



Connecting people and resources
to accelerate discovery by empowering
the science gateway community

Science Gateways Community Institute

April 18, 2019

*Nancy Wilkins-Diehr, San Diego
Supercomputer Center*

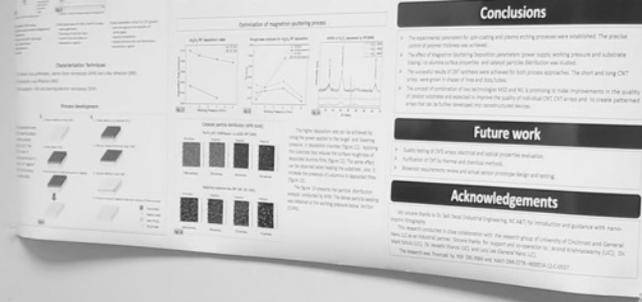
sciencegateways.org

Award Number
ACI-1547611



ARE YOU:

- Developing advanced web interfaces to:
 - Data collections
 - Analysis capabilities
 - Instruments
 - Sensor data
 - Citizen science projects
 - Community resources
 - Much more



We call these

science gateways /sī' əns gāt' wāz' / *n.*

1. an online community space for science and engineering research and education.
2. a Web-based resource for accessing data, software, computing services, and equipment specific to the needs of a science or engineering discipline.

Also known as: research platforms, virtual laboratories, virtual research environments, advanced web portals, etc.

Gateways transform science



I-TASSER

Protein Structure & Function Predictions

(The server completed predictions for 455687 proteins submitted by 108628 users from 143 countries)

(The template library was updated on 2019/03/16)

Innovations at the Nexus of Food and Environmental Systems (INFEWS)

PROGRAM SOLICITATION NSF 16-524

Leverage existing investments: INFEWS projects should take advantage of previous and operational federal infrastructure investments in data management, software and modeling, computing resources, environmental observatories and centers, and social, economic and administrative data of NSF and other agencies. A variety of computational infrastructure, including software (modeling, data analysis, knowledge discovery, visualizations, decision support systems, **science gateways**, etc.), sensors, networks, data systems, and computing hardware is available and may be utilized and shared by individual researchers, groups, centers, universities and national laboratories, and communities as appropriate.

Creating the CIPRES Science Gateway for inference of large phylogenies

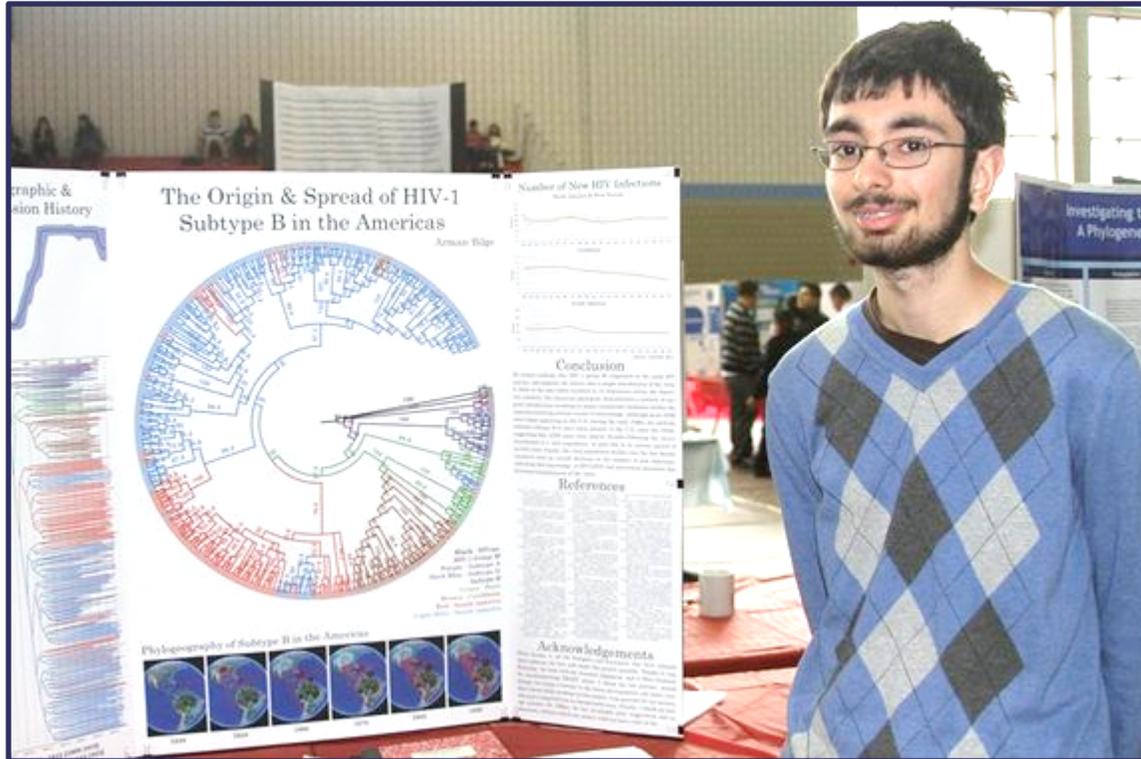
MA Miller, W Pfeiffer, T Schwartz - 2010 gateway computing ..., 2010 - ieeexplore.ieee.org

Understanding the evolutionary history of living organisms is a central problem in biology.

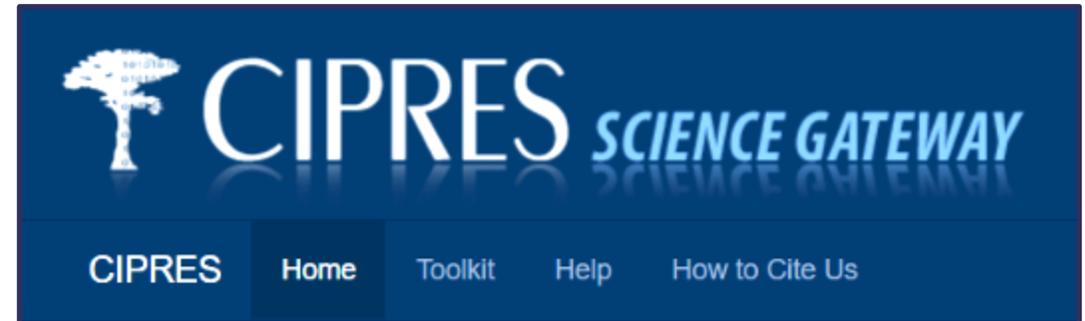
Until recently the ability to infer evolutionary relationships was limited by the amount of DNA sequence data available, but new DNA sequencing technologies have largely removed this barrier.

☆ ⓘ Cited by 4753 Related articles All 12 versions

Gateways also democratize access

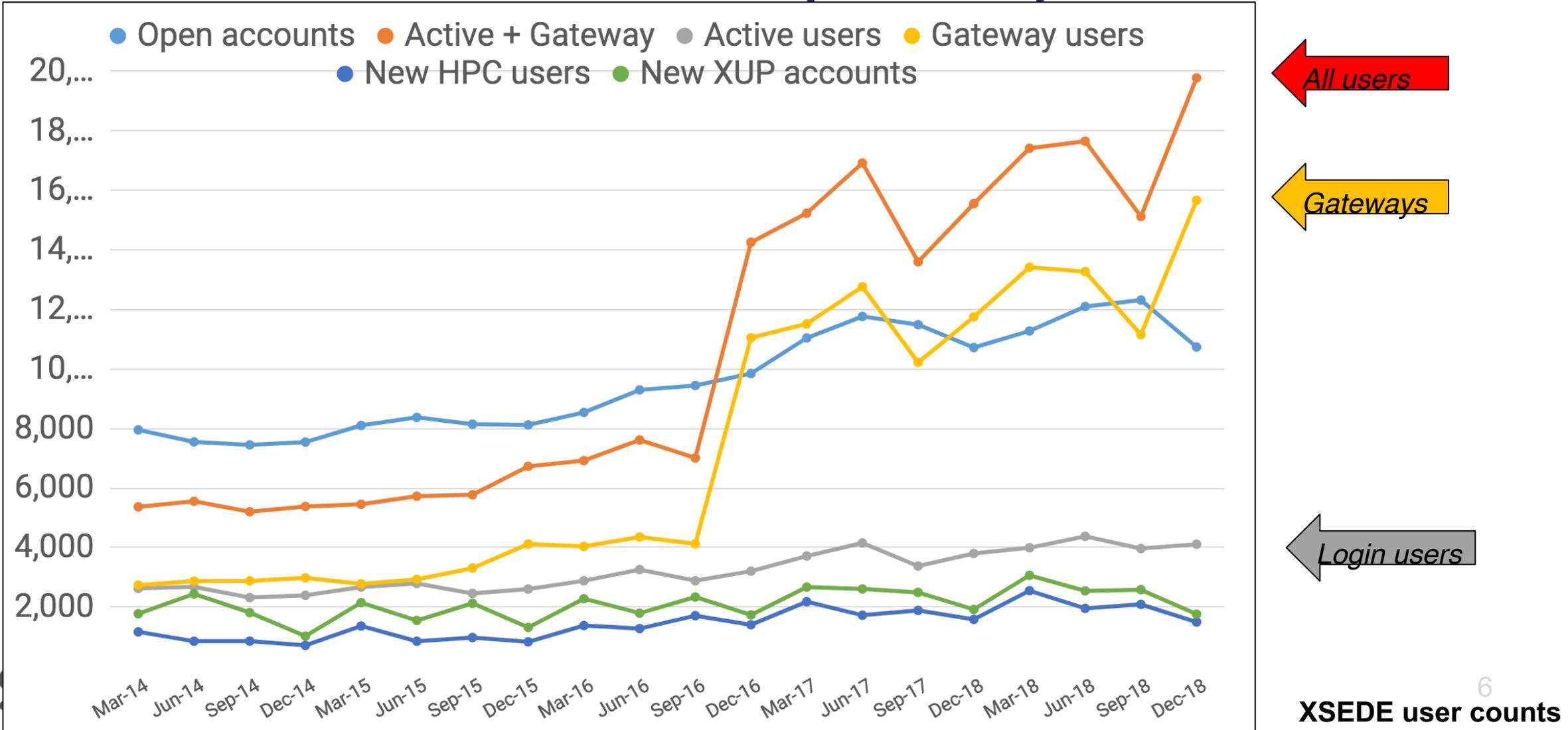


Armand Bilge, 10th grader at Lexington High School (2012), next to a poster explaining his award-winning research project, a map and timeline that identified when HIV arrived in the Americas.



- **1.36 million jobs** on TeraGrid/XSEDE submitted by **33,195 unique users**.
- Used for **curriculum delivery** by at least 93 instructors.
- Supported **4,500+ publications**.

And have radically changed the supercomputer user base

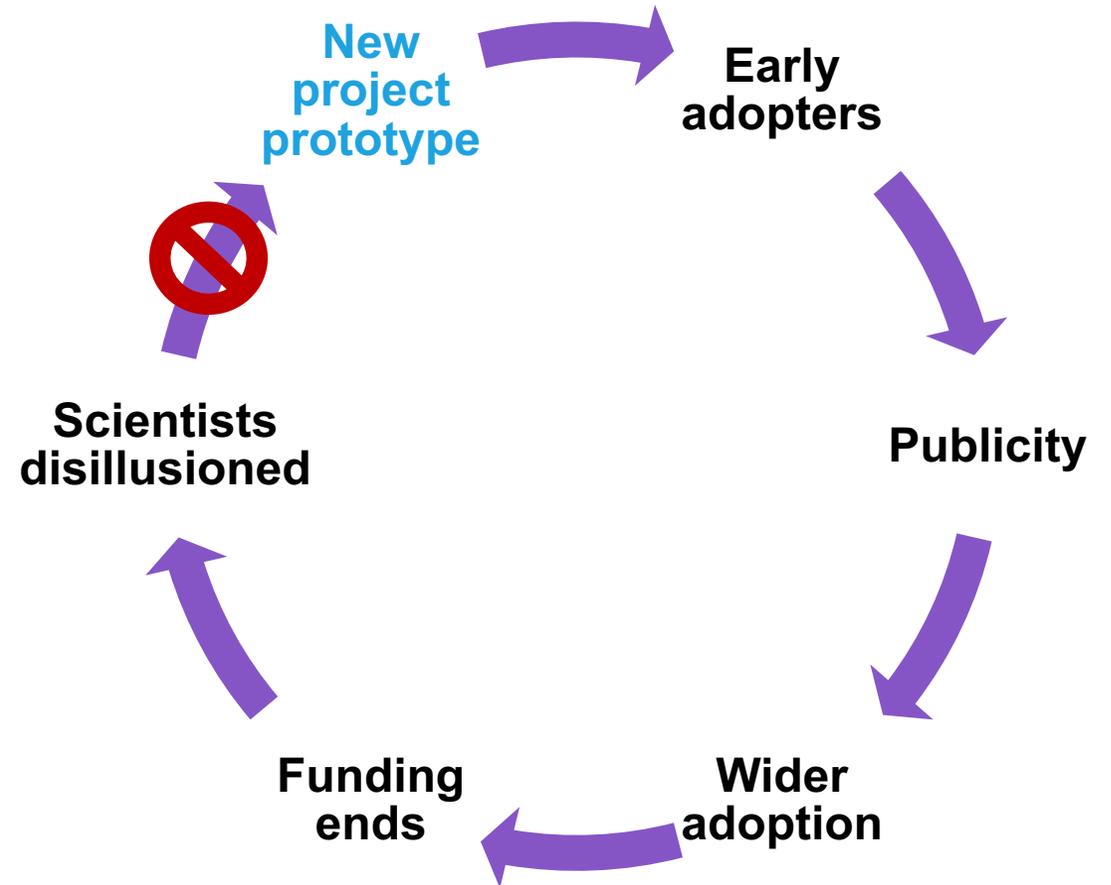




**If gateways
are so
successful,
why do we
need an
institute?**

Despite successes, challenges remain in building and maintaining science gateways

- Development often follows 3-year research funding cycles
- Developers typically
 - work in isolation
 - must bridge to variety of resources
 - need building blocks in order to focus on higher-level functionality
 - struggle to secure sustainable funding



We studied the problem
And studied it some more

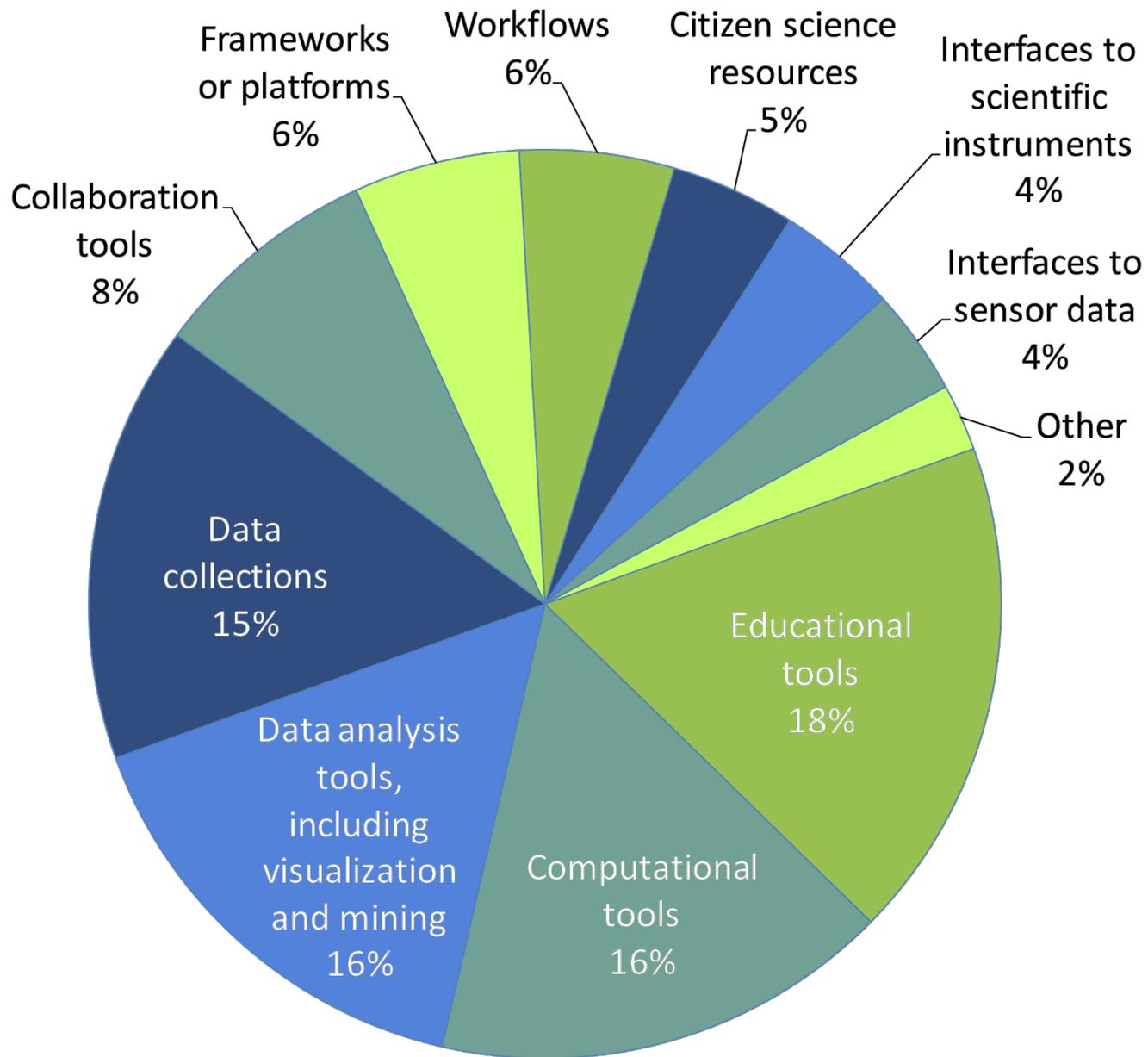
2009-2012
EAGER

2012-2015
Concept.
phase

2016
Software
Institute!

- Analyzed dozens of NSF reports
- Focus groups

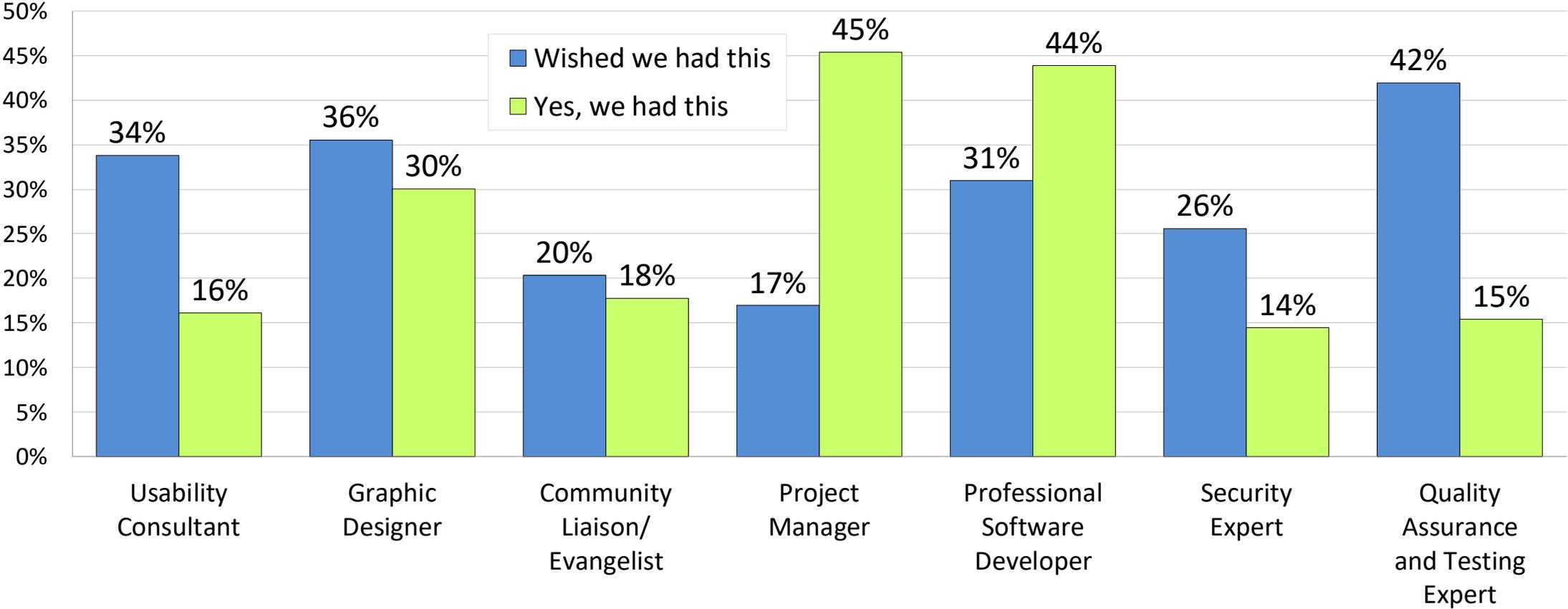
- More focus groups
- Survey with 5000 responses



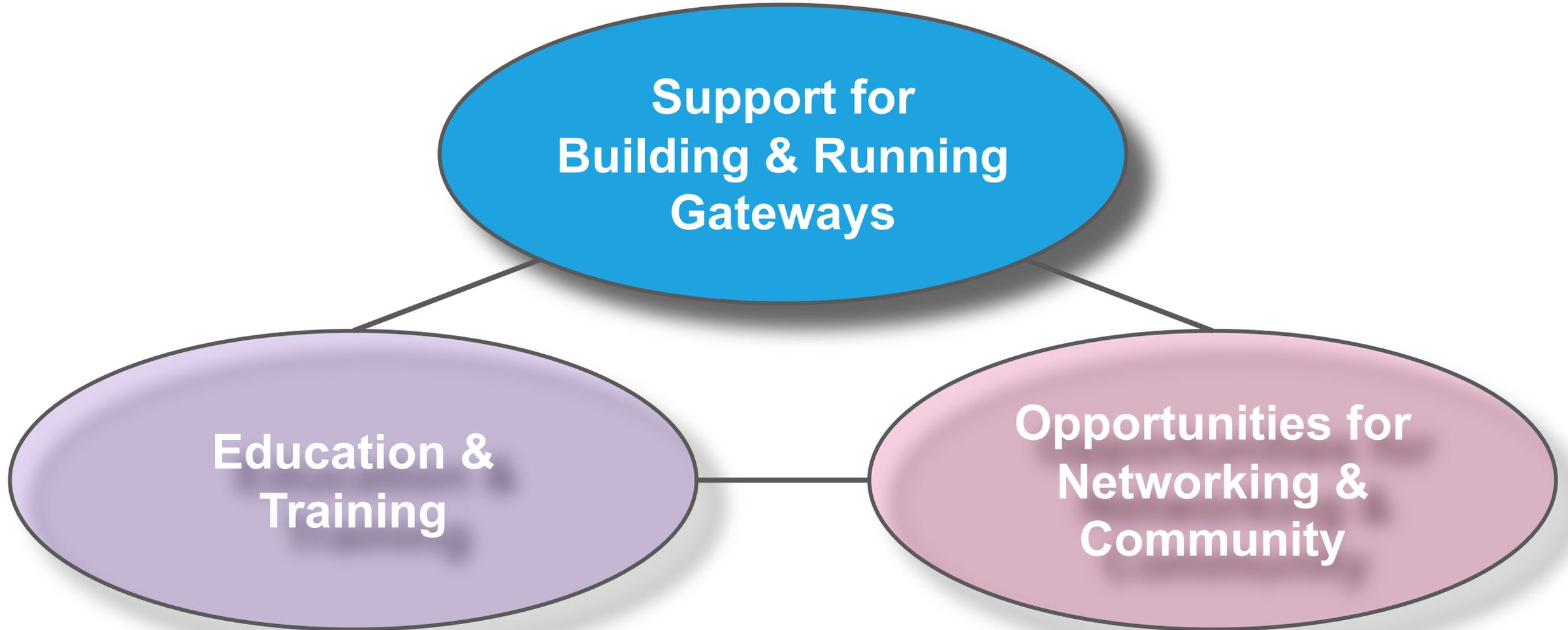
We learned that gateways are used for many purposes

And that nearly 60% of 5000 survey respondents played some role in gateway creation!

We learned that diverse expertise is needed



We designed SGCI specifically to meet the community's needs

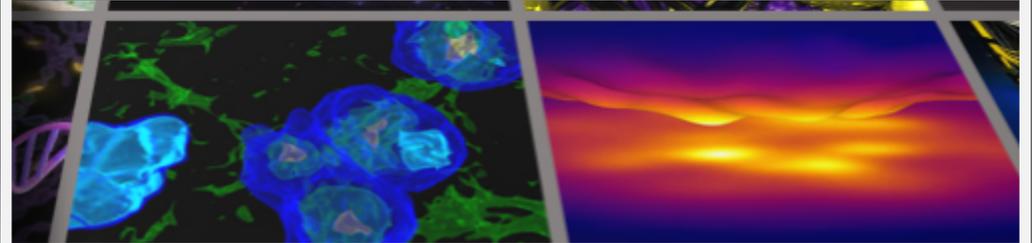


Support for Building & Running Gateways

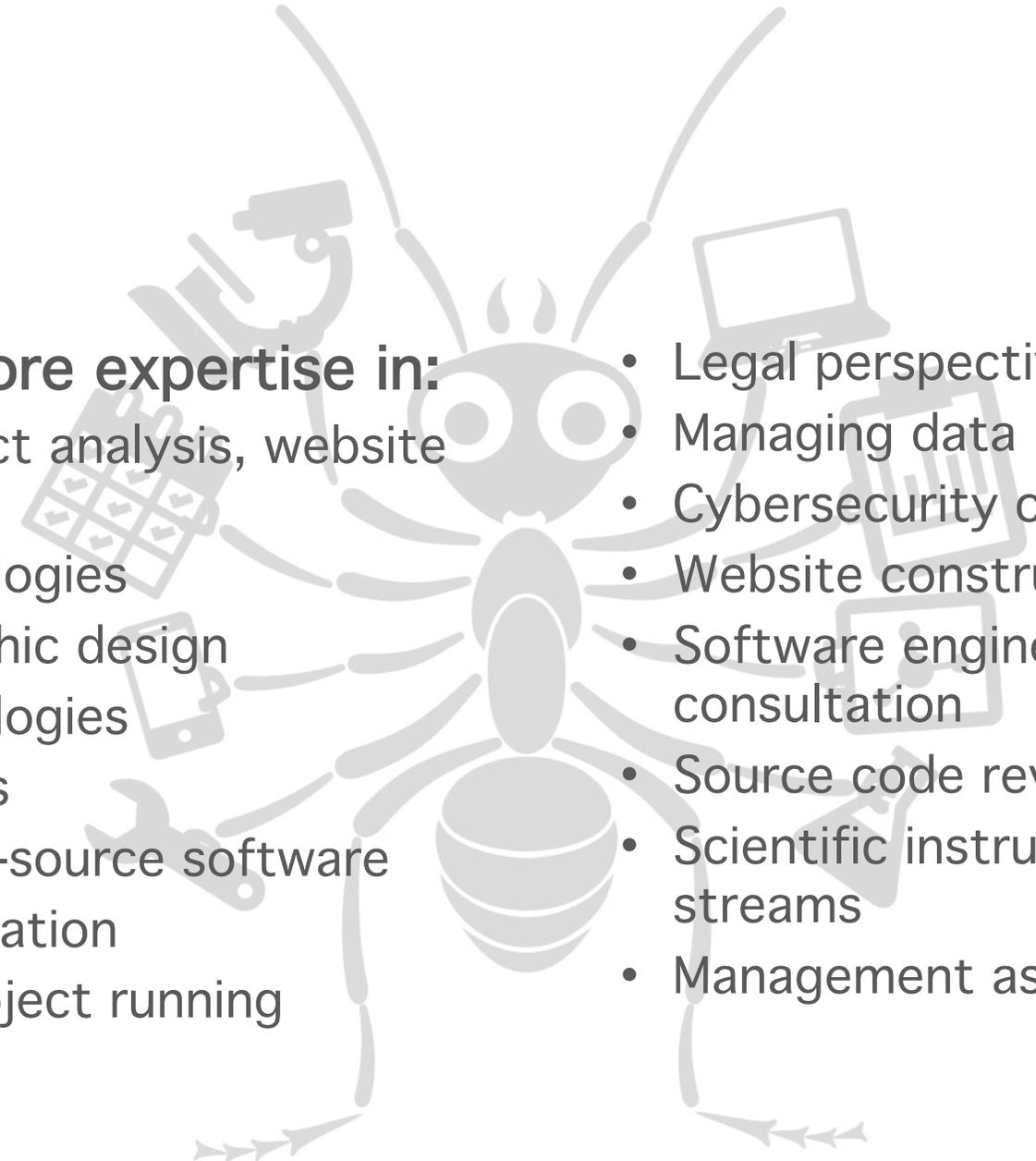
Consulting Services

Gateway Catalog with Projects and Software Components

Hosting Services



DO YOU:

- 
- **Wish you had more expertise in:**
 - Evaluation, impact analysis, website analytics
 - Adapting technologies
 - Web/visual/graphic design
 - Choosing technologies
 - Usability Services
 - Developing open-source software
 - Support for education
 - Keeping your project running
 - Legal perspectives
 - Managing data
 - Cybersecurity consultation
 - Website construction
 - Software engineering process consultation
 - Source code review and/or audit
 - Scientific instruments or data streams
 - Management aspects of a project



Short term consulting means you don't have to hire or find experts that you can't afford

Business

Sustainability Planning

(Nancy Maron – BlueSky to BluePrint)

Business & Strategic Planning

(Juliana Casavan– The Purdue Foundry)

Project Management

(Nate Snodgrass – Purdue HUBzero®)

Impact Measurement

(Michael Zentner – nanoHUB & HUBzero)

Creating Institutional Resources

*(Sandra Gesing & Michael Zentner –
CRC Notre Dame & HUBzero)*

Evaluation

*(Ann Zimmerman
Ann Zimmerman Consulting)*

Technical

Development Processes

(Marlon Pierce – Indiana University Airavata)

Technology Planning

*(Marlon Pierce & Michael Zentner – Indiana &
Purdue)*

Open Source Licensing

(Marlon Pierce – Indiana University Airavata)

Security

*(Mark Krenz & Andrew Adams - Indiana &
Pittsburgh, Trusted CI)*

Graphic & User Experience / Usability

(Paul Parsons, Purdue University Polytechnic)



Longer term engagements

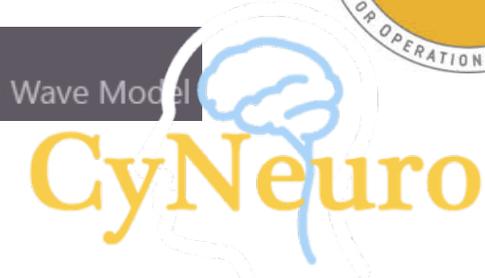
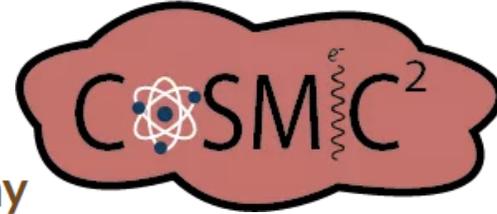
- Extended Developer Support
 - 25% time for up to 12 months at no cost to you
 - Help design, build or enhance a gateway
- Or write us into proposals for even more dedicated support

ACTION: Request at

<https://sciencegateways.org/consulting/work-with-us>

Who have we worked with?

65 projects engaged in 2.5 years



Diverse Qualities

Users

- Researchers
- Educators
- Students
- Policy makers
- Citizen scientists

Functions

- Data collection from sensors or instruments
- Community resource sharing
- Analysis or computation
- Data sharing
- Platforms

Development Stage

- Nascent idea
- Startup
- Operational
- Mature

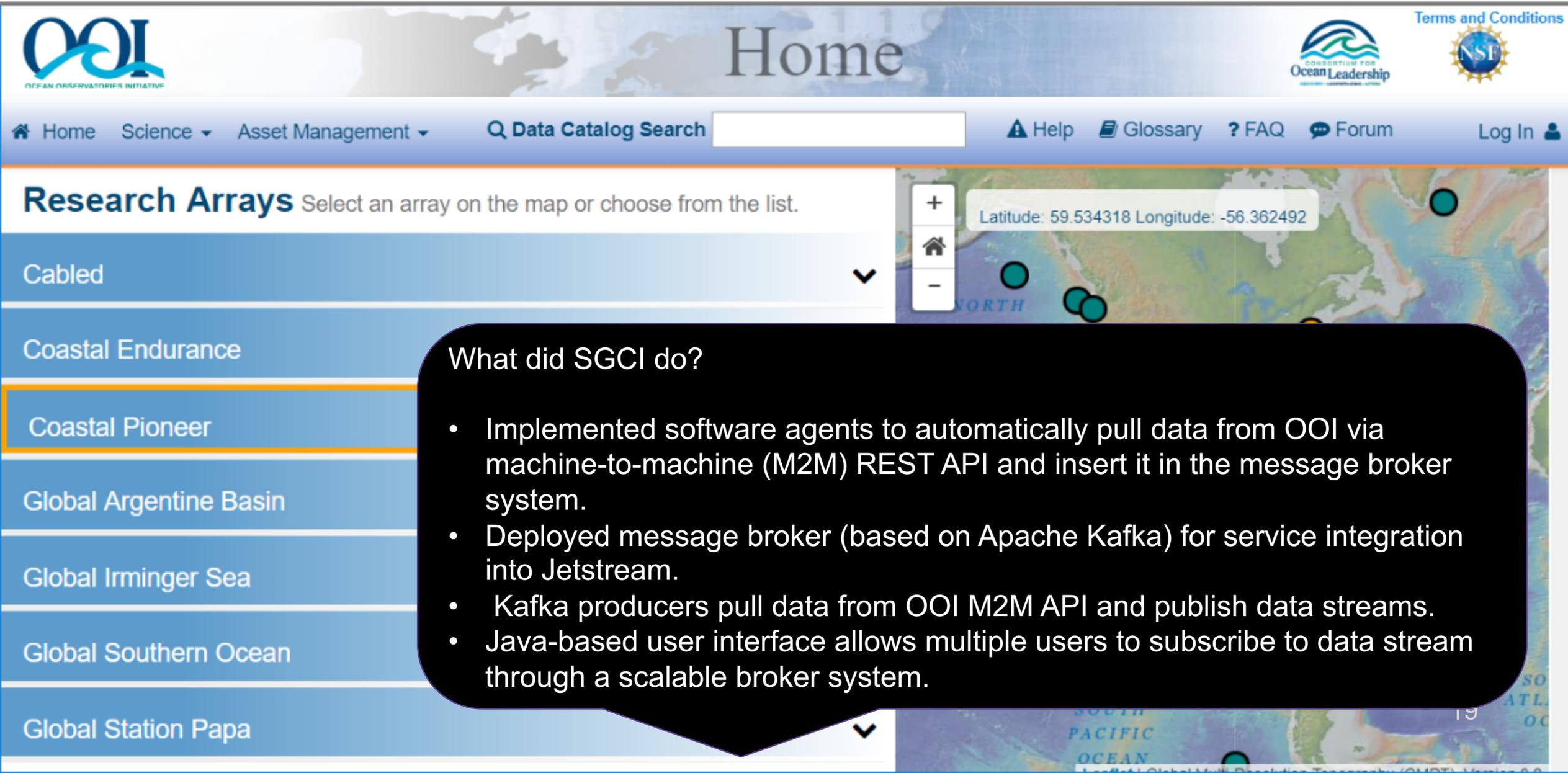
Research areas

- Drug discovery, ecological science, cryo-EM, application parallelization, life sciences, network monitoring, neuroscience, coastal flooding, more

Funding Sources

- University
- NSF
- NIH
- DOE
- DHS

OOI: Ocean Observatories Initiative



The screenshot shows the OOI website interface. At the top left is the OOI logo. In the center is the word "Home". On the right are logos for "Consortium for Ocean Leadership" and "NSI" with a "Terms and Conditions" link. Below the header is a navigation bar with links for Home, Science, Asset Management, Data Catalog Search (with a search input field), Help, Glossary, FAQ, Forum, and Log In. The main content area is titled "Research Arrays" with the instruction "Select an array on the map or choose from the list." Below this is a list of arrays: Cabled, Coastal Endurance, Coastal Pioneer (highlighted with an orange border), Global Argentine Basin, Global Irminger Sea, Global Southern Ocean, and Global Station Papa. To the right of the list is a map showing the location of the arrays with a callout box displaying "Latitude: 59.534318 Longitude: -56.362492".

What did SGCI do?

- Implemented software agents to automatically pull data from OOI via machine-to-machine (M2M) REST API and insert it in the message broker system.
- Deployed message broker (based on Apache Kafka) for service integration into Jetstream.
- Kafka producers pull data from OOI M2M API and publish data streams.
- Java-based user interface allows multiple users to subscribe to data stream through a scalable broker system.

QUBES: Quantitative Biology Education



Resources Community Services

About News & Activities Help — Q → Login

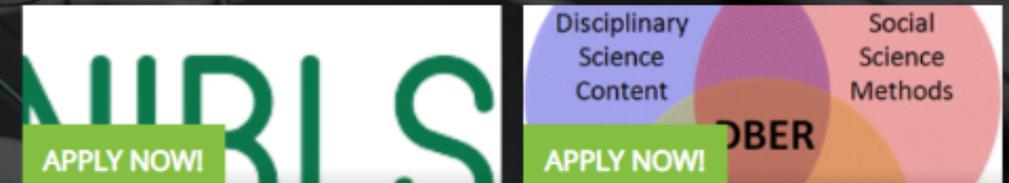
The Power of Math × Biology ×
Community

QUBES is a community of math and biology resources and methods for preparing students to solve complex, biological problems

UPCOMING

Apply now for one of our Spring 2019
Faculty Mentoring Networks

Check out our TEN Faculty Mentoring
Networks that will be running this spring!



What did SGCI do?

- Advanced the HUBzero Publications feature set to allow for “forking” of a publication.
- Forks are used to either propose changes to someone else’s materials or to use someone else’s materials as a starting point.
- Accelerates re-use and adaptation of educational materials for this community.

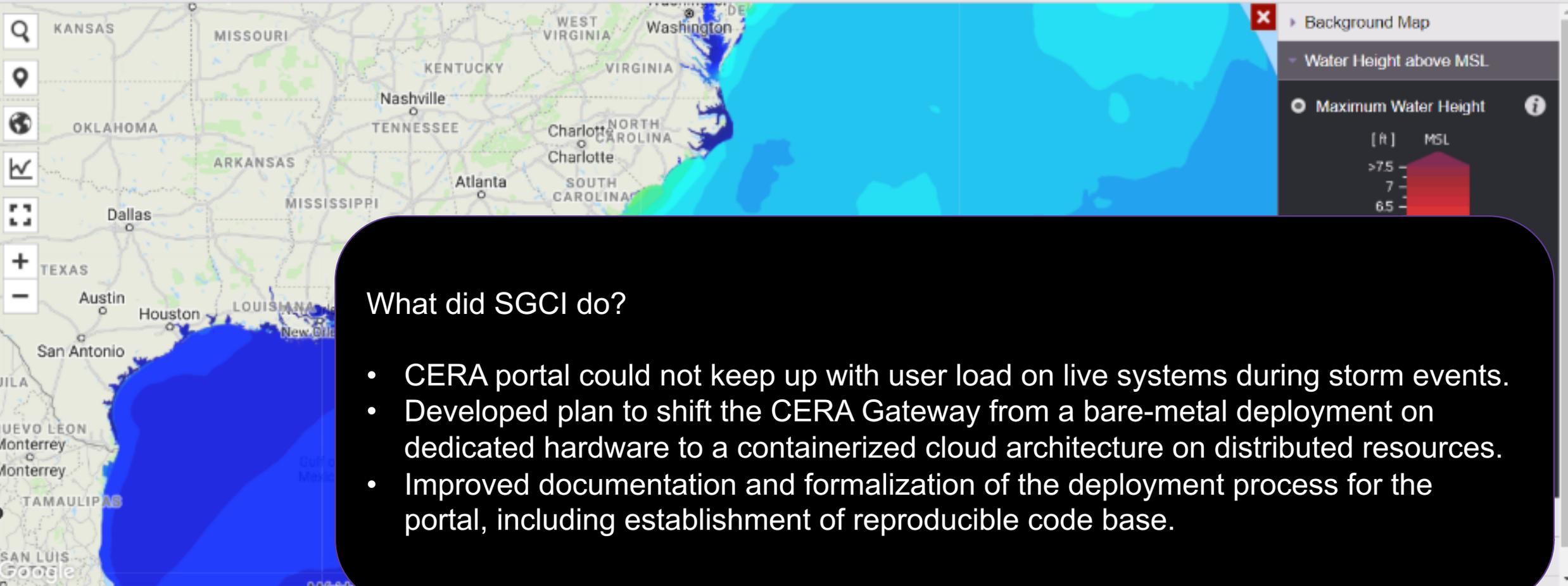
CERA: Coastal Emergency Risks Assessment

Select by **Day** Storm | Day **03-Dec-2018** Start Time **21:00 UTC**

Login Sign up

Maximum Water Height above MSL (03-Dec-2018, 21:00 - 07-Dec-2018, 06:00 UTC)

Wind and Pressure from North American Mesoscale Model (NAM)



What did SGCI do?

- CERA portal could not keep up with user load on live systems during storm events.
- Developed plan to shift the CERA Gateway from a bare-metal deployment on dedicated hardware to a containerized cloud architecture on distributed resources.
- Improved documentation and formalization of the deployment process for the portal, including establishment of reproducible code base.

Social Media Macroscope

What did SGCI do?

- PI attended first SGCI Bootcamp in 2017 and launched startup “Marketing AI Partners” in 2019
- Currently working with PI on differential privacy gateway and UX design

Social Media Macroscope

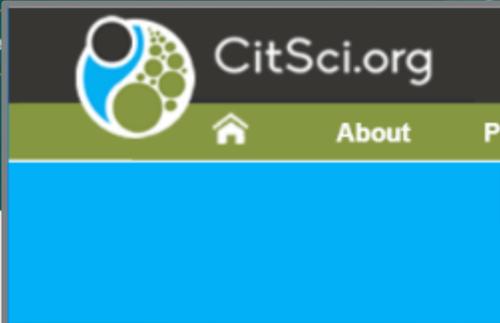
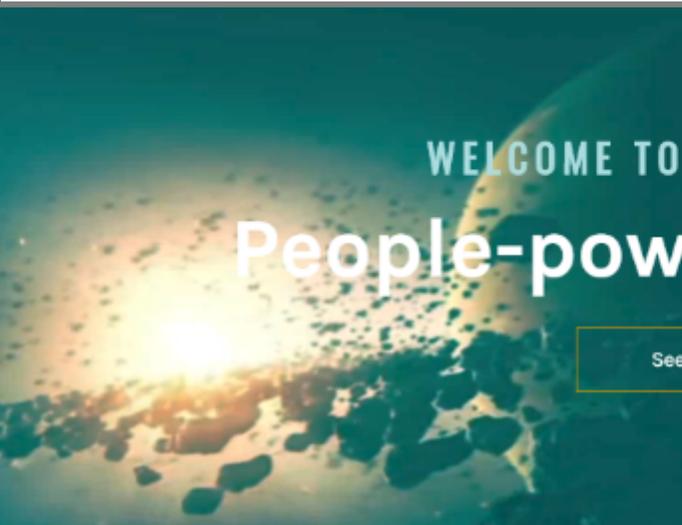
The Social Media Macroscope is a project by University of Illinois Technology Services and the National Center for Supercomputing Applications (NCSA) with the goal of making social media data, analytics, and visualization tools accessible to researchers and students of all levels of expertise. More information about this project can be found at:

<https://doi.org/10.6084/m9.figshare.6855269.v2>

Login/Register

View Available Tools

Citizen Science: Zooniverse and CitSci



What did SGCI do?

- Advanced citsci.org CI, gateway features and performance
- Robust database schema with optimized queries and improved referential integrity
- Improved long term maintenance and sustainability of code base via move outside university firewalls to git

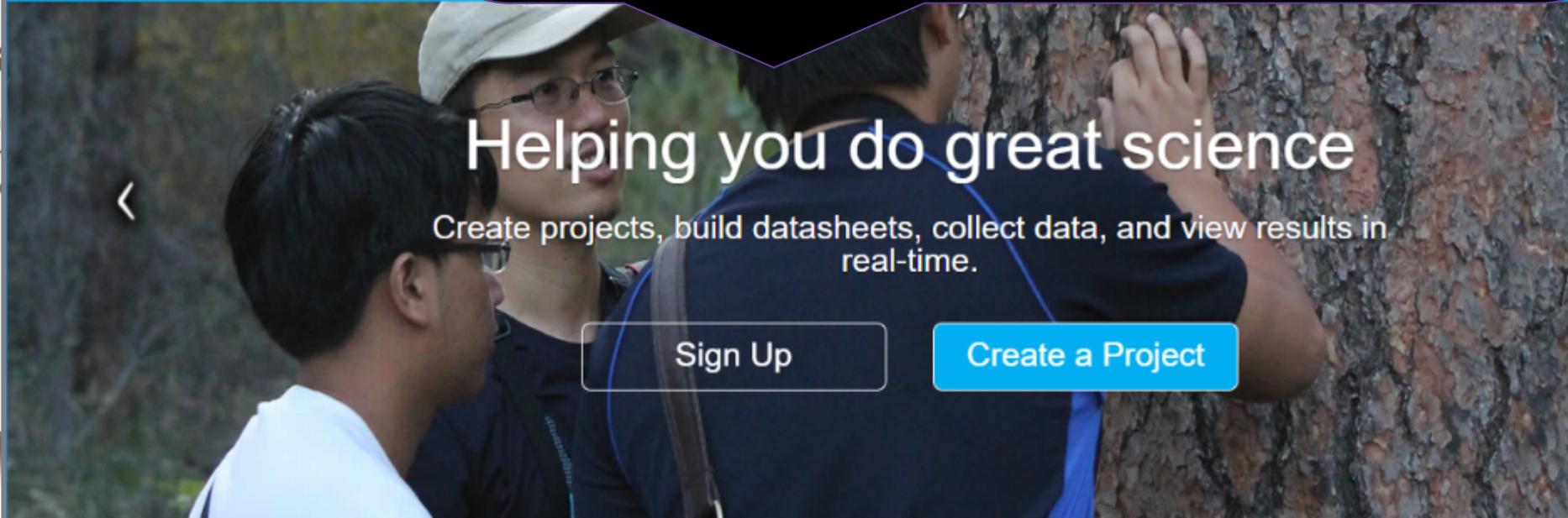
WHAT'S THIS?

Discover, teach, and learn

The Zooniverse enables everyone to take part in real research in many fields across the sciences, humanities, and arts. The Zooniverse creates opportunities for you to unlock and contribute to real discoveries.

[Sign in](#) [Register](#)

DO SCIENCE, ANYWHERE



U South Dakota Science Gateway

Advanced Clustering Technologies Deploys Lawrence Supercomputer at University of South Dakota

October 6, 2017 by [staff](#) [Leave a Comment](#) 

Today [Advanced Clustering Technologies](#) announced the deployment of a new supercomputer at the University of South Dakota. cluster. The machine is named "Lawrence" after Nobel Laureate and University of South Dakota alumnus E. O. Lawrence.



“ Lawrence makes it possible for us to accelerate scientific progress while reducing the time to discovery,” said Doug Jennewein, the University’s Director of Research Computing. “University researchers will be able to achieve scientific results not previously possible, and our students and faculty will become more engaged in computationally assisted research.”

What did SGCI do?

- Built gateway from scratch, including tool integration, documentation, and outreach
- Deployed and configured using Apache Airavata including the web based PHP gateway developed in laravel framework.
- Framework so USD Research Computing staff can easily expand to new use cases.

Enthusiastic reactions

We weren't used to this level of attention.”

Doug Jennewein, Director
Research Computing, University of
South Dakota

“I’m a one-person shop. It really helped to talk through gateway development strategy with someone else. It helped with my software engineering processes.”

Mark Perri, Chemistry Asst Prof,
Sonoma State University

“I didn’t think we needed a gateway, but now it is the thing that we test every day to make sure our infrastructure is working. Now the first 2 feet of the project is really solid. The heavy lifting is in the next challenges. We can now focus on the advanced work”.

Rob Gardner, University
of Chicago

Browse our gateway catalog

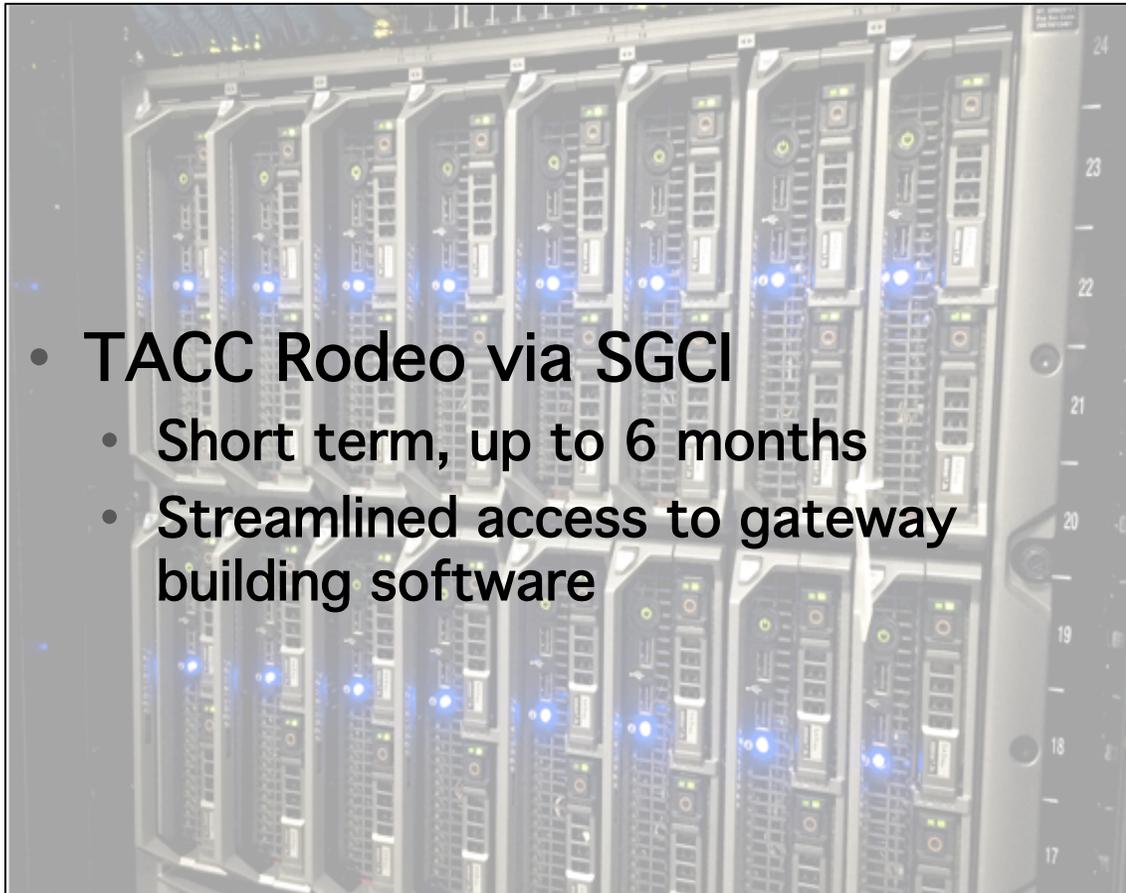
- 500 gateways
- 87 software products
- Find a gateway
 - Including gateways used in classrooms
- List your gateway
- Learn what was used to build a gateway and get help doing the same



ACTION: browse catalog.sciencegateways.org

Host your gateway with us

Get up and going quickly or host for the long term



- TACC Rodeo via SGCI
 - Short term, up to 6 months
 - Streamlined access to gateway building software



- IU/TACC Jetstream via XSEDE
 - Longer term production hosting
 - SGCI partner

Support for
Building & Running
Gateways

Education &
Training

Opportunities for
Networking &
Community

Education & Training: Face-to-Face



Conference & Tutorials



Bootcamp



Student Programs



Gateways conference series

Keynotes, panels, tutorials, posters, friends



- Annual event since 2005
- Gateways 2019 co-located with eScience 2019 this year!
 - Sept 23-25 in San Diego at the Catamaran Resort
 - Abstracts due April 29

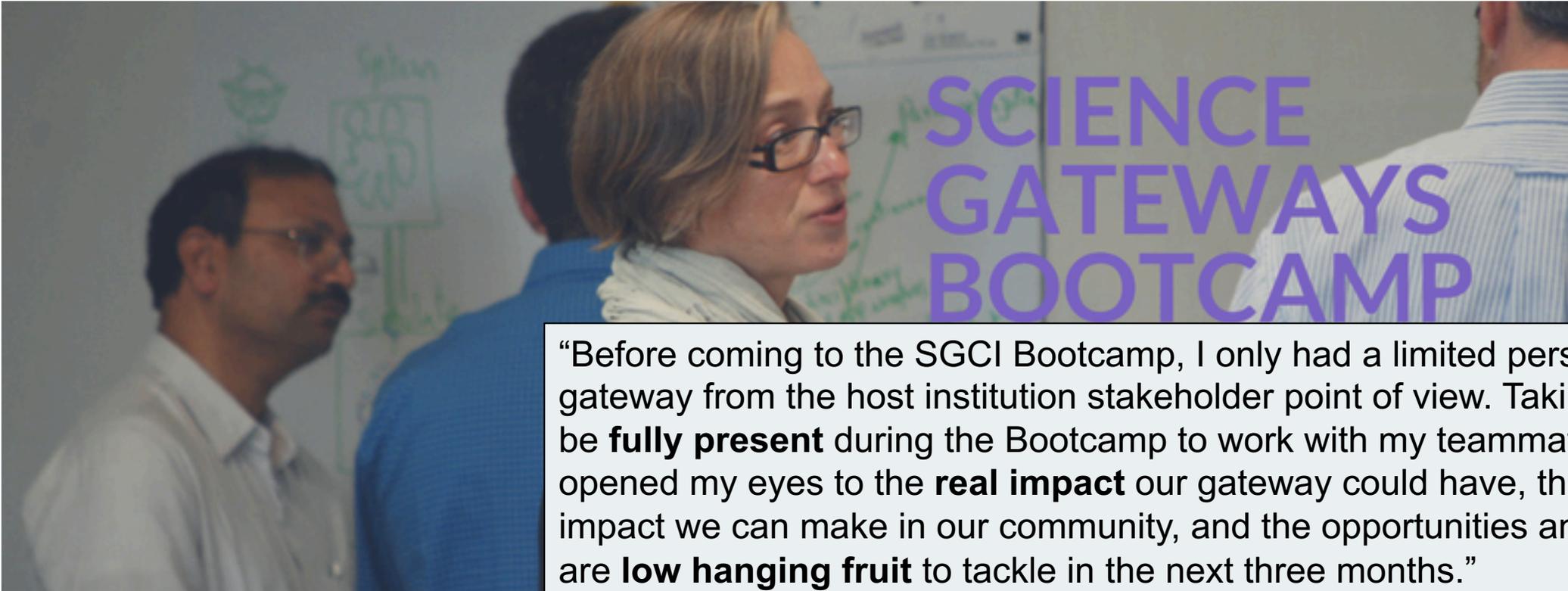


ACTION: Join us! Submit a paper, join the program committee, send a student.

<http://sciencegateways.org/gateways2019>

High praise for SGCI's Bootcamp

5-day business planning experience for gateways



“Before coming to the SGCI Bootcamp, I only had a limited perspective on our gateway from the host institution stakeholder point of view. Taking the time to be **fully present** during the Bootcamp to work with my teammate on our project opened my eyes to the **real impact** our gateway could have, the broader impact we can make in our community, and the opportunities and actions that are **low hanging fruit** to tackle in the next three months.”

Erin Robinson

Executive Director

[ESIP Data Management Training](#)

Participant in the second Bootcamp



I have an idea!



Articulate the value of your gateway and how it's distinctively different from what already exists.

Who benefits?

Identify audience and stakeholder groups and consider how they impact your success.

Where does it fit in?

Establish where your gateway solution fits within the existing market landscape of partners and competitors.

How do I make it happen?



Define measurable goals for success and sustainability. Consider multiple needs such as technology, security, project management, usability, and funding.

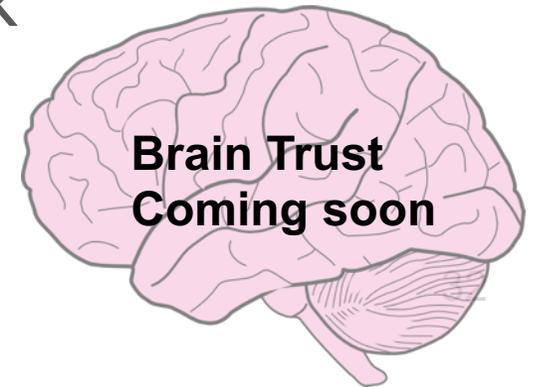
How do I sell it?

Spread the word!
Plan how to tell the unique story of your gateway.



Bootcamp at a Glance

- Full 5 days
- Knowledge dissemination
- Interactivity
- Community formation
- Putting away the normal daily routine
- Homework



Robust internship program

- Interns placed with
 - SGCI staff working on client projects
 - SGCI clients
 - SGCI partners and affiliates
 - SGCI friends
 - Anyone doing gateway work
- SGCI can provide travel and stipends
 - But others contributed 57% of funding in 2018!



2018 interns

Action: apply to be or host an intern by April 26
<https://sciencegateways.org/engage/student-focused>

Interns go
on to great
things!

← SGCI Intern Who Was Selected to Participate in HBCU@SXSW Gets Job Offers

Thanks to [HBCU@SXSW](#), SGCI Intern Ke'Darius Whitley was one of 250 students from historically black colleges and universities selected to attend SXSW. Whitley reports on this exciting experience below. He let us know that he'll decide on one of the two job offers he received after he graduates in May 2019.

You can read [Whitley's 2018 Summer Internship Report](#) here. [Check here to learn more about our opportunities for students](#), including summer internships. Applications for summer 2019 programs are due April 29.

On March 7th, 2019, I had the opportunity to fly to Austin, Texas to attend the HBCU@SXSW



Conference hosted by Opportunity Hub (OHUB). OHUB was formed by Mr. Rodney Sampson and his wife Shanterria after they attended SXSW and noticed the lack of black people in attendance. They created HBCU@SXSW in 2016 and sponsored 50 college students. In 2017, they sponsored 100 students, in 2018, they sponsored 150 and, in 2019, they reached 250 students. It was an exciting experience, especially since companies had put aside a certain number of positions and were offering students paid internships or even full-time positions.

At HBCU@SXSW I had the opportunity to meet a lot of great inspirational people, young and old. I met a lot of students that had formed their own startup business and were flourishing with their business while making a difference in their community as well. Just being around so much inspiration and young entrepreneurs inspired

Science Ambassadors

New for 2019



Samantha Blickhan
IMLS Postdoctoral Fellow at
the Adler Planetarium
Zooniverse



Alexis Garretson
Graduate student in Biology at
Brigham Young University
National Phenology Network, NEON,
SERNEC, CyVerse



Mohamed Mousa
Ph.D. candidate and graduate
research assistant at Wright
State University
Neuroscience Gateway

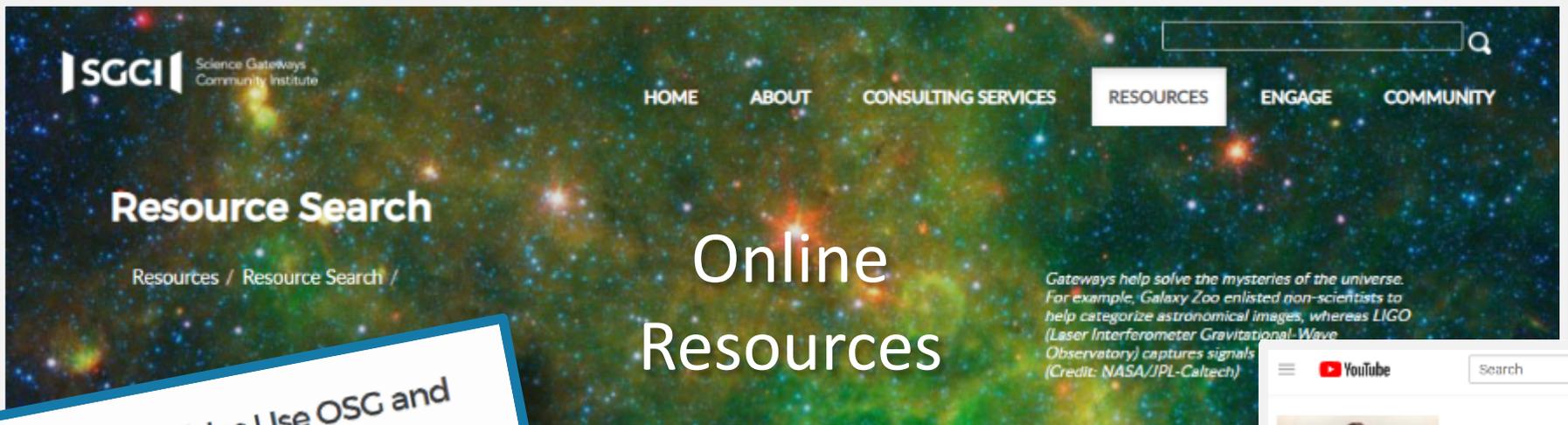


Jack Smith
Research scientist at Marshall
University,
Cyberinfrastructure
Coordinator for West Virginia
Science and Research
Aquavit, MyGeoHub, NanoHUB,
DesignSafeCI, CyVerse (iPlant),
SEAGrid (GridChem), Diagrid,
SciGaP, cmdHUB, and the Materials
Project



James Trevathan
Ph.D. candidate at the Mayo
Clinic
Neuroscience Gateway

Promoting the use of gateways by
scientists by providing travel funding
to present work

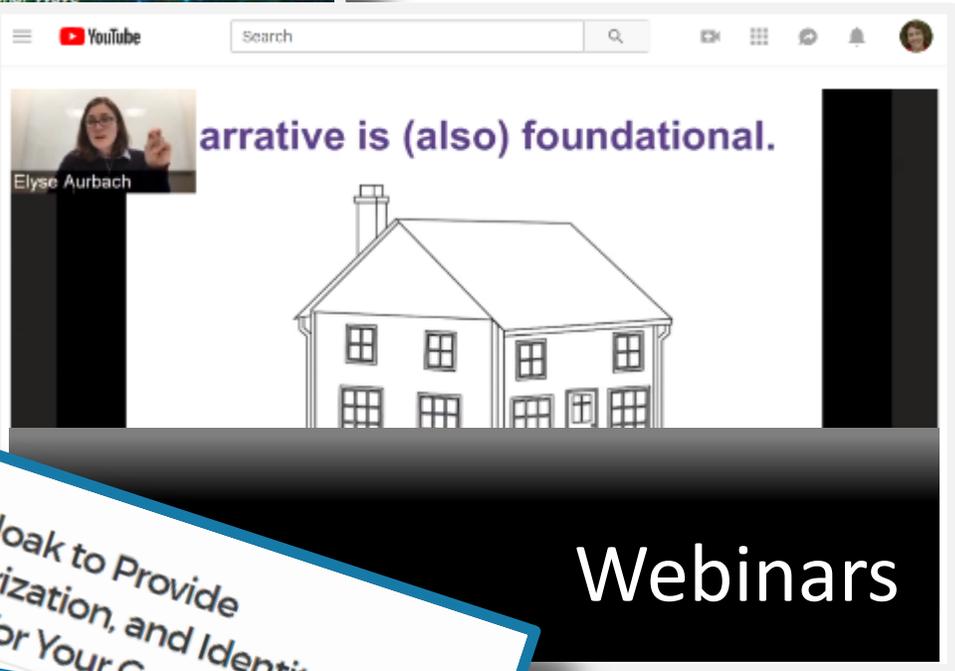


Education & Training: Online

Online Resources

SGCI Helped nSides Use OSG and Form to Augment Its Drug Side

Materials for all interests and levels of experience



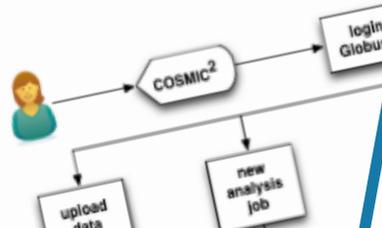
Webinars

Tech Blog: Benefits of Application Programming Interfaces (APIs)

By Josue Balandrano Coronel

What are APIs?

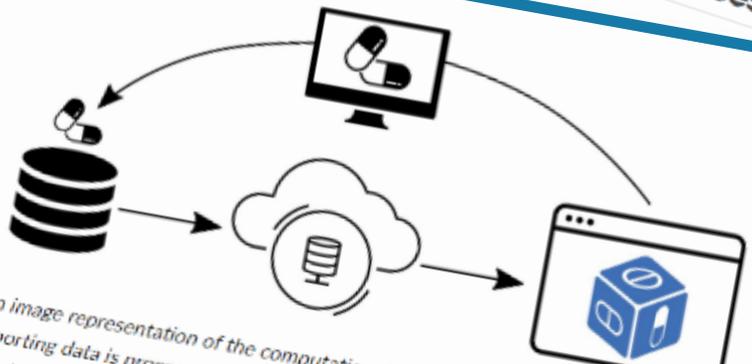
In software development, Application Programming Interfaces (APIs) are used for sharing and extending functionality between different software applications.



Why

Tech Blog: Using Keycloak to Provide Authentication, Authorization, and Identity Management Services for Your Gateway

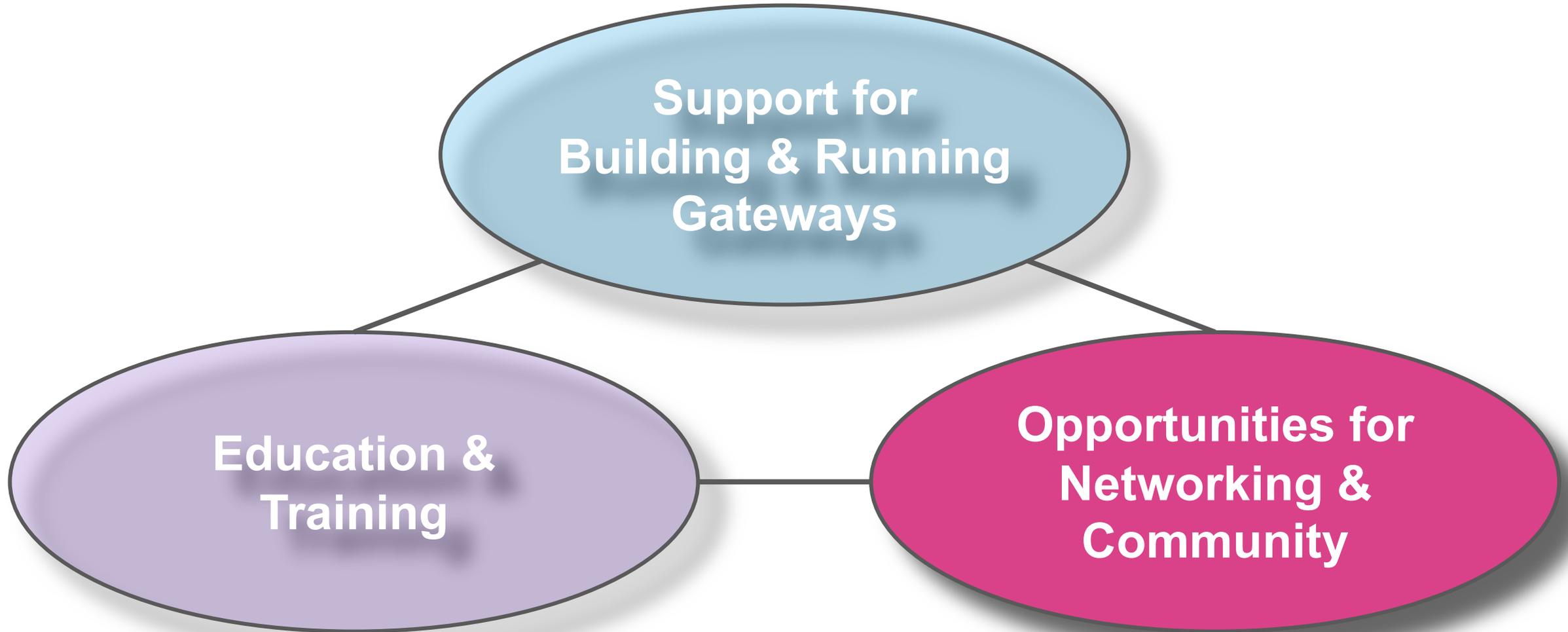
By Marcus Christie



An image representation of the computational workflow where reporting data is processed in a database.

Managing and utilizing performance scientific applications. Higher-level user interfaces for scientific application.

What does SGCI offer?



Opportunities for Networking & Community



Annual Conference

Community Forum & Resources

- Calendar
- News
- Blog
- Jobs
- Forum
- Newsletter

Connect with other gateways community members

SGCI created a Google Group discussion forum to enable members of the community to pose questions, offer help, share announcements, and connect with each other. As with all Google Groups, you can opt to receive individual messages or a digest. This discussion forum is open for all members to post, but membership requests are moderated to avoid spammers. Simply fill out the "Apply for membership" form below to request approval for joining.

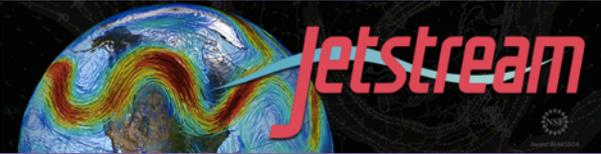
[NEW TOPIC](#)  [Mark all as read](#) [Actions](#) [Filters](#) [Help](#)



ACTION: Join the conversation at <https://sciencegateways.org/community/forum>

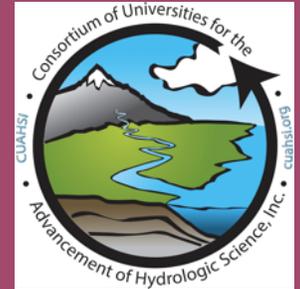
SGCI partner program: a community

Resource provider



XSEDE

Extreme Science and Engineering
Discovery Environment



Peer organization



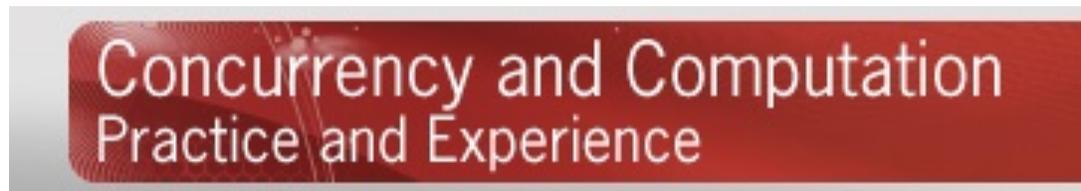
Software Provider



A community history of connection and collaboration



- Cross attendance and cross reviewing
- Publications in combined journal special issue



Franchising SGCI via campus *gateway ambassadors*

- Local contacts on campuses knowledgeable about gateways
 - Create a community
 - **Reproduce a mini-SGCI locally (franchise!)**
 - Campus cybersecurity, business school, usability professors, etc.
 - Rely on SGCI resources to supplement local expertise
- Synergistic groups
 - US Research Software Engineer Community
 - XSEDE Campus Champions
 - ACI-REF (Advanced Cyberinfrastructure – Research and Education Facilitators)
 - CaRCC (Campus Research Computing Consortium)
 - CASC (Coalition for Academic Scientific Computation)
 - Better Scientific Software
 - IDEAS
 - Xpert Network
 - The Maintainers



>100 Letters of Collaboration written

\$47M in projects supported, 41% success rate

Title	Funding	Principal Investigator	Institution
NSCI SI2-SSE: Multiscale Software for Quantum Simulations of Nanostructured Materials and Devices	\$500,000	Jerzy Bernholc	NC State
nanoBIO Node, proposed in response to the NSF Network for Computational Nanotechnology solicitation	\$800,000	Geoffrey Fox	Indiana University
SI2-SSE: Entangled Quantum Dynamics in Closed and Open Systems, an Open Source Software Package for Quantum Simulator Development and Exploration of Synthetic Quantum Matter	\$500,000	Lincoln Carr	Colorado School of Mines
SI2-SSE: GenApp - A Transformative Generalized Application Cyberinfrastructure	\$269,000	Emre Brookes	UT Health San Antonio
SI2-SSE: Enabling Chemical Accuracy in Computer Simulations: An Integrated Software Platform for Many-Body Molecular Dynamics	\$500,000	Francesco Paesani	UC San Diego
Platform for Applied Network Data Analysis (PANDA), DIBBs, NSF 17-500	\$4,000,000	Kimberly Claffy	UC San Diego
Collaborative Research: SI2-SSI: Cyberinfrastructure for Advancing Hydrologic Knowledge through Collaborative Integration of Data Science, Modeling and Analysis	\$2,400,000	David Tarboton	Utah State University
Collaborative Research: SI2-SSI: Expanding Volunteer Computing	\$1,000,000	David Anderson	UC Berkeley
NSF INCLUDES DDLP: Ecology Plus (Ecology +): Broadening Pathways to Ecological Careers through a Collective Impact Approach	\$300,000	Teresa Mourad	Ecological Society of America
SI2-SSI: Pegasus: Automating Compute and Data Intensive Science	\$2,500,000	Ewa Deelman	USC
The Open EEGLAB Portal Project (NIH)	\$589,000	Scott Makeig	UCSD
CAREER: Designing Surface Patterns for Adaptive Shape Control of Soft-Matter-Based Nanoparticles	\$172,000	Vikram Jadhao	Indiana U
CAREER: Causal Connections Between the Arctic and Mid-latitudes	\$860,000	Elizabeth Barnes	Colorado State
SI2-SSE: DeepForge: a Machine Learning Gateway for Scientific Workflow Design	\$400,000	Akos Ledeczki, Peter Volgyesi	Vanderbilt
SI2-SSE: Abaco- Flexible, scalable, and usable Functions- as-a-service via the Actor Model	\$419,000	Joe Stubbs	TACC
Collaborative Proposal: EarthCube Integration: ICEBERG: Imagery Cyberinfrastructure and Extensible Building-Blocks to Enhance Research in the Geosciences	\$632,139	Heather Lynch	SUNY Stonybrook
SI2-S2I2 Conceptualization: Geospatial Software Institute	\$500,000	Shaowen Wang	UIUC
CIF21 DIBBs: EI: SLATE and the Mobility of Capability	\$3,500,000	Rob Gardner	U Chicago
Student Program for the Practice & Experience in Advanced Research Computing Conference – PEARC18	\$19,000	Alex Ropelewski, Ricardo Gonzalez	Carnegie Mellon
NSF ABI Building a Community Gateway for Cryo-Electron Microscopy Structure Determination	\$591,000	Michael Cianfrocco	U Michigan
CC* NPEO program, "The Research and Science Engagement Center: A Production Platform for Operations, Applied Training, Monitoring, and R&E Support"	\$1,200,000	Jennifer Schopf	Indiana U
CyberTraining, Hour of Cyberinfrastructure	\$374,000	Eric Shook	U Minnesota
EAGER: Empirical Software Engineering for Computational Science	\$124,628	Tim Menzies	North Carolina State
Collaborative Research: Framework: Software: HDR: Building the Twenty-first Century Citizen Science Framework to Enable Scientific Discovery Across Disciplines	\$945,792	Lucy Fortson	U Minnesota
Framework: Software - Open OnDemand 2.0: Advancing Accessibility and Scalability for Computational Science through Leveraged Software Cyberinfrastructure	\$3,345,802	David Hudak	Ohio State
The NHGRI Genomic Data Science Analysis, Visualization, and Informatics Lab-space (AnVIL)	\$10,400,000	James Taylor	Johns Hopkins
CICI: RDP: Open Science Chain (OSC) - A Novel Distributed Ledger-Based Framework for Protecting Integrity and Provenance of Research Data	\$818,433	Subhashini Sivagnanam	UCSD
SCH: INT: Individualizing Care in Pregnancy and Childbirth through Digital Phenotyping	\$1,200,000	Kelly Gaither	TACC
Framework: Software: Collaborative Research: CyberWater--An open and sustainable framework for diverse data and model integration with provenance and access to HPC	\$514,249	Yao Liang	IUPUI
NSF Cybersecurity Center of Excellence extension	\$2,500,000	Von Welch	IU
CICI: SSC: Securing Science Gateway Cyberinfrastructure with Custos	\$997,672	Marlon Pierce	IU
Framework: Data: HDR: Extensible Geospatial Data Framework towards FAIR (Findable, Accessible, Interoperable, Reusable) Science	\$4,571,811	Carol Song	Purdue

We hope we can work together!

- <https://sciencegateways.org>
- Direct support building gateways
- Find a gateway in the catalog
- Use our online resources
- Attend a conference or bootcamp, publish a paper
- Send a student to an internship or host a student
- Subscribe to the newsletter and gateway forum



SGCI
Science Gateways
Community Institute

Scientists and engineers are turning to gateways to allow them to analyze, share, and understand large volumes of data more effectively.

Are You:

- Developing gateways and related software that serve your science discipline?
- A domain-based scientist or engineer who needs a gateway?
- A campus-based IT administrator or staff member lacking manpower or expertise to provide specialized services?

The Science Gateways Community Institute (SGCI) is here to serve you with free resources, services, experts, and ideas for creating and sustaining science gateways. We offer five key solution areas tailored to the needs of gateway developers and users.

UCSD

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UCSD



Science Gateways Institute

Join us Wednesday, November 1, 2017, 10:15 am - Noon for Technical Session 7: Computational Chemistry Session 1

The Science Gateways Institute is proud to sponsor computational chemistry research presentations during the 2017 NOBCChE Conference in Minneapolis, Minnesota

Dr. William Lester, Jr
Custom Monte Carlo for Molecular Systems: Deconvoluted Structure

Quantarius Moore, Texas A&M/Jackson State University
Interaction of Solvent Species with Carbon Nanoparticles

Dr. Bruce M. Prince, University of North Texas
An in Situ Study of Polymer C-C Activation by Earth-Abundant Metal-Amide/Ammonia Complexes

Adony Sissay, Louisiana State University
Single-Step Synthesis of Molecular Nanorods with Tunable Range-Ordered Time-Dependent Diversity Functional Theory

Luhe Anneke, Long Island University
Modeling of Reaction Design: Specifying Intra-Block Methods

SCIENCE GATEWAYS
NOBCChE

Community, Leadership, and Partnerships

A Science Gateway is a community-developed set of tools, applications, and data that are integrated via a portal or a suite of applications, usually in a graphical user interface, that is further customized to meet the needs of a specific community. Gateway users Chemistry education and research to use material resources through a common interface that is configured for optimal use. Gateways also foster collaboration and the exchange of ideas.

This project is funded by a grant from the National Science Foundation
NSF Grant Number 1508048



SGCI Incubator Services

Extended Developer Support

Are you creating a new science gateway? Are you upgrading your existing gateway to add a major new capability? The Science Gateways Community Institute's Extended Developer Support (EDS) services are available to help. The Technology and Software Development Planning can lead to an SGCI Extended Developer Support consulting agreement that will provide programming services.

SERVICES INCLUDE:

- HELP YOU DESIGN YOUR GATEWAY SYSTEM
- HELP YOU EVALUATE AND CHOOSE

Cybersecurity

SGCI has partnered with CTCSC (htscsltd.org) to provide cybersecurity services for science gateways. Given the multifaceted nature of a science gateway - with people, scientific instruments, computer hardware, networking, software libraries and applications, APIs, etc. - it's not surprising that security plays an important role in keeping the overall system safe and the science trustworthy.

SERVICES INCLUDE:

- TRAINING AND GUIDANCE ON SOFTWARE ASSURANCE AND IDENTITY MANAGEMENT FOR GATEWAY DEVELOPERS
- TRAINING AND GUIDANCE ON LOG ANALYSIS, INCIDENT RESPONSE, AND

Strategic Research & Consulting

Founded by Nancy Maron, a SGCI Incubator team member, BlueSky to Blueprint offers support to project leaders launching a new initiative or exploring new opportunities for existing ones. BlueSky to Blueprint can help to assess the existing landscape, better understand the behaviors and attitudes of your user base, and explore a range of ways to create sustainable funding sources.

SERVICES INCLUDE:

- AUDIENCE NEEDS ASSESSMENT
- ENVIRONMENTAL REVIEW
- FINDING MODEL DEVELOPMENT

Join us!

Developers independently on-campus development groups are one measure towards sustainability of science gateways. On-campus consulting provides consultancy on building on-campus development groups and/or using free available services on campus.

SERVICES INCLUDE:

- ONE-TO-ONE CONSULTATION
- MATERIAL TO REACH OUT ON CAMPUS
- DRIVERS/REPLACE FUNDING

University graduate the Univ. Purdue U supervise Lawrence Michigan at Purdue

GATEWAY REPRESENTED BY VARIOUS FEEDBACK DESIGN

CONTRIBUTING SERVICES

Community Engagement & Exchange
Bringing the community together through interaction and professional development

Workforce Development
Nurturing the next generation of science gateway users and developers

To learn more about how we can support your work at no additional cost to you, please email sciencegateways.org or visit us at egateways.org/learnmore



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SGCI
Science Gateways
Community Institute
Young Professionals

SGCI Young Professionals Network

The SGCI Young Professionals Network is a community for those just starting out as well as experienced researchers and educators who are beginning to use Science Gateways. Supporters of the Young Professionals Network serve as mentors, workforce development committee members, and hosts for Young Professionals activities.

SGCI Young Professionals SPOTLIGHT
at sciencegateways.org

Shining the spotlight on the success and next generation of science gateway users and developers. This site features highlighting young professionals and their work experiences, training, academic interests, hobbies, and more.

SGCI Young Professional of the Year Award

Acknowledging a young professional member for notable achievement in the advancement of science gateways. The award includes a certificate plus an honorarium and website highlight.

Young Professional Liaison to the SGCI Workforce Development Committee

Have a voice in developing strategies for career growth and professional success.

Networking Opportunities through Virtual Seminars

Provides an opportunity to meet with gateway experts and other young professionals to expand your network, focused on encouraging career growth, sharing accomplishments, and learning from others. Discover what young professionals can expect as they embark on their careers.

Support for Professional Editing for Your Technical Publications

Designed to assist you in producing publications that are in a style that is polished and ready for submission.

To learn more about how we can support your work at no additional cost to you, please email info@sciencegateways.org or visit us at sciencegateways.org/learnmore