews*.

Proposal reviewer for National Science Foundation.

Group Leader and Co-organizer Mongolian Dendroecological Fieldweek, Department of Forestry, National University of Mongolia, Ulaanbaatar, Mongolia, June 2007 & 2003.

Community:

Developed and taught plate tectonic lesson plan for 4th grade Nyack School District. May 2017

Visiting scientist to the Nyack School District (~1x a month), NY 2013- present.

Founding Member of Science and Outdoor Learning (SOL), Nyack School District. 2011-2015.

Lamont's "Open House": Coordinate Tree-Ring Laboratory's participation and develop science content for annual day of public education at Lamont-Doherty Earth Obs. Palisades, NY, 1997-2013.

Hudson Snapshot Day, Group Leader, Oct. 2010, 2015.

West Point Climate Change Seminar. Using Tree-rings and Climate Data for Teaching, LDEO, Palisades NY, Nov. 2010.

Lecturer: 'Learning from Tree-Rings: Introduction to Dendrochronology', Earth 2 Class (Dr. Micheal Passow), LDEO, Palisades, New York, 2011, 2005, 2003.

Bronxville High School Science Symposium, Guest Science Speaker, June 2010.

Liberty Science Center Poster Exhibit: Introduction to tree-ring research. Jersey City, New Jersey, 2002 & 2008.

SYNERGISTIC ACTIVITY:

Panelist for "Innovations: Intersections of art and science" symposium at Wesleyan University and curated by Liz Lerman, American choreographer.

Panelist for "Better Than Barter: Artists and Scientists Re-define Collaboration, Mentorship and Community" Co-curated and co-moderated by Lisa Phillips (Lenfest Center for Sustainable Energy, Earth Institute, Columbia University) and Dana Whitco (Institute for Performing Arts, NYU), Co-Directors, PositiveFeedback – an initiative of The Earth Institute, Columbia University.

Co-author, AGU Monograph and CD Atlas on NH Temperature Reconstructions from Latitudinal Treeline: contract work in progress for AGU, NSF OPUS Project.

Dendrochronological dating of historic instruments and structures.

Theater and artist collaboration; Superhero Clubhouse, Positive Feedback.

PROFESSIONAL AFFILIATIONS: American Geophysical Union, Tree-Ring Society, National Association of Geoscience Teachers.