Nicole K. Davi, Ph.D. 300 Pompton Road

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**EDUCATION:**

**Ph.D. 2009,** Physical Geography (dendrochronology, paleoclimatology), Department of Geography, Rutgers, The State University of New Jersey, New Brunswick, (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, (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:**

**Full Professor (2019-present),** William Paterson University of New Jersey, Department of Environmental Science. 300 Pompton Road, Wayne New Jersey.

**Associate Professor (2017-2019**), William Paterson University of New Jersey, Department of Environmental Science. 300 Pompton Road, Wayne New Jersey.

**Assistant Professor (2013-2017),** 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.

**Adjunct Associate Research Scientist (2013-present),** Lamont-Doherty Earth Observatory, Columbia University. Palisades, New York.

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

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

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

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

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

**Research Assistant (1997-2002),** Tree Ring Laboratory, Lamont-Doherty Earth Observatory, Columbia University. Palisades, New York.

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

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

**OTHER EXPERIENCE AND WORKSHOPS:**

# 2016 “Envisioning the Future of Undergraduate Science Education, Technology Engineering and Mathematics (ENFUSE)”, Washington sponsored by NSF and AAAS. Networking with NSF program officers and faculty engaged in improving undergraduate geoscience education.

# 2013-2016 Module Developer, InTeGrate, Science Education Resource Center (SERC) Carleton College. Water Sustainability.

# 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>

# 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://disccrs.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, 2012.

**2012** Selected for “On the Cutting Edge: Preparing for an Academic Career in the Geosciences” Workshop, hosted by NSF, The National Association for Geoscience Teachers and Carleton College.

**2005 Science Advisor,** Science Bulletins, American Museum of Natural History, NY, NY.

**RESEARCH AWARDS AND GRANTS:**

Collaborative: A Millennial Northwestern North American Treeline Blue Intensity Network based on Living and Subfossil Wood (PI: D’Arrigo R, CoPI: Anchukaitis K, Wiles G, Wilson R, **Davi N**, Porter T), WPU $65,000, P2C2, Oct. 2018 Pending.

Developing long-term climate records from high-altitude ecosystems of the Colombian Central Cordillera (PI **N Davi**), Fulbright U. S. Scholars Program, $30,000 Pending.

Climate Science Art Collaboration: National Endowment of the Arts. (Evangelista K, **Davi N**, Johnsen E), Nov. 2018, $20,000, Awarded.

Geoscience Education: Paterson Great Falls National Historical Park: National Park Service. (PI Ilyse Goldman, w. **N Davi**, N. Susan Balic, and N. Noris-Bauer). 2018, $38,300 Awarded.

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, $780,000 Awarded.

WPU: Infrastructure Support for Undergraduate Research in Dendrochromnology (**Davi N**, Griffiths M), School of Science and Health (internal award). March 2015, $19,000. Awarded

Collaborative Research: Climate, human and ecosystem interactions in the face of a rapidly changing Asian steppe. Arctic Social Science, NSF (PI Honeychurch, Co-PI Gardner W, Fowell S, **Davi N**), $1,200,000, Feb. 2017, Awarded.

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 M. Rao DEES, Columbia University, February 2017, $180,000, declined.

Collaborative Research: Evaluating long-term climate variability and change in Central Asia. Paleoclimate Program, NSF (PI **Davi N**, Co-PI D’Arrigo R, Lyon B), $400,000, 2016, declined.

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, NSF (PI R D’Arrigo, Co-Pi **N Davi**). $195,203, August, 2016, declined.

Using tree rings to develop critical scientific and mathematical thinking skills in undergraduate students, (PIs **Davi N,** Lead, Co-PI Wattenberg F) NSF-DUE, 2014-2019, $248,392. Awarded

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.

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

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

WPU: Infrastructure Support for Undergraduate Research in Dendrochromnology (**Davi N**), School of Science and Health (internal award). Sept. 2013, $20,000. Awarded

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

Tree-ring reconstructions of western North Pacific Climate Dynamics (D'arrigo, R, PI; Co-Pis: Anchukaitis, K, **Davi**, N) NSF P2C2, 2012-2015, $685,000. Awarded

Synthesis of three decades of research of tree growth In Northern Forests*,* (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: ((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 WPU New Equipment Competition. $300,000, 2015, Declined

Collaborative Research: Sub-Annual Reconstruction Of The Southeast Asian Monsoon (WPU PI **Davi N**). NSF EAR: 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

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 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 Prep Jesper Björklund, Georg von Arx, Daniel Nievergelt, Loïc Schneider, Patrick Fonti, Anne Verstege, Holger Gärtner, Fritz Schweingruber, Rob Wilson, Björn Gunnarson, Björn Günther, Alexander Kirdyanov, 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

In prep **Davi**, Oelkers, Rao, D’Arrigo, Wilson, Nachin, Surin, Byambasuren, Geary, Buckley, Pederson, Leland, Andreu Hayles, Improved temperature reconstructions for Central Asia.

In Prep **Davi N**, Lockwood J, Fiondella F, Pringle P, Tree-Ring Expeditions (TREX) for Undergrads: Five online labs that focus on compelling and societally relevant tree-ring research that guides students to think like scientists. *Journal of Geoscience Education*

2019 Wilson, R., Wood, C., Oelkers, R., Haberbauer, L., Luckman, B., Morimoto, D., Andreu Hayles, L., D’Arrigo, R., **Davi, N**., Cook, E., Krusic, P., Anchukaitis, K., Wiles, G. Exorcising “divergence” using Blue Intensity in the southern Yukon. In Press

2019 **Davi N**, Lockwood J, Fiondella F, Pringle P, Oelkers R,Tree-Ring Expeditions (TREX): Online labs that guide students to think like scientists. *Journal of Tree-Ring Research*. In Press.

2018 Buentgen U, Wacker L, Galvan D, Arnold S, Arseneault D, Baillie M, Beer J, Bernabei M, Bleicher N, Boswijk G, Bräuning A, Carrer M, Ljungqvist F, Cherubini P, Christl M, Christie D, Clark P, Cook C, D'Arrigo R, **Davi N**, Eggertsson O, Esper J, Fowler A, Gedalof Z, Gennaretti F, Griessinger J, Grissino-Mayer H, Grudd H, Gunnarson B, Hantemirov R, Herzig F, Hessl A, Heussner K, Jull T, Kukarskih V, Kirdyanov A, Kolar T, Krusic P, Kyncl T, Lara A, LeQuesne C, Linderholm H, Loader N, Luckman L, Miyake F, Myglan V, Nicoluss Ki, Oppenheimer C, Palmer J, Panyushkina I, Pederson N, Rybnicek M, Schweingruber F, Seim A, Sigl M, Churakova (Sidorova) O, Speer J, Synal H, Tegel W, Treydte K, Villalba R, Wiles G, Wilson R, Winship L, Wunder J, Yang B, and Young G, Tree rings reveal globally coherent signature of cosmogenic radiocarbon events in 774 and 993 CE" *Nature Communications 9, 3605.*

2018 Buckley BM, Hansen K, Griffin K, Schmiege 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 V50.*

2018  *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*, Journal of Geophysical Research: Biogeosciences: DOI: 10.1002/2017JG004196

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. Clim. Past, 13, 1007-1022

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: https://doi.org/10.1002/2017GL073057*

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. Quat. Sci, Reviews, 134, 1-18.

2017 Guillet S, Corona C, Stoffel M, Khodri M, Lavigne F, Ortega P, Eckert N, Dkengne Sielenou P, Daux V, Churakova (Sidorova) O, Davi N, Edouard J, Zhang Y, Luckman B, Myglan V, Guiot J, Beniston B, Masson-Delmotte V, Oppenheimer C, 2017, How exceptional were the climatic impacts of the largest Common Era volcanic eruption? *Nature Geoscience* 10, 123–128

2016Seim 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* *V49, Issue 5–6.*

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**, Kirdyanov 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. *Env. Res. Letters—\*PhD student*

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 Plateau. PLOS ONE https://doi.org/10.1371/journal.pone.0086689

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, Hessl 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. 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 FangK, ChenF, GouX, **DaviN**, LiuC, 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 Hulunbei’er steppe, northern China. *Journal of Arid Environments* http://dx.doi.org/10.1016/j.jaridenv.2012.03.013,

2012Peng 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, LelandC, NachinB, Hessl A, SaladygaT, SuranB, BrownP M and **DaviN**. 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 *Climate Research 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. *Geophy. Res. Let.* 32 19704.

2004 Kaufman, R., D’Arrigo, R., Laskowski, C., Myneni, R., Zhou, L., **Davi, N**. The Effect of Growing Season and Summer Greeness 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, Anarctic, 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.

**BOOKS, EDUCATIONAL PRODUCTS, AND OTHER PUBLICATIONS:**

2018 **Davi N**, Pringle P, Fiondella F, Lockwood J, Wattenburg F, Greidanus I, Fox S. Tree-Ring Expeditions (TREX), online labs for undergraduates: <https://serc.carleton.edu/trex/index.html>

2017 **Davi, N**, Plake T, Sinton C, Turner R, Water Agriculture and Sustainability: Curriculum for the InTeGrate, SERC—Science Education Resource Center, Carleton College. <https://serc.carleton.edu/integrate/teaching_materials/water_sustainability/index.html>

2016 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. Memorial, *Dendrochronolgia.*

**SELECTED ABSTRACTS/PRESENTATIONS:**

**Davi, N,** Tree-Ring Expeditions (TREX): Online labs to improve student understanding of climate change and the nature-of-science. Technology Across the Curriculum. EXPLORATIONS: Research, Scholarship and Creative Expression WPU Conference, April 2019

Bell R, D’Andrea W, **Davi N**, Climate Conversations: Nyack Knows, The Nyack Center, April 2019.

**Davi N,** Climate Change Through the Lens of Tree Rings: To the Core of Me. Collabaortive Eco-Theatre Workshop. Pratt University, March 2019

Knyfd\* K, Nixon T, Degan A, Harris J, **Davi N**, Griffiths M, Raphael J, Forrester JTracing Storms and Climate Change Through Tree-Ring Growth Patterns on Coastal Maritime Forests in NY and NJ, GSA, March. 2019 Portland ME. \*Student led

Oelkers R, Andeu-Hayles L, D’Arrigo R, Wiles G, **Davi N**, Anchukaitis K, A Blue Intensity Temperature Record from a Drought-Sensitive White Spuce Site in Central Alaska, AGU 2018

**Davi N**, Oelkers R, Fiondella F, Pringle P, Tree-Ring Expeditions (TREX) for Undergrads: Online labs that guide students to think like scientists, AGU 2018, Wash. DC.

Andeu-Hayles L, D’Arrigo R, Oelkers R, Anchukaitis K, Gaglioti B, Wilson R, Wiles G, Frank D, **Davi N**, Temperature Variabilty from Blue Intensity (BI) and Maximum Latewood Density (MXD) Tree-Ring Chronologies from the Nother American Boreal Forests, AGU 2018.

Knyfd\* K, Nixon T, Degan A, Harris J, **Davi N**, Griffiths M, Raphael J, Forrester JTracing Storms and Climate Change Through Tree-Ring Growth Patterns on Coastal Maritime Forests in NY and NJ, Rutgers Climate Symposium, Nov. 2018. \*Student led

**Davi N**. Tree-Ring Expeditions: A pedagogical workshop on creative and engaging assignments for the Center for Teaching Excellence. Oct. 2018

Wilson, R., Andreu Hayles, L., Cook, E., D’Arrigo, R., **Davi, N**., Haberbauer, L., Krusic, P., Luckman, B., Morimoto, D., Oelkers, R., Wood, C. Exorcising “divergence” using Blue Intensity in the southern Yukon. World Dendro Bhutan, June 2018

Gaglioti BV, Rao MP, Wiles GC, Oelkers R, N Wiesenberg, D’Arrigo RD, Wilson R, Andreu-Hayles L, **Davi N,** Cook, ER, Assessing the expression of volcanic cooling on North Pacific climate over the last millennium: The Seasonal Record from Coastal Alaskan Trees. Frontiers in Earth Science, Columbia University. June 2018.

**Davi N**, Pringle P, Lockwood J, Fiondella F, Wattenburg F, Greidanus I, TREX (Tree-Ring Expeditions): curriculum modules that use tree-ring research techniques and data to develop critical scientific thinking skills in undergraduate students. National Association of Geoscience Teachers, Washington, June 2018

**Davi N**, Demystifying Service Learning and Building Campus and Community Partnerships, Panelist. Institute for Teaching Excellence, NJ Institute of Technology. May 16th, 2018.

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 D, Rao M, Strip-bark morphology and radial growth trends of ancient *Pinus sibirica* trees in Mongolia: Considerations for dendroclimatic reconstructions. World Dendro Bhutan, 2018.

Eric Howard\*, Richard Plattel, Elizabeth Judge, Nazila Yekanifard, Omar Mahmoud, Mike Dasilva, **Nicole Davi,** Martin A. Becker. 2018, A Preliminary Study of Microplastics and Microfibers at The Molly Ann Brook, NJ, GSA, Burlington VT. March 2018. \*Student led

**Davi N**, Ilyse Goldman, Hazel England, and Bruce Balistrieri, Improving Geoscience Literacy Through Connections to the National Park Service and Community Partners, National Center for Science and Civic Engagement, Science, Washington DC, March 2018.

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 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-Climate and Undergraduate Research, Silver Tip Ranch, Montana, July 2017.

**Davi N** , 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. \*Student led

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, HesslA, Andreu-HaylesA, AnchukaitisA, NachinB, ByambasurenO, **Davi N**, D’ArrigoR, Palat RaoM, 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, Washing 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 WPU, 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 led

Geary J\*, Oelkers R, **Davi N**, Björklund J, An International Comparison of Tree-Ring Density. William Paterson U Research & Scholarship Day April 2016, \*Student led

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, 2016, Mendoza, Argentina. \*Student led

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, 2015, \*Student led

**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. AGU Fall 2015.

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 led

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 led

**Davi N,** Climate Change and the Impact on People Historically, Department of Elementary and Early Childhood Education, WPU, 7th AnnualDiversity Conference. June 2015

**Davi N,** Dzuds, droughts, and livestock mortality during unprecedented warming (931-2005 C.E.) in Mongolia, WPU 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 led

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, WPU Research & Scholarship Day, 2015 \*Student led

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, l schneider, S Tett, G Wiles and E Zorita, Are tree-ring based estimates for Northern Hemisphere medieval temperatures fit for purpose? EGU 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**, Hessl 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 led

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: WPU & Scholarship Day (2014 & the 8th Annual Undergraduate Research Symposium in the Biological Sciences at WPU (April 12th, 2014). \*Student led

**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, Hessl 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**, Hessl 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. Conference on Climate Variability in the Greater Mekong River Basin: Paleo proxies, instrumental data and model projections. 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, PP21A-1403, 2008.

**Davi, N**, Jacoby C. Extension of Drought Records for Central Asia Using Tree-Rings. 7th International Conference on Dendrochronology, 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 Dendrochronolgy, 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, 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, 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, 2-7 April 2000, Mendoza, Argentina.

McAllister, R., Wiles, G., **Davi, N**., Jacoby, G., 2000: Dendogeomorphology of the Tana Dunes, Alaska: GSA, Northcentral Meeting, Indianapolis, IN.

**SERVICE:**

William Paterson University:

* Lead faculty member to re-design the Sustainability Program at WPU
* Paterson Metropolitan Region Research Center Advisory Committee, 2015-Present
* Civic Engagement Advisory Committee
* Research Advisory Committee

Discipline:

* Reviewer: Dendrochronologia, Journal of Climate, International Journal of Climatology. Quaternary Research, Quaternary Science Reviews.
* Proposal/Panel reviewer for NSF (AGS, CNH, DUE).

Community:

Advisory Board, Science and Outdoor Learning (SOL), Nyack School District. 2011-2018.

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