

SC EPSCoR/IDeA

Call for Speakers

The 2017 SC EPSCoR/IDeA State Conference

Tuesday, April 4, 2017

Hilton Columbia Center Hotel

The SC EPSCoR/IDeA Program is inviting speakers to present at the Annual SC EPSCoR/IDeA State Conference. This is a one-day conference intended for faculty, researchers, and academic and research professionals. The goal of this year's conference is to facilitate convergent research that addresses State and National research priorities through collaboration and inclusion among South Carolina institutions. The conference will center around the following themes (adapted from the National Science Foundation) to highlight research expertise in South Carolina and to begin the process of building research teams:

- **Harnessing Data for 21st Century Science and Engineering**
- **Shaping the New Human - Technology Frontier**
- **Understanding the Rules of Life: Predicting Phenotype**
- **The Quantum Leap: Leading the Next Quantum Revolution**
- **Navigating the New Arctic**
- **Windows on the Universe: The Era of Multi-messenger Astrophysics**

Harnessing Data for 21st Century Science and Engineering such as developing a cohesive national-scale approach to research data and a 21st century workforce capable of working effectively with data. This will enable data-driven discovery through visualization, better data mining, machine learning, and more. It will support an open cyberinfrastructure for researchers and develop innovative educational pathways to train the next generation of data scientists.

Shaping the New Human-Technology Frontier such as developing new machine algorithms; computing system structures; designing, building, and developing the human-centered engineered systems with cognitive and adaptive capacities; determining how new learning will be possible; and addressing challenges in privacy and security.

Understanding the Rules of Life: Predicting Phenotype such as increasing the knowledge base to predict the phenotype of a cell or organism from what we know about the genome and environment through the convergence of research (e.g., biology, computer science, mathematics, physical sciences, behavioral sciences, engineering). Genomes to Phenomes was the topic of this year's NSF RII Track-2 solicitation and is likely to be the topic of the next Track-2 solicitation.

The Quantum Leap: Leading the Next Quantum Revolution such as answering questions about quantum behavior and the means of accessing and manipulating quantum systems, how to prepare and manipulate complex or dynamic quantum states; control material-light interactions to create new quantum phenomena; the mathematics that describe emergent quantum behavior; and designing and engineering systems that use quantum effects extensively.

Navigating the New Arctic such as answering how the dramatic changes in sea ice alter marine ecosystem structure and primary productivity; the functionality of the new Arctic Ocean ecosystem; new indicators and theory to understand adaptive capacity of Arctic individuals and communities; permafrost thaw and the changing Arctic water cycle; and the linkages between Arctic warming and changing mid-latitude weather patterns.

Windows on the Universe: The Era of Multi-messenger Astrophysics such as how electromagnetic waves, particles and gravitational waves answer questions on the beginning of the universe, acceleration of the universe, the unseen matter of the universe, and the properties of the most exotic objects in the universe.

Session Format

The Conference sessions will be designed to facilitate discussions and serve as a resource to identify potential collaborations by providing networking opportunities. Sessions will include scientific research presentations as well as panel presentations/discussions and interactive sessions to expose conference attendees to research activities in the State as well as approaches, models, and best practices relating to research. Each presentation will be limited to 15 minutes with additional five minutes for Q&A.

Presentation Abstract Submission Guidelines

Presentation Title (15-word limit)

Author(s) Information – List of authors, titles, affiliation, and contact information of each. Identify the person who will deliver the presentation at the conference.

Presentation Theme (select only one that best describes the topic of the presentation)

- Harnessing Data for 21st Century Science and Engineering
- Shaping the New Human-Technology Frontier
- Understanding the Rules of Life: Predicting Phenotype
- The Quantum Leap: Leading the Next Quantum Revolution
- Navigating the New Arctic
- Windows on the Universe: The Era of Multi-messenger Astrophysics

Presentation Abstract (350-word limit)

Abstracts should briefly describe the research objectives, methodology, results and potential future

research. The abstracts selected for presentation at the Conference will be published in a conference book and on the SC EPSCoR/IDeA website.

Deadlines

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| Thursday, March 9, 2017 | Deadline for submitting an abstracts |
| Thursday, March 16, 2017 | Notification Authors |
| Thursday, March 23, 2017 | Conference registration deadline (There is no fee for attending the conference) |
| Wednesday, March 29, 2017 | Electronic copies of the presentations are due by noon (email april.heyward@scra.org) |

Contact Information

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