



Distributed  
Big Data &  
Analytics

# Internet2 CINO Distributed Big Data & Analytics (DBDA) Working Group Collaborative Innovation Community Meeting

1 April 2016

Chairs  
Alex Feltus, Clemson  
Sam Gustman, USC  
Marc Hoit, NC State



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# Meeting Objectives

- NSF Big Data Innovation Hubs
  - Rene Baston (Northeast) & Renata Rawlings-Goss (South)
- Global Summit 2016

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**NORTHEAST**  
**BIG DATA**  
INNOVATION HUB

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René Bastón, Executive Director

Kathy McKeown, PI

*Coordinated by Columbia University*

# Regional Data Innovation Hubs

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## History

2012: White House “Big Data Research and Development Initiative” → \$200 million

2015: NSF → \$25 million to four Hubs and set to award another \$10 million to the Spokes, this year.



Hubs based on Census Regions of the  
United States

Alaska & Hawaii are part of the West Region  
US Territories can participate in any region

# NE Regional Big Data Innovation Hub

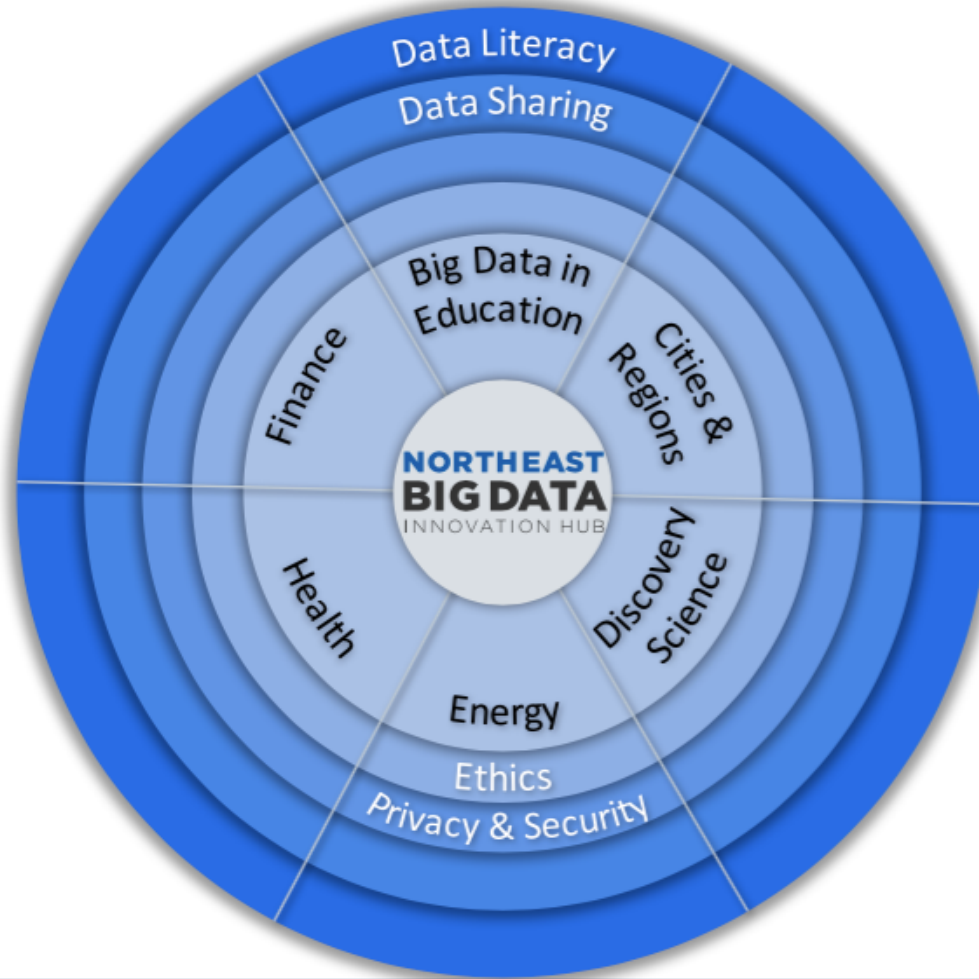
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## **Mission**

Build public-private, multi-sector partnerships to address high-priority challenges with data-driven innovations



# Priority Areas



# Early Activities

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- Workshops/Community-Building
- Spoke Projects
- Northeast Road Trip
- Membership/Partnership
- Infrastructure

# Opportunities

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- Spokes Call
- CCC Call
  - Young Innovators Internship
  - Knowledge Exchange
    - Lecture Series
    - Visiting Scholars
  - Data Sharing Workshop





# For More Information

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**Visit our website:**

<http://northeastbdhub.dsi.columbia.edu>

**Email us:**

[northeastbdhub@columbia.edu](mailto:northeastbdhub@columbia.edu)

**Follow us on Twitter:**

[@NEbigdatahub](https://twitter.com/NEbigdatahub)



# **BIG DATA**

## **A REGIONAL INNOVATION HUB FOR THE SOUTH**

**Renata Rawlings-Goss**

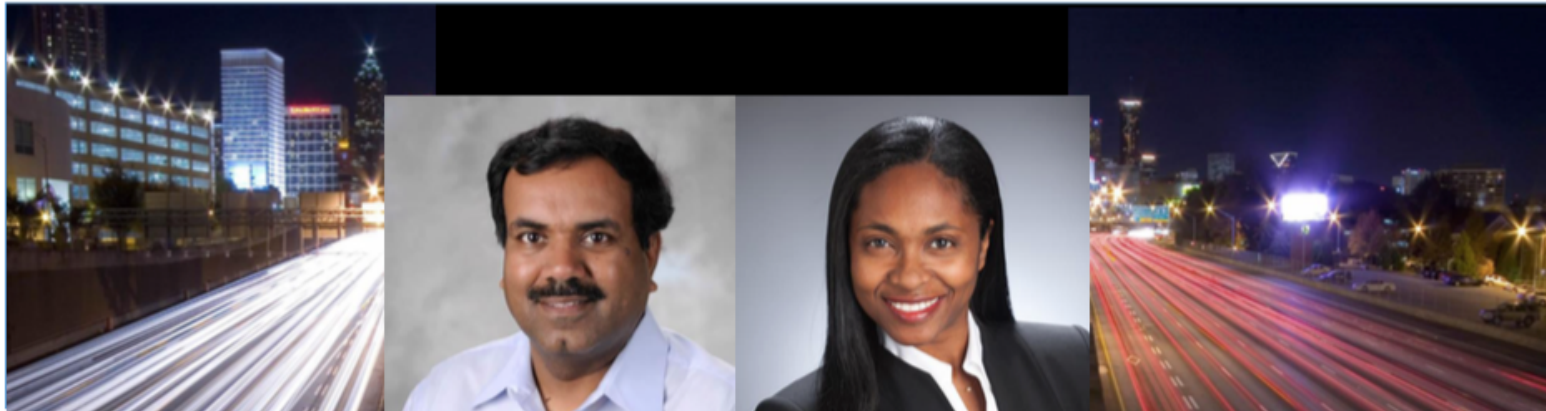
# The South Big Data Hub



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL

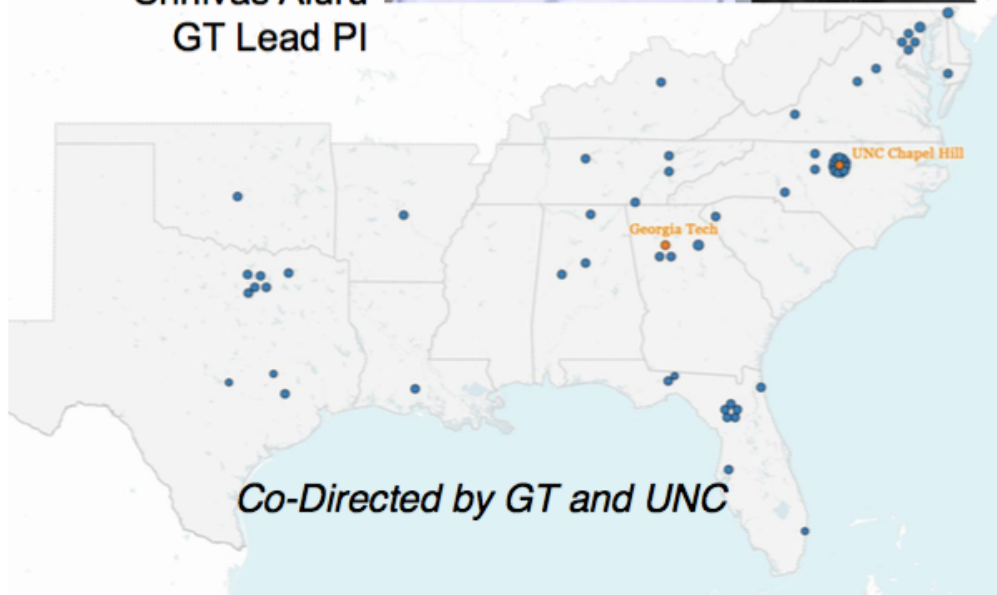
- Co-Directed by The Georgia Institute of Technology and the University of North Carolina's Renaissance Computing Institute (RENCI)
  - Serving 16 Southern states and the District of Columbia.
  - Phase one NSF funding for the South BD Hub will be \$1.5 million over three years.
  - **Vision: To be a Connection Point for Big Data Partnerships in the South**
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# NSF South Big Data Innovation Hub



Srinivas Aluru  
GT Lead PI

Renata Rawlings-Goss  
GT Co-Executive Director



**59** Academic/Nonprofit/  
Government Partners

**25** Industry Partners

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## South BD Hub Priority Areas

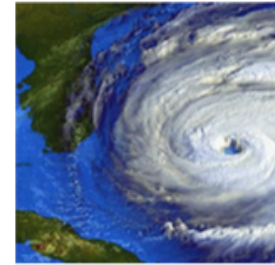
- NSF Hub investments: \$6M + \$10M/yr for spokes + ... (over four hubs)
- Initial areas of South BD Hub focus are on...



Big Data Sharing  
and Infrastructure



Healthcare



Coastal Hazards



Economics, Privacy  
and Policy Issues



Industrial Big Data



Materials and  
Manufacturing



Habitat Planning

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## Spoke: Health Disparities, Health Analytics, and Precision Medicine



- Use South region's top health care organizations and resources
- Understand how precision medicine can benefit minority health
- Close the gap on wide disparities in health status, health outcomes, and access to health resources using data driven analytics

# Spoke: Habitat Planning



- Urban infrastructure and resilience planning, transportation, smart cities, urban-rural co-dependent systems, and wildlife habitat planning.
- Collect and integrate population-level data on infrastructure and behaviors and the subsequent development of complex simulation models to guide decisions.
- Topics: food deserts, transportation research, spread of disease, urban and rural infrastructure resilience, and plant and animal conservation.

## Spoke: Industrial Big Data



- Complex physical machinery and networked sensor use increasing.
- Essential to monitor the health of physical systems, dynamically manage their operations, and ensure their security.
- Data abounds in many industries and types of equipment
  - including power generators, jet engines, railroads, and oil and gas production, transmission, and distribution pipelines.





**Chicago Marriott Downtown Magnificent Mile  
540 N. Michigan Ave  
Chicago, IL**

**Distributed Big Data and Analytics Innovation Working Group: Tuesday, May 17<sup>th</sup>,  
7:15-8:45AM CDT**

- Join us to discuss our learnings & recommendations, and share your thoughts to help us build the future of Distributed Big Data & Analytics.
- If you haven't **registered** to attend, please do so. **Prices go up after April 15<sup>th</sup>!**
  - <http://bit.ly/1RNQdYg>
- Need a **hotel room** to go along with that registration? **Block rate ends April 15<sup>th</sup>!**
  - <http://bit.ly/21V1uJ0>

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**Questions & Answers...**  
**Thank You**  
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