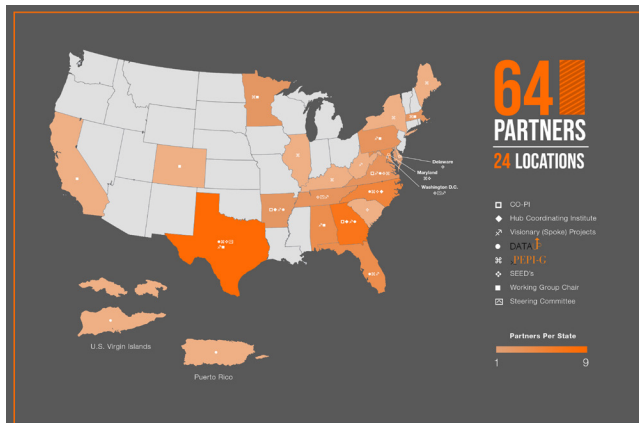
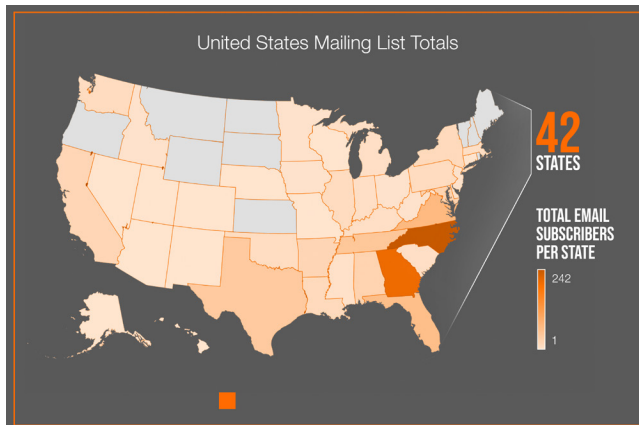
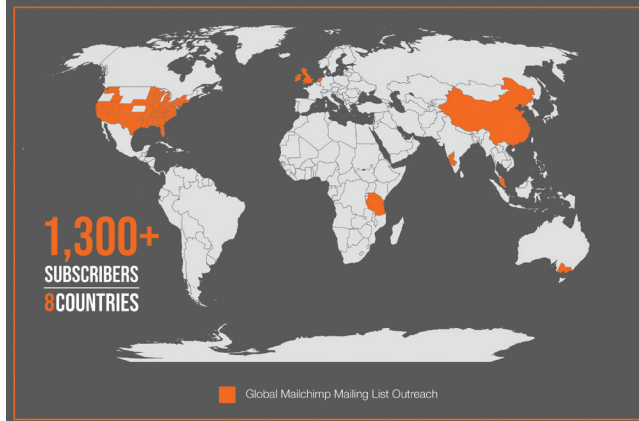




SOUTH BIG DATA HUB: IMPACT REPORT

Who We Are

A community convener of data innovation



What We Do

We Actively Reduce the Barriers to Data Innovation at Scale

Four key barriers to data innovation at scale:



Who We Serve

- Faculty Research and Development
- Students and Education
- Industry and Government
- The Southern Region and Non-Profit Communities

125,500,000+

constituents in the southern region of 16 states

6 domain communities

1500+

Faculty participated in South Hub supported projects, programs, events

60+ academic partner institutions

510+

students participated in South Hub supported projects, programs, events

15+ industry partner organizations



Why We Do It

WE SEE PRESSING NEEDS THAT DATA INNOVATION CAN SOLVE



Health Disparities



Environment



Smart Cities & Communities



Materials and Manufacturing

While some challenges are widespread, like data Science education, data sharing, and team science, many others are unique to the South. For example, the South region faces vast disparities in the health of its citizens and access to healthcare resources. Secondly, the coastal region of the South, which covers most of the East Coast and the Gulf Coast, is associated with a disproportionate share of natural hazards such as hurricanes and flooding. Third, regions of the South are growing rapidly, which brings an urgent need for careful, smart city and rural planning. Lastly, the Southern region contains several industrial materials and manufacturing “hot spots,” which present both challenges and opportunities to support economic growth in the region.

Data Science Education & Workforce Development

Higher education institutions are at different levels of readiness concerning thinking about data science, artificial intelligence, and their impact on all areas of science and education. One major challenge to increasing broad data literacy is the lack of trained instructors to teach data science. With global shortages in data and analytics talent, the South Hub has taken a stance to build awareness and deeper connections around the scope of data science, address faculty development and training through programs and outreach projects, and provide real-world experiences to enhance and expand the workforce.



\$280,000+

funding for students to gain real-world data-related career experience

750+

students and faculty participated in Hub supported programs, workshops, or events

\$110,000

provided in Education & Workforce Development Seed Grants

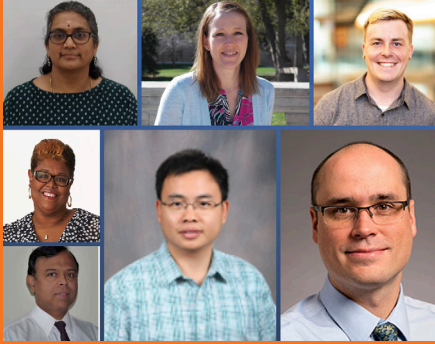
Faculty Development

Data Science Educators and Program Leaders Convened from Across the Country

The Data Science Education and Workforce Working Group is an open monthly working group that consists of over **140 educators and program leaders** from across the country, including academic, government, non-profit, and industry partners. The Keeping Data Science Broad Series brought together **60+ institutions and 600+ individuals** to explore the challenges and opportunities for data science programs at primarily teaching institutions (e.g., teaching institutions, community colleges, (HBCU's), (HSI's), other (MSI's)). Small writing groups were created to cluster ideas into topic areas and write white papers, resulting in **29 white papers produced**. The three webinars attracted 600+ viewers to discuss the implementation of data science undergraduate programs. Culminating in the final report, 'Keeping Data Science Broad: Negotiating the Digital and Data Divide Among Higher Education Institutions'.

Data Science Education & Workforce Working Group

In 2020, the South Hub expanded the Data Science Education and Workforce Working Group to become a national working group. The 140+ working group members include faculty from over 76 R1 institutions, 16 HBCUs, 14 liberal arts colleges, six community colleges, and five hispanic serving institutions. This monthly virtual meeting provides community members the opportunity to discuss regional and national program structures and curriculum, available resources for datasets and tools, and connect training in academia to industry and government needs. Speaker topics have discussed teaching data science to kids, structure of undergraduate and graduate programs, assessing data science, Research Experiences for Undergraduates (REU) opportunities, etc. Past speaker presentations are located on the South Hub YouTube page and contain 20+ past speaker presentations.



Top Left: Speakers from the 2020 Data Science Education & Workforce Working Group. L-R: Drs. R.N Uma, Mandy Hering, Hunter Schafer, Cheryl Swanier, Le Xie, David Beck, and Aryya Gangopadhyay. Top Right: 2018 and 2020 DataUp Faculty Teams from 12 minority serving and primarily teaching institutions. L-R: Florida A&M University, University of Virgin Islands, Johnson C. Smith University, Spelman College, North Carolina Central University, University of Puerto Rico - Rio Piedras, Georgia Gwinnett College, Morehouse College, Texas A&M University- Kingsville, Clark Atlanta University, and Old Dominion

Building Data Science Capacity in the South

Faculty training is an important tool for data science education and workforce development. In partnership with the Carpentries, the DataUp program is a 12 month-faculty development experience that provides on-campus data science training workshops and an instructor training experience to learn pedagogical strategies for teaching data science. To date, **120+ faculty and 175+ students were trained during on-campus workshops.** In addition, participating faculty teams utilized their tools gathered from the instructor training event to train **100+ indirect learners.** Faculty teams represented **8 HBCUs, 2 HSI, and 2 Liberal Arts institutions.**



Faculty Fellowships with Industry and Government

PEPI-G, the Program to Empower Partnerships with Industry and Government, is an opportunity for some of the best and brightest early-career faculty from academic institutions across the southern region to solve pressing data science priorities with industry and government. The program has supported 10 faculty and research scientists from institutions such as Louisiana State University- Alexandria, Duke University, University of Alabama at Birmingham, Texas A&M University, Georgia Institute of Technology, University of North Carolina at Chapel Hill, and Florida State University have partnered with companies and agencies such as McKesson, Biogen, PhishMe, Inc, UnitedHealthcare, Accelogic, Allscripts, Nanotechnology Patronas Group, GlaxoSmithKline and the Department of Homeland Security. 100% of the faculty and research fellows either planned to continue their research relationship or continue to engage with the partners.



TESTIMONIAL



PEPI was valuable because it provided the funds needed for prolonged deep-dive discussions between industry and academic experts. In my past experience, these conversations have been limited to a short meeting or perhaps a day-long event of some kind. However, having several consecutive days or weeks to meet, brainstorm, and develop a long term plan was invaluable.

**David Gotz, Ph.D., Assistant Professor,
University of North Carolina and PEPI participant.**



Student Training and Education

Student Experiences with Industry and the Federal Government

The South Hub created the PEPI-G Program, the Program to Empower Partnerships with Industry and Government, to provide participants the opportunity to work on high-level problems for industry and federal government. Through this program, students develop relationships with industry and government for research collaboration, build skills and relationships beneficial to entering the workforce, and provide real-world impact through hands-on experience in data science. To date, **5 graduate and undergraduate students** received **\$60,000+** to engage in fellowships to work on projects related to advanced algorithmic and analytics applications for static and streaming datasets as well as privacy-protecting analytics.

TESTIMONIAL



There are so many opportunities to contribute to the different focuses of DHS, and the mission/requirements are so different from a lot of industry jobs...This information can't really be gleaned from just reading or keeping up with academic developments- it's absorbed through talking with a wide range of folks with different careers.

**Jasper Johnson Doctoral Candidate,
University of Minnesota**

Student Experiences with Big Data Research

In 2018, collaborators from West Virginia University, University of Tennessee-Chattanooga, Spelman College, and Tuskegee University received a \$1M NSF Spoke award for the Integrating Biological Big Data Research into Student Training and Education project. Led by Dr. Hong Qin at UT-Chattanooga, **450+ faculty and students** have participated in **5 in-person bootcamps/workshops, 3 remote online bootcamp/workshops training, and 2 working group meetings**. The project infused biological big data into stand-alone courses and modules that span several courses at West Virginia University and Spelman College, impacting **~160+ students**. The project has **830+ associated videos** with **500,000+ views** posted on Youtube.

Below: Project lead and co-leads led a 2019 bootcamp for 50+ faculty and student participants to engage in data around Electronic Health Records.



Student Experiences with NonProfits and Local Governments

In 2017, the South Big Data Hub partnered with the Data Science for Social Good Program in Atlanta to develop the BDHub4Good experience. The South Hub funded travel and housing expenses for **9 graduate students** from diverse academic backgrounds and demographics to work in teams with undergraduates, local



governments, NGOs, and nonprofits. Students engaged in a **10-week program** that included data-related hands-on tutorials, attended weekly seminars, and received mentorship from faculty partners to design data-driven solutions for Food Banks, City Bike shares, Housing Justice, Building Energy, as well as Road flooding. During the program, women's participation steadily increased.

*Top Right: Project lead and co-leads led a 2019 bootcamp for **50+ faculty and student** participants to engage in data around Electronic Health Records.*

Students Opportunities to Speak and Expand Experiences

The South Hub, in conjunction with the University of Chicago, and the non-profit LRNG, developed a multi-city mentorship and internship program for youth, ages 16-20 years old. South Hub members participated in the curriculum development for an interactive online playlist to teach



youth about civic technology and data skills to serve the needs of their local communities. LRNG enhanced the online 'playlist' to include celebrity or culturally connected guests, digital badges, and local opportunities. The South Big Data Hub piloted the use of the Civic-Tech Playlist with partners at the University of Florida as part of the existing course, 'Computers in Modern Society,' taught by Dr. Kyla McMullen.

Through the SNAP-DS program, Stimulating New Activities and Projects in Data Science, graduate students from the southern region were awarded travel fellowships for participating as panelists during StatFest 2017. StatFest is a one-day conference encouraging undergraduate students from historically underrepresented groups (e.g. African American, Hispanic, Native Americans) to consider careers and graduate studies in statistics and data sciences. During StatFest, students shared their experiences as statistic majors and as minorities or persons of color with undergraduates interested in choosing a major.



Top Right: Brittney Bailey, Jemar Bather, Renee Dale, Ishmael Asamoah, and Brittany Green were recipients of a SNAP-DS award to attend the 2017 StatFest.

Three students from the southern region were awarded registration fellowships through the SNAP-DS program, “Stimulating New Activities and Projects in Data Science,” to attend the Young CEOs Business Summit (YCBS). YCBS is a conference that connects Africa’s political and business leaders to discuss opportunities to improve the political and economic landscape of the continent. During the summit, students engaged with young African enterprise leaders learning how to utilize data privacy and security to better implement data into businesses that enhance the social values of Africa.



Below Right: From L-R: SNAP-DS participants Abdoulaye Gueye, Favour Ori, and Sylvester Ogbonda received registration fellowships to attend the Young CEOs Business Summit in Atlanta, GA.

Education & Workforce Development Projects

With the \$10,000 from the South Hub SEEDS Program, North Carolina School of Science and Mathematics (NCSSM) will host the NC Data Science Panel



**North Carolina
School of Science
and Mathematics**

Series events to showcase the different educational pathways high school students can take to become a data scientist and highlight the variety of career opportunities available in this field to students and teachers in 63 of North Carolina's most economically distressed counties.

The South Hub seed funding will help educators across the United States prepare children to be better data users, stewards, and consumers by creating a



publicly available webpage that contains guides, videos, and other content to assist educators and instructors. The seed funding will advance science by helping the project identify 20 collaborators, conduct interviews with individuals and collaborators, and curate content for the website.

Over 90% of the Historically Black Colleges and Universities (HBCUs) are located in the Southern US. The South Hub awarded The Historically Black College and University Data Science



Consortium (HBCU-DSC) project \$100,000 through the 2020 S.E.E.D.S – Southern Engagement and Enrichment in Data Science program, promoting collaboration and support cross-pollination of tools, data, and ideas across the Southern region. The HBCU-DSC project is led by six university teams from Florida A&M University (FAMU), Norfolk State University, Bowie State University, Alabama A&M University, Johnson C. Smith University, and Morehouse College. The consortium seeks to provide an accessible and

beneficial platform within the HBCU community that will promote collaboration and support the “cross-pollination” of data analysis tools, data, and ideas across the HBCU community through virtual workshops, mini-grants, and speaker series. To date, the project has engaged 100+ individuals at HBCUs.

TESTIMONIAL



So specifically, African-Americans make up about four to five percent of the field of computer science. And when you start talking about data scientist, it's a much smaller percentage than that. So, we are looking to increase diversity in the area of data science in particular.

Dr, Jason Black, Asst Professor of Computer and Information Science, FAMU

Dr, Jason Black, Asst Professor of Computer and Information Sciences at FAMU, was a participant in the inaugural cohort of DataUp and lead recipient of the 2020 SEEDS

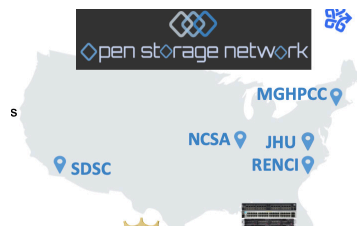
Data Sharing & Cyberinfrastructure

There is a current need to address knowledge gaps and increase the awareness and availability of cyberinfrastructure and (big) data innovations for the regional and national communities. The South Big Data Hub catalyzes the existing human infrastructure to provide demos to improve the national data research infrastructure, content, and capabilities. We also provide resources (such as storage allocations and training) to transformational pilots and supporting nascent multi-sector and transdisciplinary teams through the open storage network.

An Open Storage Network for High-Impact Academic Datasets

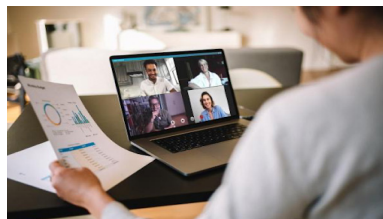
The NSF funded Open Storage Network provides a Cyberinfrastructure service to address specific data storage, transfer, sharing, and access challenges while enabling and enhancing data-driven research collaborations across universities and making new datasets widely available.

The South Hub's Co-PI, Jay Aikat, and members of the South Hub team actively participate, provide leadership, and support the project and development of the pilot. Within the first year, the project, the team designed, purchased, delivered, and installed storage pods. OSN is partnering with the Big Data Hubs to facilitate improved data dissemination and usage. Increasing access to data can allow researchers to analyze larger and more diverse datasets that may be more representative and lead to more exact conclusions and projections.



Data Sharing and Cyberinfrastructure Working Group

In 2018, the South Hub's Data Sharing and Cyberinfrastructure Working Group catalyzed All Hub activity around the recently NSF-funded Open Storage Network, of which the South Hub is a node. The working group provided logistical support



for the Open Storage Network Birds of Feather session, and the data and cyberinfrastructure focused networking events for 25 working group members to convene and discuss opportunities for collaborations that set the stage for expanding the Data Sharing and Cyberinfrastructure Working Group. In 2020, the South Hub relaunched the Data and CyberInfrastructure Working Group as an All Hub working group in collaboration with the Midwest, West, and Northeast Big Data Hubs. Each month **120+ members** from across the country engage in knowledge sharing among federally funded data and Cyberinfrastructure. The South Hub YouTube page contains **45+ demos** of existing data cyberinfrastructure collaborations, services, and resources.

CHAIR & CO-CHAIRS



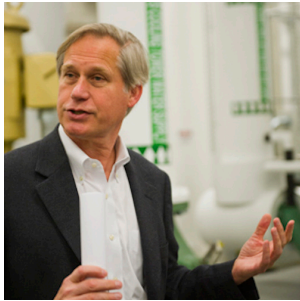
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Social Cybersecurity Working Group

In 2017, the South Hub launched the monthly Social Cybersecurity Working Group to focus on national security, network analysis, social computing, and share methods and results from ongoing research efforts. The working group consists of a diverse group of **110+ people** from **27 partner organizations**, including **five industry organizations**, **three HBCUs**, **12 four-year liberal arts institutions**, and **seven R1 institutions**. These individuals have met in **36+ sessions**, with hour-long presentations spanning 34 institutions across the nation. In 2019, under the South Hub's leadership and logistical and programmatic support, the Social Cybersecurity Working Group, created a special **day-long mini-conference on Disinformation at SBP- BRIMS for roughly 150 participants** from all over the world. Topics included social science approaches, operational relevance, and applications posted on the SBP-BRIMS Youtube page. Recently, the Working Group has developed a website with tools, datasets, and events relevant to the community.



Community Engagement

The South Big Data Hub focuses on community engagement around key Big Data challenges and opportunities for its region. It supports the breadth of interested local stakeholders in achieving common Big Data goals that would not be possible for the independent members to achieve alone. The South Hub has led community information gathering activities geared towards understanding the NSF-HDR ecosystem's needs and stakeholders, supporting the organization of up-to-date information regarding NSF COVID RAPID awards, and developing numerous meetings to bring the community together to explore and address important regional challenges.

Harnessing the Data Revolution Through Community Input

The South Hub team led, with the support of the Big Data Hubs, the information gathering activity to understand the needs of the Harnessing the Data Revolution (HDR) PIs and stakeholders. The four-part project consisted of a survey to better understand the potential value of an HDR coordinating entity with

160+ responses from HDR PIs and stakeholders. The second component consisted of a microlab that facilitated an open virtual discussion in small breakout groups with HDR stakeholders. Thirdly, the inaugural HDR PI meeting provided **200+ attendees** the opportunity to meet and explore current projects, future collaborations, and resources to support the growing ecosystem. Finally, the project team led the generation of a community report to answer how to advance a robust data science research ecosystem further.



Connecting COVID Research and Researchers

The South Hub supports the Cross-Hub project to gather and analyze COVID-19 RAPID grant data, the COVID Info Commons. The Info Commons has **1200+ community members**, 7 CIC hosted



webinars from July 2020 to February 2021 with **510+ participants**. With the support and guidance of the South Hub, this project will elevate COVID data to the Southern community to assist with bringing data science solutions to health disparities. Beyond the scope of this project, a longer-term objective is for the NSF COVID Commons to be the definitive site where all NSF-funded projects on COVID would be aggregated, tracked, and analyzed over time.

Meetings to Breaking Silos, Bridging Solutions, and Building Partnerships

The South Hub organizes bi-annual All Hands Meetings to convene the entire South Hub Community. The All Hands Meetings are an opportunity for attendees to foster new and support existing data science collaborations and share best practices and resources for data science related projects in the priority areas of the southern region. Including the smaller topical meetings, the South Hub has reached over **2500+ individuals** representing researchers from key Southern universities, representatives from local companies in the healthcare and consulting industries, as well as members of government entities. Members provide poster sessions, topic-focused panels, breakout sessions, and networking.

Partnership & Collaboration

The South Hub has emphasized building and connecting partners and stakeholders in the scientific community to advance science through training, awareness, and collaboration building in our Priority Areas that address regional and national cross-cutting challenges. These partnerships lend their expertise and skill set to our five priority areas. We empower and support our partners to lead projects in priority areas to address societal challenges, partner with Spoke projects to expand their projects' reach and provide seed grants to address challenges and extend opportunities into the community.



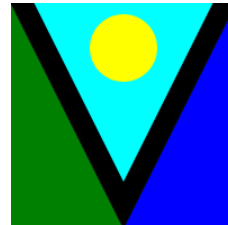
Advancing Science Through Large-Scale South Hub Spokes

The South Big Data Innovation Hub BD: SPOKE program is designed in conjunction with NSF to promote collaboration, support the cross-pollination of tools, data, and ideas across disciplines and sectors, engage academia, industry, government, and communities.



SPOKES Program Impacts

VERA: A Virtual Ecological Research Assistant is now live and allows users to perform ‘what if’ experiments to explain an existing ecological system or predict future changes. The platform is equipped to support ecological, economic, and epidemiological data and other domains where components act together for citizen scientists to upload their datasets for simulations. Currently, the platform integrates with the Encyclopedia of Life’s TraitBank’s 11 million data records and 53 datasets to explore a particular organism for simulation. The South Hub promotes project outcomes and reuse by disseminating project white papers, 1-pagers, user guide, link to the platform and introduction video to the larger South Hub community. This project has resulted in VERA’s **3380+ users, 4960+ sessions, and 25000+** page views, including the platform’s usage in Biology courses and domestic and international research, to support students and researchers in building deeper, richer, and more creative models. Interested individuals can access VERA through the CitSci.org, Encyclopedia of Life, VERA main page, and the South Big Data Hub’s website.



A 3-D mapping system for the wetland areas of the Southern US

Utilizing over 13,000 satellite images to analyze land cover mapping, drones to create Airborne drone Surface from landscape Mapping, Airborne Topographic Lidar to take detailed 2 meter images of coastal land using pulsing lasers and GPS to measure terrain locations. The goal is to answer questions such as what coastal areas are prone to flooding, do major hurricanes affect land cover, and what new technologies can be used to assess these factors.



MOYO, a full scale HIPPA-compliant app for large scale medical informatics that includes health factors like a food desert map developed through crowdsourcing, a census tract, google data, and amazon to map the location of quality food, tracking of activity, mood, environmental pollution and a host of other key factors. The app was developed by an expert team but also through African-American and Hispanic youth participant groups, from local populations of study, who were taught new coding skills to pitch their solutions for health challenges to the project team to create an app to address relevant societal challenges. MOYA is currently being used domestically and internationally at Emory University and the University of Virginia for cardiovascular training, and in rural Guatemala assisting with maternal mortality.



Smart Energy Grid Infrastructure for the United States

aimed at converting Big Data into new knowledge. A large action-oriented organization has been built focused on developing the fundamental framework for Big Data integration and knowledge extraction for power system applications. To date, the consortium has resulted in **seven working groups** centered around tools, analytics, education testbeds, and use cases, produced **40+ publications**, such as books, journal and conference papers, and numerous reports related to improving smart grid operations, provided an inventory of testbeds that allow different testing activities related to Big Data research outcomes and products, and hosted events, panels, workshops, webinars conferences, and NSF meetings.

Smart Privacy for Smart Cities. This Spoke project launched and expanded the Civic Data Privacy Leaders Network by the Future Privacy Forum. The project began at the 2018 MetroLab Annual Summit, in which the South Hub was an event partner. The project has helped **30+ municipal and county officials** better understand, communicate, and collaboratively address data privacy issues and principles. This project, led by the Future Privacy Forum, partners with Asheville, NC, Austin TX, Gainesville, FL, and Chattanooga, TN. The project also developed a privacy risk assessment framework to evaluate new technologies and data flows and created a



Training that Integrates and Automates Biological Big Data into Student Education.

A suite of training workshops on using network models to integrate heterogeneous genomic big data and heterogeneous ecological big data to address life sciences questions. Faculty and students have been engaged in developing a protocol to automate field data collection, prototyping automated methods to enhance plant digitization, as well as leveraging the collection of digitized plant images and ecological datasets. The project has held **5 in-person bootcamps/workshops** and **3 remote online bootcamp/workshops** training with **450+ faculty** and students participants. The project also infused biological big data into stand alone courses and modules that span several courses at West Virginia University and Spelman College, discussions about board of trustee approval regarding undergraduate and graduate programs are occurring respectively



S.E.E.D.S Grant Program: Southern Engagement and Enrichment in Data Science

The South Hub has emphasized building and connecting partners and stakeholders in the scientific community to advance science through training, awareness, and collaboration building in our Priority Areas that address regional and national cross-cutting challenges. These partnerships lend their expertise and skill set to our five priority areas. We empower and support our partners to lead projects in priority areas to address societal challenges, partner with Spoke projects to expand their projects' reach and provide seed grants to address challenges and extend opportunities into the community.

2020-2021 SEEDS GRANT PROGRAM RECIPIENTS

Evaluation and Demonstration of Open Data Portal Technology for Smart Cities and Data Science for Social Good



Reducing uncertainty in Risk Projections for Statewide Hospital Capacity in COVID-19

North Carolina Data Science Panel Series



North Carolina School of Science and Mathematics

Visualization and Data Reuse Challenge - NSF Digital Rocks Portal

Visualization and Data Reuse Challenge - NSF Digital Rocks Portal



HBCU Data Science Consortium (HBCU-DSC)



The South Hub PARTNERS Program Accomplishments Projects

This program cultivates voluntary partners that commit to resource sharing and community building with the South Hub in priority areas. The South Hub currently has **70+ partners** that engage with the South Hub programs, projects, or groups, and that provide value to and share resources with the Hub community. Partners help us in Expanding Broader Impacts for Data Research Projects, Gaining robust Communication Platforms, Sharing Project Highlights in South Hub publications and platforms, Providing Funding, Starting working groups, Sharing news stories with Hub membership, and creating new offerings.

The South Hub Partner Institutions. Currently, partners engage in one or more of the South Hub programs or projects. Alternatively, partners can provide funding and/or in-kind support, while engaging with the South Hub partner benefits such as Finding Collaborators, Recruiting students, faculty and/or staff or Gaining users for data or cyberinfrastructure projects. Finally, partners can work with the South Hub to create products or useful services for the community.



Our Team



Renata Rawlings-Goss
Executive Director,
Georgia Institute of Technology

Renata Rawlings-Goss, Ph.D., is the Executive Director of the South Big Data Innovation Hub and oversees the strategic direction of the South Hub including its programs, operations, and staff. She is also the Director of Strategic Partnerships for the Georgia Institute of Technology-Institute for Data Engineering and Science. Formerly, Dr. Rawlings-Goss worked with the White House Office of Science and Technology Policy to create the National Data Science Organizers Group, which facilitates data science groups to address national “Grand Challenge” problems. She also sat on the NITRD interagency Big Data Senior Steering group charged with strategic planning for big data research funded by the federal government. She was awarded as an founding AAAS Big Data Science and Technology Fellow to work with the National Science Foundation (NSF) in the directorate



Shannon McKeen
Deputy Director,
University of North Carolina - Chapel Hill

Shannon McKeen has a strong background in consulting in senior management roles for companies restructuring in the textiles space. He is an instructor in Kenan-Flagler’s online MBA program and in the undergraduate business program at Wake Forest. McKeen has 20 years of executive experience in sales, marketing, and general management, with extensive expertise in growth strategies, new products, and brand rejuvenation. As an entrepreneur, McKeen has worked with startup companies and with new divisions of larger companies. His work has included starting ecommerce sites in the U.S. and China and raising capital for medical products companies. He serves on the Fryeburg Academy Board of Trustees and the City of Winston-Salem Budget Advisory Council. He is a member of the National Association of Corporate Directors and the



Srinivas Aluru

PI, Georgia Institute of Technology

Srinivas Aluru, Ph.D, is a Principal Investigator of the South Big Data Hub, the Executive Director of the Georgia Tech Interdisciplinary Research Institute (IRI) in Data Engineering and Science (IDEaS), a professor in the School of Computational Science and Engineering within the College of Computing, and an adjunct professor in the school of Electrical and Computer Engineering at the Georgia Institute of Technology. Aluru conducts research in high performance computing, large-scale data analysis, bioinformatics and systems biology, combinatorial scientific computing, and applied algorithms. He pioneered the development of parallel methods in bioinformatics and systems biology and contributed to the assembly of genomes and metagenomes, next-generation sequencing bioinformatics, and gene network inference and analysis. His contributions in scientific computing lie in parallel fast multipole methods, domain decomposition methods, spatial data structures, and applications in computational electromagnetics and materials informatics.



Stanley Ahalt

PI, University of North Carolina at Chapel Hill

Stan Ahalt, Ph.D., is the Director of the Renaissance Computing Institute (RENCI) at UNC-Chapel Hill. As director, he leads a team of research scientists, software and network engineers, data science specialists, and visualization experts who work closely with faculty research teams at UNC-CH, Duke, and NC State as well as with partners across the country. RENCI's role is to provide enabling cyberinfrastructure to these research collaborations, which entails working on the challenges of data management, sharing, integration, and security. Ahalt is also a professor in the UNC-CH Computer Science Department and the Associate Director of the Informatics and Data Science (IDSci) Service in the North Carolina Translational and Clinical Sciences Institute (NC TraCS), UNC's CTSA award. Ahalt earned his doctorate in Electrical and Computer Engineering from Clemson University and has over 30 years of experience in high performance computing, signal processing, and pattern recognition.

SOUTH HUB Co-PIs



Patrick Sullivan
Emory University



Madhav Marathe
University of Virginia



Surya Kalidindi
Georgia Tech



Jay Aikat
University of North Carolina



Steve Fiore
University of Central Florida

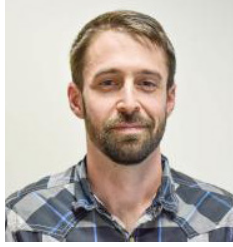


Renata Rawlings-Goss
Georgia Tech

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Jeremy Zollars
Project Coordinator



Stephanie Subers
Communications Lead



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Comms Program Mgr



Jaysaree Jaganatha
Social Media and
Communications Specialist

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Steering Committee



Niall Gaffney (TACC)
Steering Committe Member



Michela Taufer (UTK)
Steering Committee Member



Carolina Cruz-Neira
Steering Committee Member



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