# Curriculum Vita Snapshot

**Nastassia N. Jones**
**Associate Professor**
Department of Science & Math Education
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## ACADEMIC HISTORY

**Southern Illinois University, August 2011**
Ph.D. Molecular Biology, Biology, Microbiology, and Biochemistry, Dissertation: *Investigating Nitrate-dependent Humic Substance Oxidation and In-service K-12 Teachers' Understanding of Microbiology*

**Southern Illinois University, August 2007**
M.S. Molecular Biology, Biology, Microbiology, and Biochemistry, Thesis: *The Analysis of Humic Substances as an Electron Donor for Soil Processes*

**Albany State University, May 2005**
B.S. Biology

## PROFESSIONAL EXPERIENCES

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|---|---|
| 2018-Present | **Tenure Track Associate Professor**<br>Full time teaching, research, and service<br>Department of Science and Mathematics Education<br>Southern University and A&M College |
| 2015-2018 | **Assistant Professor**<br>Full time teaching, research, and service in science education<br>College of Science and Mathematics<br>University of the Virgin Islands |
| 2015-2018 | **Managing Director**<br>Develop STEM teacher professional development program<br>Virgin Islands Institute for STEM Education Research and Practice<br>NSF VI EPSCoR program |
| 2011-2015 | **Tenure Track Assistant Professor**<br>Full time teaching, research, and service<br>Department of Biology<br>Philander Smith College |
| Spring 2011 | **Instructor**<br>ZOOL 115 General Biology, Southern Illinois University |

## OTHER EXPERIENCES

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|---|---|
| Spring 2018 | **Substitute Teacher**<br>Part time teaching in K-12 schools<br>Barrow County Schools, Kelly Educational Services |
| 2017-2018 | **Visiting Scholar**<br>Curriculum and research development<br>Center for Social Justice, Human and Civil Rights, University of Georgia |
| Summers 2010-2012 | **STEM Teacher Professional Development Specialist**<br>Develop biology content for course CI 428-3 Science Methods and Curriculum Development for K-8 and SCI 503A Science for Elementary School Teachers<br>Department of Curriculum and Instruction, Southern Illinois University |
| 2007-2009 | **Graduate Research Assistant**<br>Develop active learning activities for Introduction to Biology and Environmental Science<br>Carbondale Community High School and Carterville High School<br>NSF HEART GK-12 Resident Scientist, Southern Illinois University |

## GRANTS

| | |
|---|---|
| 2022-2026 | **Co-Principal Investigator**, *Research in Service to Practice: Asset-Based Learning Environments (ABLE)*, NSF Advancing Informal STEM Learning program proposal #2215613, $2,000,000, Funded |
| 2020-2023 | **Principal Investigator**, *Building Environmental and Educational Technology Competence and Leadership Among Educators: An Exploration in Virtual Reality Professional Development*, NSF DRK-12 award# 2010563, $384,558, Funded |
| 2020-2022 | **Co-Principal Investigator**, *Journeys in Agricultural Science through Developing Educational/Experiential Networks Learning Center (JAG's DEN)*, Louisiana Board of Regents Support Fund Enhancement Program, $134,250, Funded |
| 2017-2018 | **Principal Investigator**, *Exploring Augmented Reality Infrastructure for Undergraduate STEM Education*, USVI NASA EPSCoR Research Initiation Award, $8,200, funded |
| 2017-2020 | **Senior Personnel**, *From the Sea to the Stars: Educational Advancement at UVI via Observations and Astronomy Research Experience*, NSF HBCU-UP Targeted Infusion Project, $300,000, funded |
| 2016-2020 | **Co-Principal Investigator**, *Changing the Face of STEM in the U.S. Virgin Islands through Targeted Interventions to Expand Opportunities and Broaden Participation*, NSF INCLUDES, $264,391, funded |
| 2014-2015 | **Co-Principal Investigator**, *Bridging the Divide: A Program to Broaden Participation in STEM PhD*, NSF OIA EPSCoR Research Infrastructure award #1348389, $749,964, funded |

2012-2013 **Principal Investigator**, *Partnerships for Biomedical Research in Arkansas*, NIH/NIGMS Equipment Subaward, $22,705, funded

2012-2015 **Senior Personnel**, *Philander Smith College Historically Black Colleges and Universities – Undergraduate Program*, NSF HBCU-UP Implementation Project award #1238895, $1,750,000, funded

2010-2015 **Campus Principal Investigator**, *Project Arkansas Advancing and Supporting Science, Engineering, and Technology (ASSET) Initiative II, Center for Generating Renewable Energy with Efficient Nanoplasmonic (GREEN) Solar Cells*, NSF EPSCoR award #1003970, $20,000,000, funded

## SELECTED PROFESSIONAL TRAINING

MaxQDA Introductory Starter and Advanced Basic Workshops, 2021

Developing Publications for the Dissemination of Efforts that Broaden Participation in STEM, Understanding Interventions, 2021

Quality Education for Minorities Network NSF Proposal Development Workshops: HBCU-UP Broadening Participation Research strand and Research on Learning in Formal and Informal Settings (DRL) and Robert Noyce Teacher Scholarship Program, 2015, 2019, 2020

How to Write about Qualitative Research, AERA Virtual Research Learning series, 2020

Quality Matters Independent Applying the QM Rubric and Peer Reviewer Course certifications 2018, 2020

Qualitative Analysis With ATLAS.ti 8 Mac and Research Methodology Training, 2017

Discover the NGSS Train-the-Trainer workshop, NSTA, 2017

## PUBLICATIONS

Jones, N. N. & Mellieon-Williams, F. M. (2022). Social justice service-learning at an HBCU: Including tips to transform the project in the wake of COVID-19. *Journal of College Science Teaching* 51(5). https://www.nsta.org/journal-college-science-teaching/journal-college-science-teaching-mayjune-2022/social-justice

Mellieon-Williams, F.M., Jones, N.N. and Cruz, I.J. (2021). STEM outreach: Traditional vs. virtual summer programming. *Connected Science Learning* 3 (2). https://www.nsta.org/connected-science-learning/connected-science-learning-march-april-2021/stem-outreach-traditional-vs

Jones, N. N., Cummings, L., Guannel, M., & Abdallah, S. *Reforming science education to a place-based focus: Cultural congruence and 21st Century Skill development*. 2018 Arts, Humanities, Social Science & Education Conference Proceedings, Honolulu, HI. ISSN #2333-4908 (Online) *https://huichawaii.org/ahsse/proceedings-programs/proceedings-ahse-2018-2/*

## PRESENTATIONS

### Peer-refereed National and International Presentations

Jones, N. N., LaCour, N. & Green, K. (2022, March 31-April 2). *Using virtual reality to make ecosystems a real-life experience*. Hands-on demonstration at the National Science Teachers Association Annual Meeting, Houston, TX. (**with 2 STEM teacher participants**).

Jones, N. N. & Shyamala, S. (2022, March 31-April 2). *Supporting High School chemistry literacy through computer-based simulation exploration*. Paper presented at the National Science Teachers Association Annual Meeting, Houston, TX (**with graduate student**).

Hinyard, B.S., Mellieon-Williams, F., Guillory, C., Jackson-Osagie, E. & Jones, N. N. (2022, February 11-16). *Tapping into collaboration as an intervention during uncertain times*. Paper presented at the Association of Teacher Educators Annual Meeting, Chicago, IL (**with graduate student**).

Jones, N. N., Mellieon-Williams, F., Jackson-Osagie, E. & Garcia, R. (2021, February 14-17). *Exploring virtual reality in STEM teacher education: From pre-service teachers to college faculty*. Symposium organized by Dr. Jones presented at the Association of Teacher Educators Annual Meeting, virtual (**with graduate student**).

Jones, N. N. (2020, February 15-19). *Teachers as students: Exploring action research within doctoral coursework*. Paper presented at the Association of Teacher Educators Annual Meeting, Atlantic City, NJ.

Forbes Jr, H., Stout, J., Grimes, K.W., Brandt, M. E., Jones, N., Bucklin, C. J. & Medina, M. (2019, November 3-7). *Youth Ocean Explorers: A pathway to diversifying the field of marine science*. Paper presented at the 2019 CERF Biennial Conference, Mobile, AL.

Grimes, K.W., Brandt, M.E., Medina, M., Bucklin, C.J., Jones, N., Forbes Jr, H. & Guannel, M. (2019, November 3-7). *A pathway and partnership program to engage US Virgin Islanders in the marine sciences*. Paper presented at the 2019 CERF Biennial Conference, Mobile, AL.

Schlender, K., Grimes, K.W., Brandt, M.E., Medina, M., Bucklin, C.J. & Jones, N. (2019, November 3-7). *Supporting emerging aquatic scientists (SEAS) your tomorrow: Bridge to Ph.D. program and marine science opportunities*. Paper presented at the 2019 CERF Biennial Conference, Mobile, AL.

Grimes, K.W., Brandt, M.E., Bucklin, C.J., Jones, N. & Medina, M. (2019, November 3-7). *Supporting emerging aquatic scientists (SEAS) your tomorrow: Engaging US Virgin Islanders in the marine sciences*. Paper presented at the 2019 CERF Biennial Conference, Mobile, AL.

Jones, N. N. & Cummings, L. (2019, February 16-20). *Including university and community STEM partners in the job experience professional development (JEPD) model for teacher professional development*. Roundtable presented at the Association of Teacher Educators Annual Meeting, Atlanta, GA.

Cummings, L., Jones, N. N. & Abdallah, S (2018, April). *The impact of campus wide experiences: Freshman students' school connectedness and 21$^{st}$ century skill development*. Paper presented at the American Educational Research Association Annual Meeting, New York, NY (**with undergraduate student**).

Jones, N. N. Cummings, L., Abdallah, S. & Guannel, M. (2018, January). *Reforming general science education for a place-based focus: Cultural congruence and 21st Century Skill development*. Paper presented at the Arts, Humanities, Social Science & Education Conference, Honolulu, HI (**with undergraduate student and postdoc**).

Jones, N. N., Guannel, M., Cummings, L. & Abdallah, S. (2017, June 23-24). *Exploring the impact of extracurricular experiences in general science courses*. Poster presented at the Network of STEM Education Centers National Conference, New Orleans, LA (**with undergraduate student and postdoc**).

Guannel, M. & Jones, N. N. (2017, June 23-24). *Re-engaging teachers in their craft through action research*. Roundtable discussion at the Network of STEM Education Centers National Conference, New Orleans, LA (**with postdoc**).

Jones, N. N. & Armstrong, J. (2014, May 15-18). *Microbially delicious: Using food fermentation experiments to build workforce readiness and 21st century skills*. Microbrew paper presented at the Annual American Society for Microbiology Conference for Undergraduate Educators, Danvers, Massachusetts.

Graham, V., Kahill, K., Warner, L., Poole, B. & Jones, N. (2013, March). *Evaluating compost piles using soil bacteria community analysis*. Poster presented at the Emerging Researchers National Conference in STEM, Washington, DC, (**with undergraduate students**).

Kahill, K., Graham, V., Warner, L., Poole, B. & Jones, N. (2013, March). *Soil microbial community analysis with an emphasis in site assessment*. Poster presented at the Emerging Researchers National Conference in STEM, Washington, DC, (**with undergraduate students**).

Jones, N. N. & Mumba, F. (2011, February). *Science teachers' perceived and actual knowledge about basic microbiology concepts*. Poster presented at the American Association for the Advancement of Science Annual Meeting, Washington, DC.

Jones, N.N. & Sellers, S. (2011, January) *Microbes without microscopes: Using everyday materials to teach microbiology*. Presentation at the Illinois Science Teachers Association Science in the South Conference, Carbondale, IL.

Jones, N.N. (2011, October). *The importance of secondary science teacher content knowledge to the overall microbial literacy of today's youth*. Presentation at The Welcome Table: A Colloquium on Africana Research, Carbondale, IL.

**Invited National and International Presentations**

Jones, N.N. (2022, January 12). *HBCU equity vaccine initiative panel: HBCUs and underserved communities navigating the pandemic*. An invited panel for the Black Men Engaged Virtual Town Hall Series, virtual.

Jones, N. N. (2021, June 15-17). *Building environmental and educational technology competence and leadership among educators: An exploration in virtual reality professional development*. Presented at the annual NSF DRK-12 PI Meeting, virtual. http://cadrek12.org/posters/building-environmental-and-educational-technology-competence-and-leadership-among-educators

Jones, N. N. (2019, April). *Including families of URMs in the SEAS Your Tomorrow INCLUDES program*. Presented at the INCLUDES-ERC Capacity Building Institute, Seattle, WA.

Jones, N.N. (2018, July 28). *What is STEM education & why is it important?* An invited talk and demonstration at the Coastal Estates International School 3rd Speech and Prize Giving Day, Accra, Ghana.

**Local Presentations**

Jones, N. N. (2019, November 4-5). *Classroom-based action research as teacher PD*. Paper presented at the LATM/LSTA Joint Conference, Baton Rouge, LA.

Mellieon-Williams, F.M., Guillory, C. & Jones, N. N. (2019, November 4-5). *Is a doctoral program in science or math education right for you?* Presented at the LATM/LSTA Joint Conference, Baton Rouge, LA.

Abdallah, S., Cummings, L., & Jones, N. N. (2018, April). *The ties that bind us: Campus Wide Experiences (CWEs) facilitating school connectedness among first year UVI students*. Poster presented at the Annual UVI Research Day, St. Thomas, VI (**with undergraduate student**).

Jones, N.N. (2017, April). *Making STEM count in the Virgin Islands: Increasing economic competitiveness through STEM education research and training*. VI-EPSCoR Annual Conference, St. Thomas, VI.

Matthew, S., Guannel, M. & Jones, N.N. (2017, April). *Integrating STEM with the arts to motivate middle school students*. Poster presented at the Annual UVI Research Day, St. Thomas, VI (**with K-12 STEM teacher and postdoc**).

Jones, N.N. (2017, April). *Exploring the impact of campus wide experiences on SCI 100 students*. Poster presented at the Annual UVI Research Day, St. Thomas, VI (**with K-12 STEM teacher and postdoc**).

Kahill, K., Shipp, B., Bradley, J. & Jones, N.N. (2014, May). *Iyanla fix my garden*. HBCU-UP II Academic Year Research Program Symposium, Little Rock, AR (**with undergraduate students**).

Fisher, A., Hamilton, B., Dumas, J. & Jones, N.N. (2014, May). *Progressing towards a functional greenhouse: An interdisciplinary modeling experience*. HBCU-UP II Academic Year Research Program Symposium, Little Rock, AR (**with undergraduate students**).

Kahill, K., Warner, L. & Jones, N.N. (2013, July). *Composting bioinformatics: A more sustainable PSC*. HBCU-UP II Summer Science and Technology Enrichment Program Symposium, Little Rock, AR (**with undergraduate students**).

Fisher, A., Dumas, J. & Jones, N.N. (2013, July). *Progressing towards a functional greenhouse: An interdisciplinary modeling experience*. HBCU-UP II Summer Science and Technology Enrichment Program Symposium, Little Rock, AR (**with undergraduate students**).

Jones, N.N, Burroughs, C., Hahn, F. & Davis, S. (2013, April). *Computational thinking in STEM. An HBCU undergraduate research forum*. Presentation at the PSC Cyberinfrastructure Day, Little Rock, AR.

Jones, N.N. & Burroughs, C. (2012, March). *CI for biology undergraduate education*. Presentation at the PSC Cyberinfrastructure Day, Little Rock, AR.

## UNIVERSITY AND COLLEGE SERVICE

**University Committees**

Senator of the Faculty Senate for College of Sciences and Engineering
Member of Graduate Council, Graduate School, Southern University and A&M College
Member of the Internal Review Board, University of the Virgin Islands
Member of the Carnegie Community Engagement Elective Classification Initiative Committee, Philander Smith College

**College Committees**

HBCU/CORE STEM Site Liaison at Southern University for the QEM funded program
Member of the STEM Education Minor committee, University of the Virgin Islands
Member of the Internal Advisory Committee for the HBCU-UP, Philander Smith College

**Department Service**

Chair of the SMED Faculty Writing Group, Southern University and A&M College
Chair of the SMED First- and Second-Year Advisement committee, Southern University and A&M College
Member of the SMED Policy committee, Southern University and A&M College

**University Service in the Community**

Advisory Committee Member of the Region 2 Capital Area STEM Network Center, Southern University and A&M College
Member of the USVI Teachers Pipeline Task Force as part of the USVI-P16 Collaborative committee, University of the Virgin Islands
Member of the Virgin Islands Department of Education Next Generation Science Standards rollout committee, University of the Virgin Islands
Reader for the ETS Advanced Placement Biology Exam Reading in Kansas City, MO
Member of the Arkansas Minority Cyberinfrastructure Training Education Consortium Project

**Program Development and Coordination**

2015-2018: Virgin Islands Institute for STEM Education, Research and Practice (VIISERP) Teacher PD – St. Thomas location was established through grant funding. I developed the components for the summer teacher training and academic year components to support the teachers in creating action research projects.
2013-2015: Choosing Opportune Resources Everyday (CORE) nutrition and fitness program was developed to elicit behavioral changes leading to healthy weight loss and an overall increase in health. This program was supported by the department of biology and the Social Justice Initiative at Philander Smith College.
2012-2015: GREEN Center Renewable Energy Laboratory was designed as a mobile lab for outreach related to renewable energies including solar, wind and hydrogen fuel cell. This multi-institutional program included trainings for undergraduate students, as well as community college and university faculty.

## ADVISING AND COURSE WORK

**Faculty Mentoring**

2021-2022: Campus STEM Mentor for Dr. Erin Scott-Stewart, Assistant Professor, Department of Curriculum and Instruction, Southern University and A&M College, *Measuring the relationship between preservice teachers' self-efficacy for teaching science and their teaching practices*. NSF Quantitative Research Methods for STEM Education Scholars Program.

2020-2021: Campus STEM Mentor for Dr. Emily Jackson-Osagie, Assistant Professor, Department of Curriculum and Instruction, Southern University and A&M College. NSF Quantitative Research Methods for STEM Education Scholars Program.

**Chair or Co-Chair of Doctoral Student Committee**

Brittany Hinyard, defended dissertation, *Investigating teacher collaboration for early-career science technology engineering and mathematics teachers in Louisiana's middle schools,* graduated from Science and Mathematics Education Ph.D. Program at Southern University and A&M College, May 2022 **(2020-2021 Community for the Development of Research in Education (CADRE) Fellow)**

Sunitha Shaymala, defended dissertation, *High school chemistry students' perspectives on using computer-based simulations*, graduated from Science and Mathematics Education Ph.D. Program at Southern University and A&M College, December 2021

Dawn Kight, defended dissertation, *A study of information literacy instruction and its impact on STEM students at HBCUs*, graduated from Science and Mathematics Education Ph.D. Program at Southern University and A&M College, August 2021

**Doctoral Student Committee Member**

Foluso Ayeni, defended dissertation, *An Analysis of blended learning as a pedagogical tool for teaching computer science at historically black colleges and universities*, graduated from Science and Mathematics Education Ph.D. Program at Southern University and A&M College, August 2020

**Doctoral Courses Taught**

SMED 710: History and Structure of Science/Mathematics Education, Department of Science and Mathematics Education, Southern University and A&M College

SMED 715: Science/Mathematics Curriculum I: Elementary, Department of Science and Mathematics Education, Southern University and A&M College

SMED 716: Science/Mathematics Curriculum II: Secondary, Department of Science and Mathematics Education, Southern University and A&M College

SMED 717: Science/Mathematics Curriculum III: College, Department of Science and Mathematics Education, Southern University and A&M College

SMED 725: Critical Thinking in the Sciences and Mathematics, Department of Science and Mathematics Education, Southern University and A&M College

SMED 743: Science/Mathematics Research Design, Department of Science and Mathematics Education, Southern University and A&M College

SMED 770: Special Topics (Action Research), Department of Science and Mathematics Education, Southern University and A&M College
SMED 790: Independent Study in Science Education, Department of Science and Mathematics Education, Southern University and A&M College
SMED 799: Advance Research, Department of Science and Mathematics Education, Southern University and A&M College
SMED 800: Dissertation Research, Department of Science and Mathematics Education, Southern University and A&M College

**Undergraduate Courses Taught**

BIO 101: General Biology, Department of Biology, Southern University and A&M College
SCI 100: The Natural World: The Caribbean, College of Sciences and Mathematics, University of the Virgin Islands
SCI 100L: The Natural World: Caribbean Lab, College of Sciences and Mathematics, University of the Virgin Islands
BIO 114: Biology for Majors I, Department of Biology, Philander Smith College
BIO 204: Genetics, Department of Biology, Philander Smith College
BIO 304: Cell Biology, Department of Biology, Philander Smith College
BIO 324: Microbiology, Department of Biology, Philander Smith College
BIO 334: Animal Parasitology, Department of Biology, Philander Smith College
BIO 384: Environmental Science, Department of Biology, Philander Smith College
BIO 400: Undergraduate Research, Department of Biology, Philander Smith College
ZOOL 115: General Biology, Department of Zoology, Southern Illinois University