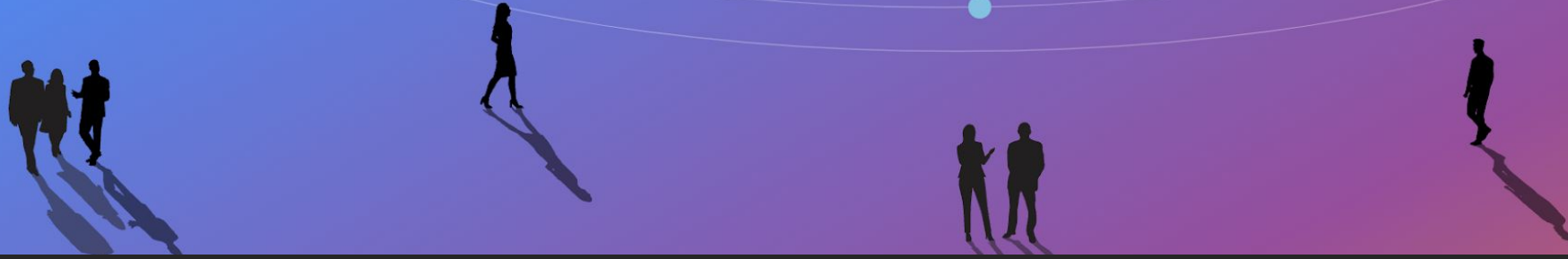


# Extend. Expand. Exemplify.

The SGCI team continues to offer its services AND brings you a new Center of Excellence to Extend Access, Expand the Community, and Exemplify Good Practices for CI through Science Gateways.



## 2023 Hack HPC in the City: Pandemic SGCI/SGX3 Update

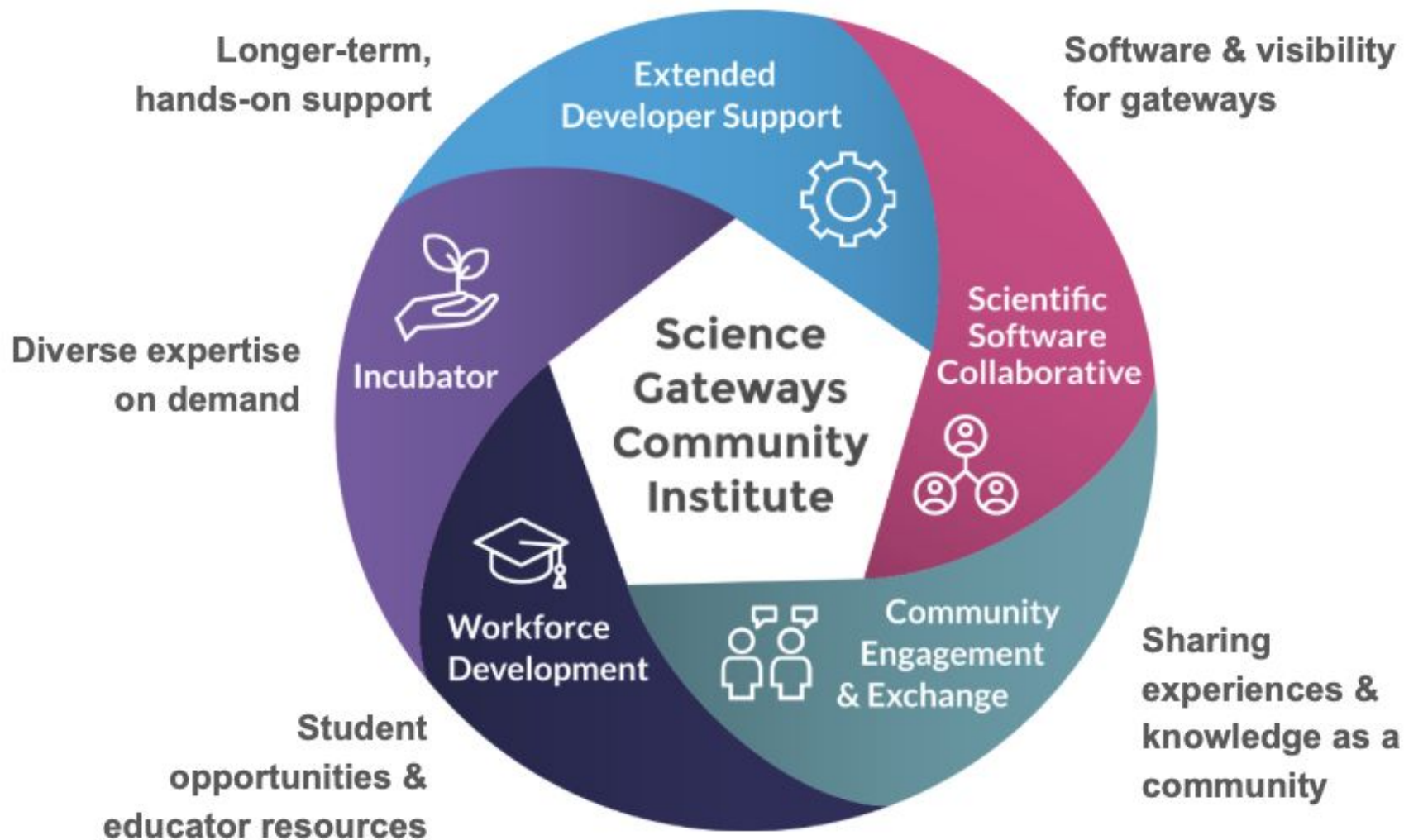
Linda Bailey Hayden, Co-PI  
LBHAYDEN@ECSU.EDU



NSF awards  
1547611  
2231406



# Science Gateways Community Institute





**Michael Zentner**  
Director



**Claire Stirm**  
Project Manager  
Incubator Lead



**Maytal Dahan**  
Scientific Software Collaborative Lead



**Sandra Gesing**  
Community Engagement Lead



**Linda Hayden**  
Workforce Development Lead



**Nancy Maron**  
Sustainability Blueprint Factory Lead



**Paul Parsons**  
User Experience Consulting Lead

# Leadership Team

**939**

webinar attendees



**2056**

participants in SGCI's events

**504**

student &

**41**

faculty participants



**154**

letters of collaboration

**240**

Focus Week Attendees

**13**

Affiliates

**32**

success stories



**63**

Consultations

**14**

partners

**48**

Extended Developer Support projects



**\$1,384,325**

additional funding to SGCI by external projects

**600**

Gateway Catalog entries





RIP.

SGCI

Science Gateways  
Community Institute



# SGX3

## Extend. Expand. Exemplify.

A Center of Excellence to Extend Access, Expand the Community, and Exemplify Good Practices for CI through Science Gateways.

Award  
#2231406



# SGX3

A Center of Excellence and a Software  
Institute to serve the Science Gateways

Helping...

- Community Focused
- Workforce Focused
- Future Focused
- Working Toward Preparing for the Future

Community

Building...

- Development Service Focused
- Operations Service Focused
- Heavy Touch Consulting
- Working Toward Self-



SGCI

The logo for SGCI (Software Gateways Center of Excellence and Institute) features the letters 'SGCI' in a bold, white, sans-serif font. The letters are set against a dark blue background with a network of interconnected nodes and lines in shades of purple, pink, and blue, suggesting a digital or scientific network.



# SGX3

## A new Cyberinfrastructure Center of Excellence for Science Gateways

### SGX3 - NSF Funded

- ✓ Community building activities
- ✓ Workforce development activities
- ✓ Light-touch consulting / advisory services
- ✓ Envisioning the future through Blueprint Factories
  - ✓ ACCESS
  - ✓ PATH
  - ✓ Materials Genome Initiative
  - ✓ Sustainability practices
  - ✓ more to come...

### SGCI - Client Funded

- ✓ Heavy-touch consulting / other services
- ✓ Software team augmentation / outsourcing
- ✓ Professional science gateway operations

SGX3 is \$7.5 million over 5 years beginning September 2022

# Workforce Development Overview

<https://sciencegateways.org/faculty-focused>

SGX3's workforce development activities contribute to broader impact by enriching existing and forming new relationships with minority serving institutions and organizations to bring gateway development into curricula, bring domain-specific gateways to relevant classrooms and research settings, and train faculty to scale these efforts to grow and live beyond SGX3.

**The SGX3 Faculty Program** builds a supportive HPC/Gateways community for the faculty while providing them the training and support needed to succeed. SGX3 staff assist faculty in establishing HPC accounts for their classes and consult with them through the implementation phase of their curriculum changes.

- HPC/SG Curriculum Enhancement Efforts
- Faculty workshops at ADMIUSA.ORG Symposiums
- Faculty Hackathons
- Faculty Poster Session at Gateways conference
- Gateway Community mentors assigned to faculty



Partnership with ADMIUSA.org has been a key ingredients to being successful.

# 2023 ADMI Symposium

SGCI /SGX3 involvement included:

## Faculty Session:

Hackathon HPC Education

**Charlie Dey**, *Director, Training and Professional Development*

**Je'aime Powell**, *Sr. Systems Admin. TACC*

## Student Workshop

HPC and Science Gateway Opportunities

**Charlie Dey**, *Director, Training and Professional Development*

**Je'aime Powell**, *Sr. Systems Admin. TACC*

## Faculty Session:

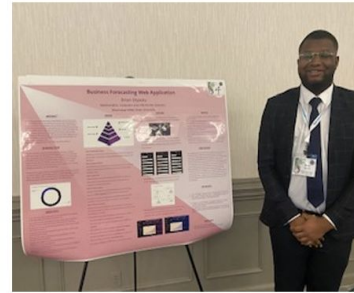
Initiative for HBCUs/MSIs

**Dr. Elijah Maccarthy**, *HPC Engineer*

*Systems Acceptance and User Environment*

*Oak Ridge National Laboratory*

**Student and Faculty Session:** *The ACCESS Program: Research Computing Resources for All*  
**Ms. Virginia Do**, *Outreach Manager & SIParCS Internship Director, NCAR*



# 2023 Coding Institute & Hackathon

- Sixteen students participated in the virtual 2023 Coding Institute. All were computer science majors. Weeks one and two of the Coding Institute focused on building non-technical and basic technical skills. Week three was devoted to specific gateway technology led by TACC. Finally, week four involved team projects via the hackathon.
- The Hackathon was co-sponsored by SGCI/SGX3, [Omnibond Systems](#), [Texas Advanced Computing Center](#) and [Amazon Web Services](#) June 26th - 29th. All team projects focused on using UX Design techniques to revamp ADMIUSA.org and the HACKHPC.org sites. SGCI staffer Ali Baigelenov [abaigele@purdue.edu](mailto:abaigele@purdue.edu) served as a consultant and judge for the event.



Ali Baigelenov



Professional development seminar speakers:  
Dan Dietz, Suzanne Prentice and Jacqueline  
Jackson.

**Student Programs.** Hackathons, professional development seminars, and coding institutes that have a focus on participants from traditionally underrepresented populations will be continued from SGCI.

- Coding Institute June 5-29, 2023
- ADMI Symposium April 13-15 , 2023
- ADMI Hackathon June 26 -30, 2023
- Gateways Conference Mentors
- Rising Stars Award
- HPC in the City Hackathon@ SC
- Internships at TACC



# SGX3 Internships

<https://sciencegateways.org/internships>

Each year, our Workforce Development team offers summer internships for students interested in developing their gateway development skills. Interns are placed at the Texas Advanced Computing Center (TACC).

Eligible applicants include graduate students majoring in computer science or computer engineering (or related fields). The student will be funded by SGX3 to join the TACC science gateway team for the summer, working on live, impactful gateways.

## Stipend

Participants will receive a \$5,400 stipend (scholarship), housing (if not local to Austin), and meal card at The University of Texas at Austin, and travel arranged by TACC.

Additionally, travel grants to present research at an annual conference will be available to selected participants.

## Intern Presenters: (L to R) Jackson, Dhanny, Swathi, Prithul, Steven

- **Dhanny Indrakusuma** - working on Tapis with the Cloud and Interactive Computing team on creating a machine learning hub application that aims to enhance the experience of non-technical individuals involved in machine learning research. **Dhanny will continue his work at TACC funded by TAPIS.**
- **Jackson Thetford and Steven Oh** - working on the SCOPED (Seismic COmputational Platform for Empowering Discovery) project, an organization that advances research for seismic analysis to create custom Tapis applications using the Tapis UI infrastructure.
- **Prithul Sarker** - working with the web mobile applications team and the project primarily focuses on the backend operations of applications in high-performance computing.
- **Swathi Vallabhajosyula** - working with the Tapis team on extending the platform to include microservices to profile applications for resource consumption and recommend walltime.
- Jackson and Steven (undergraduates) will be funded by an NSF Scoped project and will be working with Ian Wang at UT Austin and TACC staff to continue the project they have been working on.





SGX3 Funded Services

UX evaluation and design engagements lasting up to 3 calendar months

Technology evaluation and gap analysis

Science Gateway architecture design

Summer faculty and student internships

Once annually Science Gateways Focus Week sustainability sessions

Focus Week follow-on sustainability coaching

Summer Coding Institutes

Science Gateway Hackathons

Young Professionals program

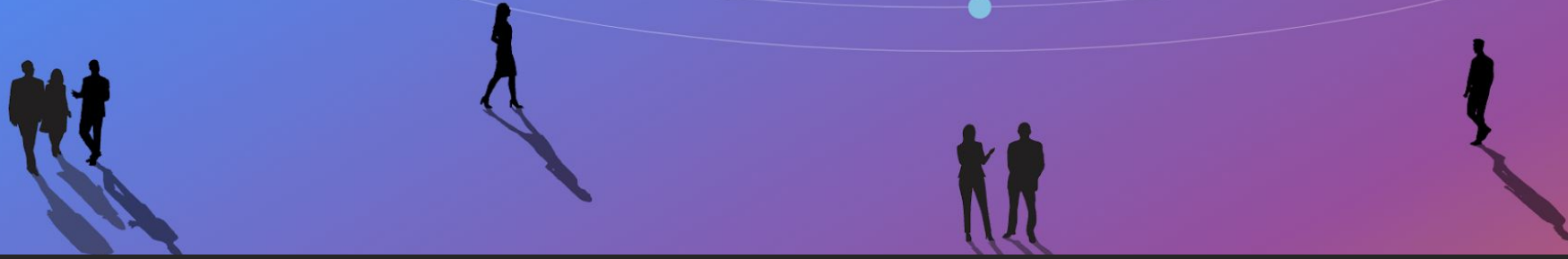


In addition, SGX3 also conducts the following community catalyzing services:

- Gateways Central site for gateway listing, software listing, and partnership formation
- SGX3 “On the Road” outreach to scientific communities where they meet
- Gateways conference series
- Blueprint Factory sessions to develop the future roadmap for Science Gateways serving new domain science needs

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## 2023 Faculty Hackathon – SGCI/SGX3 Update

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