

Brief Curriculum Vitae – J. Wright Horton Jr., February 2015

Research Interests

Field and laboratory research on structural geology and tectonics, metamorphic and igneous rocks, impact craters and related materials, fault zones and fault rocks, mountain chains, Appalachian Piedmont and Blue Ridge geology, pre-Cretaceous terranes and buried basins beneath the Atlantic and Gulf coastal plains, and hydrogeology of fractured crystalline rocks, including geologic mapping, scientific drilling, geologic interpretation of geophysical data, and multidisciplinary collaborations

Professional Experience

Research Geologist, U.S. Geological Survey, Reston, Virginia, 1980–present

National Research Council Postdoctoral Associate, U.S. Geological Survey, Reston, Virginia, 1978–80

Assistant Professor of Geology, University of Southern Maine, Portland and Gorham, Maine, 1977–78

Education

Ph.D., University of North Carolina at Chapel Hill (Geology), 1977

M.S., University of North Carolina at Chapel Hill (Geology), 1974

B.S., Furman University (Geology), 1972

Awards and Honors

STAR Awards, U.S. Geological Survey, 1997, 2003, 2004, 2006, 2011

Superior Service Award, U.S. Department of the Interior, 1997

Elected *Fellow*, Geological Society of America, 1986

Special Achievement Award, U.S. Geological Survey, 1986

Awarded National Research Council (NRC) Postdoctoral Research Associateship, 1978–80

Projects

Task Leader, Central Virginia Seismic Zone Overview and Synthesis task of USGS Geologic Framework for Seismic Hazards in Central Virginia and the Eastern U.S. Project, 2014–present

Coastal Basement Task Leader, USGS Geology of Atlantic Watersheds Project, 2008–2114

Project Leader (2007–2008) and Co-leader (2004–2007), USGS Chesapeake Bay Impact Crater Project Cooperating Principal Investigator, ICDP-USGS Chesapeake Bay Impact Structure Deep Drilling Project, 2004–2009

Co-leader, Crater Materials Science Team, ICDP-USGS Chesapeake Bay Impact Structure Deep Drilling Project, 2004–2009

Task Co-leader, USGS Chesapeake Bay Impact Crater Project, 2000–2004

Task Co-leader, Hydrogeologic framework of the Piedmont and Blue Ridge, North Carolina task of USGS Bedrock Regional Aquifer Systematics Study (BRASS) Project, 2000–2005

Staff Scientist, USGS Office of Eastern Regional Geology (2002)

Task Leader, Geology of the Washington-Baltimore Urban Area task of USGS Appalachian Regional Geology and Hydrology Project, 1998–2002

Project Chief, USGS Geology of the Mid-Atlantic Urban Corridor (GOMAC) Project, 1995–98

Project Chief, USGS Geology of the South-Central Virginia Piedmont Project, 1991–95

Assistant Branch Chief, USGS Branch of Eastern Regional Geology, 1984–85

Project Chief, USGS Raleigh Belt and Eastern Slate Belt Project, 1983–91

Geologic mapping, USGS projects in Charlotte (NC-SC) and Greenville (SC-GA) 1° × 2° quadrangles, 1980-89

Scientific Editor (Books)

The 2011 Mineral, Virginia, Earthquake and Its Significance for Seismic Hazards in Eastern North America, Geological Society of America Special Paper 509, edited by J.W. Horton Jr., M.C. Chapman, and R.A. Green, 2015

The Sedimentary Record of Meteorite Impacts, Geological Society of America Special Paper 437, edited by K.R. Evans, J.W. Horton Jr., D.T. King Jr., and J.R. Morrow, 2008

Studies of the Chesapeake Bay impact structure—The USGS-NASA Langley corehole, Hampton, Virginia, and related coreholes and geophysical surveys, U.S. Geological Survey Professional Paper 1688, edited by J.W. Horton Jr., D.S. Powers, and G.S. Gohn, 2005

Forum on Geologic Mapping Applications in the Washington-Baltimore Urban Area, U.S. Geological Survey Circular 1148, edited by J.W. Horton Jr., and E.T. Cleaves, 1997
The Geology of the Carolinas, Carolina Geological Society Fiftieth Anniversary Volume, University of Tennessee Press, edited by J.W. Horton Jr. and V.A. Zullo, 1991
Mélanges and Olistostromes of the U.S. Appalachians, Geological Society of America Special Paper 228, edited by J.W. Horton Jr. and N. Rast, 1989

Editorial Boards

Associate Editor, *Geological Society of America Bulletin*, 1988–90 and 1991–93
Editorial Board, *South Carolina Geology*, 1989-97

Committees and Review Panels

Co-leader, USGS Science Coordination Team for Virginia Earthquake Studies, 2011-present
USGS Ad Hoc Committee on Research Priorities following the Virginia Earthquake Sequence, 2011
NAGT-USGS Internship Review Panel, 2011
Science Review Committee, Barringer Family Fund for Meteorite Impact Research, 2008
Argon Geochronology Laboratory Advisory Committee, USGS Geology Discipline, 2006–07
Organizing Committee for ICDP-USGS Workshop on Deep Drilling in the Central Crater of the Chesapeake Bay Impact Structure, Virginia, USA, Herndon, VA, 2003
Co-chair, Science Language Technical Team Subgroup on Metamorphic Rocks, North American Geologic Map Data Model (NAGDM), 2001–04
Membership Committee, Geological Society of America, 2000–03
Eastern Region Publications Steering Committee member, USGS Geologic Division, 1998
Publications Committee, Geological Society of America, 1993–95
U.S. National Committee for IGCP Project 233, Terranes in the Circum-Atlantic Paleozoic Orogens, 1986–91
Science Advisory Committee, USGS Geologic Division, 1988–90
Committee on Penrose Conferences, Geological Society of America, 1983–85
North Carolina State Geologic Map Advisory Committee, 1983–85
Working Group E4 of Geodynamics Continental-Ocean Transects Program, 1982–87

Organizing Conferences and Special Sessions

Co-convener of Topical Session, *Magnetic Surveys for Imaging the Geology of Earth and Other Planetary Bodies: A Session Honoring the Legacy of Isidore Zietz*, Geological Society of America Annual Meeting, 2014
Co-convener of Theme Session, *Lessons Learned from the 2011 Virginia Earthquake*, Geological Society of America Southeastern Section Meeting, 2014.
Co-convener of Topical Session, *Central Virginia Earthquakes of 2011: Geology, Geophysics, and Significance for Seismic Hazards in Eastern North America*, Geological Society of America Annual Meeting, 2012.
Co-convener of Topical Session, *Exploring Subsurface Terranes and Buried Basins of Eastern and Central North America - Geology, Geophysics, and Geochronology*, Geological Society of America Annual Meeting, 2011
Co-convener of Topical Session, *Tectonic Significance of Buried Terranes of the Atlantic and Gulf Coastal Plains*, Geological Society of America Northeastern/Southeastern Sections Meeting, 2010
Technical Program *Co-chair*, Geological Society of America Northeastern/Southeastern Sections Joint Meeting, 2010
Co-convener of Symposium, *Drilling of Impact Structures*, Conference on Large Meteorite Impacts and Planetary Evolution IV, Vredefort Dome, South Africa, 2008
Co-convener of Symposium, *The Chesapeake Bay Impact Structure: Formation and Consequences*, American Association for the Advancement of Science Annual Meeting, 2005
Co-convener of SEPM Research Conference, *The Sedimentary Record of Meteorite Impacts*, 2005
Co-convener of Topical Session, *Peri-Gondwanan Terranes of the Appalachians*, Geological Society of America Northeastern/Southeastern Sections Meeting, 2004
Co-convener, *Forum on Geologic Mapping Applications in the Washington-Baltimore Urban Area*, sponsored by U.S. Geological Survey and Maryland Geological Survey, 1997

Recent Invited Conferences

CEUS Earthquake Hazards Research Review and Planning Workshop, Memphis, TN, invited talk, 2014
Virginia Geologic Research Symposium, Charlottesville, VA, invited talk, 2012.
Earthscope – GeoPRISMS Science Workshop for Eastern North America, Bethlehem, PA, invited talk, 2011
U.S. Continental Scientific Drilling: Into a New Decade, DOSECC 14th Annual Continental Scientific Drilling Workshop, Arlington, VA, 2011
Conference on *Large Meteorite Impacts and Planetary Evolution IV*, Vredefort Dome, South Africa, 2008
ICDP-ESF Conference on *Marine Impacts and Environmental Consequences*, Svalbard, Norway, 2007
Symposium on *Impact - From the Nano- to the Macro-scale*, 17th Annual Goldschmidt Conference, Cologne, Germany, keynote speaker, 2007
Geological Society of America *Field Forum on Marine Impact Craters on Earth*, Wetumpka, AL, 2007
ICDP-IODP Workshop on *Scientific Drilling in the Chicxulub Impact Structure*, Potsdam, Germany, 2006
Lockne 2006 Workshop on *Impact Craters as Indicators for Planetary Environmental Evolution and Astrobiology*, Östersund, Sweden, 2006
Workshop on *The Role of Volatiles and Atmospheres on Martian Impact Craters*, Laurel, MD, 2005
International Continental Scientific Drilling Program (ICDP) Conference on *Continental Scientific Drilling 2005: A Decade of Progress and Challenges for the Future*, Potsdam, Germany, 2005
Workshop on Research *Frontiers in Appalachian Geology and Tectonics: An EarthScope Perspective*, National Science Foundation, Arlington, VA, 2004

Recent Invited Lectures

Earthquake Insight Briefing, Washington, DC, 2014
Congressional Hazards Caucus, Washington, DC, 2012
Geological Society of Washington, Washington, DC, 2012
Harrisburg Area Geological Society/Association of Environmental and Engineering Geologists, Harrisburg, PA, 2012
Furman University, Greenville, SC, 2011
Lunar and Planetary Institute, Houston, TX, 2009
Brown University, Providence, RI, 2008
Rutgers University, New Brunswick, NJ, 2007
Geological Society of Washington, DC, 2007
Smithsonian Institution, National Museum of Natural History, Washington, DC, 2003

Advising Graduate Students and Postdoctoral Fellows

Ph.D. dissertation committee for A.J. Merschat, University of Tennessee, 2009
Ph.D. dissertation examiner for L. Coney, University of the Witwatersrand, South Africa, 2009
Research advisor for Mendenhall Postdoctoral Fellow M.L. Malinconico, USGS, 2006–08
M.S. thesis committee for R. Nardini, George Washington University, 2002
M.S. thesis committee for P.J. Bradley, North Carolina State University, 1996
Research advisor for National Research Council Postdoctoral Associate P.E. Sacks, USGS, 1990–91
M.S. thesis committee for D.E. Blake, North Carolina State University, 1986

Reviewer

U.S. National Science Foundation, National Park Service, American Chemical Society Petroleum Research Fund, Geological Survey of Canada, Geological Society of America Map and Chart Series, Joint Oceanographic Institutions U.S. Science Support Program
Journals: American Journal of Science, Earth Science Reviews, Geochimica et Cosmochimica Acta, Geological Society of America Bulletin, Journal of Geology, Journal of Geochemical Exploration, Lithosphere, Meteoritics and Planetary Science, Ohio Journal of Science, Science, South Carolina Geology, Southeastern Geology, Tectonics

Recent Outreach

Organized booth and represented USGS at *Dedication of Thomas Jefferson Elementary School* (rebuilt after earthquake), Louisa, VA, 2014
Appeared on U.S. DOI weekly video series *This Week at Interior*, 2013
Interviewed at earthquake-anniversary press conference, Washington Monument in DC, 2012

Provided information for geology signs on Kings Mountain Gateway Trail, NC, 2012
Appeared on Maryland Public Television special *Secrets of the Chesapeake*, 2012
Mentor, John Mann Mentors in Applied Hydrogeology, Geological Society of America, 2011, 2012
U.S. Sponsor for Fulbright Visiting Scholar, 2007
Appeared in Discovery Science Channel mini-series, *Faces of Earth*, 2007
Led field trips for National Park Service (Piedmont geology near Kings Mountain, NC-SC, 2000), NC DENR (Piedmont hydrogeology near Reidsville, NC, 2001); Chesapeake Bay impact crater drill cores (repeatedly, 2006-13)
Technical Advisor for USGS educational video, *The Southern Appalachians: A Changing World*, 2001
Interviews for Baltimore Sun, Bay Weekly, Discovery News, Richmond Times-Dispatch, Smithsonian Magazine, Virginian Pilot, WTOG radio, ABC News, USA Today, The Free Lance-Star (Fredericksburg, VA), WHSV TV (Harrisonburg, VA), WCVE public radio (Richmond, VA), OurAmazingPlanet, Associated Press, WBAL radio (Baltimore, MD), WRVA radio/Virginia News Network (Richmond, VA), WCCB TV (Charlotte, NC), Charlottesville Newsplex (ABC, CBS, and FOX), Chesapeake Bay Magazine, The Daily Times (Salisbury, MD), The Central Virginian (Louisa, VA)

Professional Organizations

American Association for the Advancement of Science, American Geophysical Union, Carolina Geological Society (*President*, 1981–82), Geological Society of America (*Fellow*), Geological Society of Washington (*Council Member*, 2009–10), Impact Field Studies Group, Planetary Crater Consortium (formerly Mars Crater Consortium), Meteoritical Society, Sigma Xi - The Scientific Research Society, SEPM (Society for Sedimentary Geology)

Certifications

South Carolina Registered Professional Geologist
Virginia Certified Professional Geologist

Publications

Listed separately