

Trakela R. Wright, Ph.D.

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An interdisciplinary scientist available to work independently or as part of a team to gather, analyze, access, manage, and deliver scientific data while improving education in urban areas. She can teach instructional methods on various levels by applying a broad spectrum of understanding consistent with the continuous changes and evolving sciences particularly in areas of STEM, environmental health, urban forestry, and natural resources.

Education

Doctor of Philosophy, Urban Forestry and Natural Resources, May 2015

Southern University and A&M College, Baton Rouge, LA

Department of Agricultural Sciences and Urban Forestry (225-771-3535)

Concentration: **Urban Sustainability, Urban Ecology**

Master of Science, Urban Forestry and Natural Resources, December 2012

Southern University and A&M College, Baton Rouge, LA

Department of Agricultural Sciences and Urban Forestry (225-771-3535)

Concentration: **GIS/Remote Sensing**

Bachelor of Science, Environmental Health, December 2004

Mississippi Valley State University, Itta Bena, MS

Department of Natural Sciences and Environmental Health (662-254-3377)

Concentration: **Chemistry**

Environmental Projects/Fieldwork

Dissertation Research, Southern University and A&M College

- Title: Ecological Assessment of Southern University's Mississippi River Bank (Scott's Bluff)
- Completed and defended research for the highest grant obtained for funding at Southern University through the USDA-NIFA McIntire-Stennis Cooperative Forestry Research Program.
- Displayed the ecological effects of soil erosion rates, soil characteristics, and vegetative cover related to the sustainability of Southern University's Scott's Bluff using various tools including GIS and Remote Sensing.
- Created cost-efficient best management practices for wildlife management in natural resources along the Scott's Bluff as well as a 3D/i-Tree model of environmental enhancement showing the need for advance sustainability of Scott's Bluff longevity and future existence.

Thesis Research, Southern University and A&M College

- Title: A Comparative Study of the Lower Mississippi River Basin to the Chesapeake Bay Dynamics of Nitrate and Phosphate Transport
- Created a riparian buffer design incorporating water and soil erosion, urban sustainability, and knowledge of plant species for use on farmland to control the downstream effects of pollution.
- Studied the environmental protection, management, and evaluation of nitrate and phosphate transport into the Lower Mississippi River Basin.
- Compared hypoxia (low oxygen levels) in the Lower Mississippi River Basin (Gulf of Mexico) to nutrient transport in the restored Chesapeake Bay.

Undergraduate Research, Mississippi Valley State University

- Title: Controlling the Level of Contamination Through the Purification of Wastewater Treatment
- Comparative study identifying the best pretreatment option for purifying influent water from pathogenic material using three components: pumps, filtrations, or dispersal fields.
- Identified NPDES levels in influent wastewater during the following test: total suspended solids, biological oxygen demands, nutrients, and solids.
- Created a wastewater purification system model which was used as a test filter for Mississippi Valley State University in 2004.

Work Experience

Academy of Hope (AOH), Washington, DC

Evening STEM Adjunct

Aug 2016 –

- Demonstrate Common Core and/or College and Career Readiness Standards such as adult numeracy, basic education, secondary, and/or post-secondary level classes required for a successful transition into the workforce or postsecondary education to adults twice a week.
- Provide direction and knowledge to volunteer instructors engaging with adult students effective and appropriate classroom management during my class.
- Teach basic computer classes, math, and science classes that provide content knowledge related to GED Math and Science Standards to assure student completion of the GED or CASAS test leading to a high school diploma.
- Coordinate with Student Support and Program Managers to ensure adult learners are receiving both the academic and social services they need to be successful in school and in their transition to college or careers.

Friendship Public Charter Schools-Blow Pierce, Washington, DC

SMART Lab Facilitator/Garden Coordinator

Sept 2015 –

- Teach curriculum to students 5th thru 8th grade through a series of computer & project-based learning engagements known as Learning Launchers which utilizes a wide variety of applied technologies for STEM such as GIS, First Lego League, robotics, engineering with K'NEX, etc.
- Instruct students in grades Pre K 3-4 thru 8th technical skills, nutrition, hands-on demonstrations, curricula, and best management practices (BMPs) of agriculture using soil to grow produce available for consumption in the school garden.
- Participated in the 2017 DC Science Assessment for Grades 5, 8, and High School Biology establishing cut scores for each of five levels of performance for 8th graders in accordance to Office of the State Superintendent of Education (OSSE) standards and Next Generation Science Standards (NGSS).
- Teach 8th graders the skills and procedures needed to produce a profitable business including a plan with features for publicity such as a website, a functional app, social media, etc.

Southern University and A&M College, Baton Rouge, LA

Graduate Research Assistant (full-time)

Jan 2013 – May 2015

- Taught undergraduate and graduate students soil conservation, urban hydrology, the effects of soil erosion, and soil remediation.
- Trained more than 25 people on the usage of ArcGIS 10.1/2 and Juno Trimble 3B GPS software manually and with the use of technical hardware.
- Created best management practices (BMPs) for several areas of urban forestry, environmental health, and natural resources which provided cost effective and sustainable guidance.
- Analyzed data on elevation, plant height, and soil loss using SAS (Statistical Analysis System) and R (GNU project).
- Designed a published map route for the 2.5 Health Walk “Striding for healthily to the Next 100 Years” Centennial Celebration at Southern University and A&M College.

United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine (USDA-APHIS-PPQ), Miami, FL

Import/Export Intern (full-time)

June 2013 – Aug 2013

- Organized and created a Herbarium Database for the large and small Herbarium collection.
- Reviewed, verified, and updated sample data and information in the Germplasm Resources Information Network (GRIN) USDA official taxonomy collection.
- Incorporated new seed samples into the Botany Database Collection at the Miami Inspection Station (MIS) Entered data gathered from the PPQ Interception Pest Report (309) into the USDA inspection station's database.
- Taught students in the 2013 Agrisummer Science Camp about pest surveying and the use of solar pest traps using the green approach or natural pest control.

Southern University and A&M College, Baton Rouge, LA

Graduate Teaching Assistant (Part-Time)

Aug 2011 – Dec 2012

- Provided intermittent teaching to undergraduate level students on basic principles and concepts of GIS and remote sensing through visual understanding, technical software, and using databases.
- Guided and mentored undergraduate Urban Forestry students interested in continuing education at Graduate level on thesis preparation.
- Assisted in the providing knowledge of hydrology and water cycle effects on water erosion.
- Trained students how to properly collect samples and field evaluations using standard operating procedures (SOPs) while incorporating the knowledge of best management practices.

United State Department of Agriculture (USDA-APHIS-PPQ), Riverdale, MD

Import/Export Intern (full-time)

June 2012 – Aug 2012

- Reviewed and updated Zea Maize Plant Pest Datasheets for indication of diseases affecting corn throughout the United States.
- Evaluated and entered applications into e-Permits required to control the acceptance or denial of imported (enter) and exported (exit) of plant pest and noxious weeds.
- Created an alphabetical, data filing system representing the analysis of the percent of outsourced noxious weeds and plant pest applications received by USDA-APHIS-PPQ before 2002 using Microsoft Excel, Word, and Access.
- Printed, copied, and faxed information to applicants regarding clarification and correction of incomplete applications under review for clearance of imported and exported material.

American Radiation Services, Inc., Port Allen, LA

Chemist (Full-time)

July 2010 – June 2011

- Stored soil, water, sludge, oil, and biota samples deemed radioactive or hazardous from various agencies such as Halliburton, Louisiana Department of Environmental Quality, etc.
- Entered numerical and alphabetical data into LIMS for tracking, location, and detection levels of RAD samples as enforced by mandated regulations through EPA and OSHA.
- Received NORM (Naturally Occurring Radioactive Material) training to understand and learn the importance of handling, disposing, maintenance, and storing of radioactive material.
- Calculated and entered data completed using the Laboratory Information Management Systems (LIMS) for need of availability by other chemist, operators, etc.

Rapides Parish School Board, Alexandria, LA

Permanent Substitute Teacher (Full-time)

Aug 2009 – May 2010

- Generated various assignments needed to express mathematical expressions and scientific exploration for urban students in grades sixth through eighth.
- Mentored troubled students throughout the year by creating an expressive writing club to substitute as a disciplinary action instead of other actions including suspension or expulsion.
- Administered the Louisiana Educational Assessment Program (LEAP) test for six grade students.
- Provided students with leadership and motivation in pursuit of their individual advancements that would be supplemental to future goals beyond high school.

Red River Academy, Inc., LeCompte, LA

Interdisciplinary Science Teacher/Tutor

March 2007-Sep 2008

- Worked at a private boarding school housing students of various ethnicities from all regions of the world in grades seventh through twelfth who needed physical science, biology, chemistry, and physics as needed in route for progression towards graduation.
- Asserted and designed a science curriculum per each student's need for development by grade requirements for advancement.
- Created hands-on experiments and implemented tools for each student according to their need for developmental understanding of the current science of study.
- Tutored and mentored disadvantaged youth in literacy and computer skills on a one-on-one basis who were lacking understanding of basic science concepts.

City of Alexandria-Lab Testing, Alexandria, LA

Environmental Technician I (Full-time)

July 2007 – Oct 2008

- Pulled influent (inflowing and untreated) and effluent (outflowing and processed) wastewater samples from septic tanks for analysis and data collection through Fecal Coli form testing as a

full-time employee.

- Calculated Biological Oxygen Demand (BOD) limits to measures the amount of pollution or material in collected wastewater.
- Collected, processed, and analyzed Fecal Coli form found in wastewater and processed oil from samples provided by Uncle Ben's Rice, a Mars, Inc.
- Conducted field work under the direction of a senior scientist to investigate the nature and extent of sediment affecting influent/effluent water utilized by residents of Greenville, MS.

Involvement

- DC STEM Network (2015-)
- Growing School Gardens Teacher Network: Garden Coordinator (2015-)
- Wisteria Alliance-Baton Rouge (Women in Agriculture Program) (2013-2015)
- Urban Forestry Club (2014-2015)
- AmeriCorps: National & State Alumni (2002-2004)
- Zeta Phi Beta Sorority, Incorporated. (2014)
- Beta Kappa Chi/National Science Institute (2012)
- Thurgood Marshall College Fund Leadership Institute & Recruitment Fair Recipient (2012-2013)
- Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) (2011-15)
- NSEHC (Natural Science and Environmental Health Club) (2001-2004)
- Habitat for Humanity Youth Professionals: Recruiter (2014)
- AmeriCorps (State & National) Award Recipient (2003)
- Bridge Builders, Inc. (2000-2003)
- Who's Who Among High School Students (2000)
- National Honors Society (1997)

Skills

Type 65 WPM, Analytical Writing & Editing, Scientific Research, Strategic Thinker, Strategic Planner, Information Managing, Team Work, Public Speaking, Lecturing, Teaching, Spoken/Written Communication, Curriculum/Grant Writing, Budget Accessor, Professional Development, Networking, Leadership, Delegation, Trainer, Environmental/Educational Laws & Regulations, Recruiting, Scheduling, Problem Solving, Logical/Methodical Approach, Scientific/Technical/Numerical Skills, Experimental Design, Data Analyzing/Recording, Laboratory Techniques, Public Outreach, Cataloging, Agricultural Identification/Taxonomy/Surveying, Consulting

Software Proficiency

Microsoft Office 8 (MS Word, MS PowerPoint, MS Excel, Outlook), HTML, Coding, OneNote, i-Tree, Google Drive, Google Slides, Google Docs, USDA Web Soil Survey (WSS), ESRI ArcGIS 10.2, NOAA CanVis, R Statistic System, GPS Pathfinder, EDRAS Remote Sensing, Web Design, Google Office, WebEx

Hardware Proficiency

Printer/Fax/Copier Machine, Troubleshooting, Software Installation, Graphic Tools, Projector Screens, Juno Trimble 3B, Sieves & Lab Scales, pH Measuring Device GMH 3530, Quincy Heating Oven, Nikon SMZ 1500 Stereoscope

My interest in science and agricultural came far before I even understood or knew the technical concepts of what being a scientist really was. Growing up on a farm in rural Mississippi, transplanting to suburban Tennessee, and being raised in urban Louisiana, I was exposed to various settings of agricultural which help encourage my career path to help “save the planet”. I began my journey by maintaining highest average in all of the high science courses I took. In 2004, I received a Bachelor’s of Science degree in Environmental Health with a minor in Chemistry. Once I obtained my Bachelor’s Degree, I transitioned through several positions, but I was not being fulfilled mentally. I decided to return back to school to obtain a Master’s of Science in Chemistry, but the program was obsolete. I was then introduced to Urban Forestry and Natural Resources at Southern University and A&M College where a Master’s of Science and Doctorate of Philosophy was obtained. With no perception of what Urban Forestry was, I no understanding of how these subject areas would connect to each other and, nevertheless, pushing me further into the world of STEM as an Interdisciplinary Scientist.

My methods of teaching are done to reach all students through various resources. I provide comfort zones for each student to meet objectives when teaching. Using various teaching strategies have allowed students to embrace critical thinking, being self-directed learners, stimulate active learning, and ensuring students that being wrong is part of learning. Engaging students and motivating their failure for an answer is the key to growth. One philosophy I adhere to is that learning is the natural process of absorbing information in no particular way. Yet, one has to have the ability to exhibit the content knowledge that was obtained. The beginning stages of the learning processes are very important, and one must remember all content will not be retained.

As science is being distanced in schools by the tests requirements which focus more on ELA and Math proficiency, my drive to one day create and incorporate a curriculum that coexist with the transitional needs of secondary and high schools students who are interested in STEM careers beyond those seen on the forefront. Students are pushed out of their comfort zones to explore careers within careers or those unspoken. I am currently a Smart Lab Facilitator at Blow Pierce Middle School in Washington, DC who implement computer & project-based learning in all areas of STEM. My focus is to provide students with opportunities to embrace content through visual, vocal, technical, written, and physical contact. The Inspire Space Academy for Educators Scholarship will allow me the ability to expand GIS, remote sensing, and earth science projects in my class while expanding learning to my students interested in meteorology and space science. This opportunity will provide the connection I need to include NASA content into my curriculum with guidance, confidence, and clarity.

Dr. Jeffrey Grant
Principal

March 21, 2017

To Whom It May Concern,

I am very pleased to provide a letter of recommendation for Dr. Trakela Wright as a candidate for the Inspire Space Academy for Educators Scholarship at the U.S. Space & Rocket Center in Huntsville, AL. For the past year and a half, Dr. Wright has been employed as the Smart Lab Facilitator & Garden Coordinator for 5th-8th grade students here at Blow Pierce Middle School. Her knowledge and skills have been a great asset to not only the middle academy, but the entire school in general with the various programs she has obtained through grants. She goes above and beyond to ensure that all students {Pre K $\frac{3}{4}$ -8th grade} participate or engage in STEM activities.

Trakela did an excellent job filling the vacant Smart Lab position. She was a resource tool for the many students, teachers, and administration with her technical skills. Teaching the students real life factors such as creating a successful business from start to finish displays her care for their long-term growth. Dr. Wright's ability to connect with those beyond her wall of contact is awesome. She is very friendly and has a great rapport with people from various ethnic backgrounds, of different ages, and diverse walks of life. She is very outgoing and goes above and beyond for the students and our colleagues. She exhibit a keen interest in rejuvenating our school garden and the role of nutrition outreach for the urban community.

She has excellent oral communication and analytical skills, is extremely organized, intelligent, reliable, and very computer literate. Trakela show tenacity, determination, and a well-developed work ethic. She has the ability to work independently to ensure success on every assigned task. Everything she produced was timely and of very high quality. It is because of her great follow through skills and brilliant mind that she is able to accomplish assigned tasks with ease.

It is a pleasure to work with such a dedicated and capable individual. I strongly recommend Dr. Wright as a superior candidate for your position without reservation. If you have further questions with regard to her background or qualifications, please do not hesitate to contact me at 412-953-0124 or you may email me: durham.daniellem@gmail.com.

Sincerely,



*Danielle Durham
History Teacher
FPCS-Blow Pierce Campus*



College of Sciences and Agriculture
Department of Agricultural Science and Urban Forestry

Voice: (225) 771-6213
FAX: (225) 771-4464

To Whom It May Concern:

I have known Dr. Trakela Wright for approximately six years since her arrival at Southern University and A&M College. Since that time, I have become very familiar with her serving as her mentor and professor. During her time there, Trakela has exhibited numerous positive attributes, which I believe indicate her suitability to serve as a lecturer.

As a student, Trakela has distinguished herself as a hardworking, dedicated, and popular student who cared about her students and her community. Trakela was among the top 5% of our graduate students because of the attention to detail and professionalism she demonstrated while attending Southern University. In addition, along with these attributes her work ethic continues to set her apart.

While enrolled in our doctoral program, Dr. Wright had not only served as a Teaching Assistant in a number of Geographic Information Systems (GIS) courses, but she also taught several undergraduate GIS courses. She has also assisted with many of the graduate level courses taught in our Urban Forestry Program, including Remote Sensing and Hydrology. Dr. Wright has worked with a number of different agencies which has given her a unique perspective. This perspective has greatly benefitted our students including those that are now working with government agencies such as USDA. Because of her proficiency in GIS, Dr. Wright is constantly being sought out to assist in the development of landscape designs and the generation of maps. In addition, she has been trained in the use of I-tree software and NRCS web soil survey software.

Lastly, I believe Trakela's character is above reproach. She is an honest person who follows through on her commitments, and is always willing to lend a hand to someone in need. She is confident and self-assured, and these serve her well. I have no hesitations in recommending Trakela for Inspire Space Academy for Educators Scholarship at the U.S. Space & Rocket Center in Huntsville, AL. She will be a great asset.

Sincerely,

Andra Johnson

Andra D. Johnson, Ph.D.