

SCHEDULE AT-A-GLANCE

Tuesday, April 2, 2019		
Time	Topics	
8:00am	NSF Opening Remarks <i>Teresa Grancorvitz, NSF Chief Financial Officer & Matt Hawkins, Head of the NSF Large Facilities Office</i> Auditorium	
8:30am	Large Facility Spotlight <i>Adam Bolton, Scott McIntosh, Mark McKinnon & Thomas Rimmele</i> Auditorium	
9:45am	Introduction to TACC and NHERI <i>Ellen Rathje & Dan Stanzione</i> Auditorium	
10:30am	Refreshment Break	
10:50am	The Role of Education and Public Outreach (EPO) During Construction and Operations <i>Amanda Bauer, William Buckingham & Sharon Cooper</i> Auditorium	
11:40am	Lunch (Vislab & Machine Room Tours for Groups 1 & 2)	
1:05pm	Bridging the Communications Gap for Key Stakeholders <i>Amanda Greenwell, Adrian Apodaca, John Taber, Ranpal Gill, Shari Lifson, Jennifer Plozai, Cheryl Ann Blain & Claire Raftery</i>	An Update on the LFM (retitled Major Facilities Guide) <i>Matthew Hawkins, Bill Miller, Joy Pauschke, Kevin Porter, Eddie Whitehurst, Rebecca Yasky & Jeff Zivick</i> Auditorium
2:05pm	ROC 1.900	Auditors and Best Practices <i>Elizabeth Goebels</i> Auditorium
3:00pm	Refreshment Break	
3:20pm	Education and Public Outreach (EPO) Best Practices and the Diversification Challenge <i>Donna Charlevoix, Sue Ann Heatherly, Roxanne Hughes, Jim Madsen, Kristin Roberts & Tim Spuck</i> ROC 1.900	Applying the Learning Culture Concept to NSF's Major Facilities Knowledge Management Program <i>Jose Martens, Virginia Taberski & Rebecca Yasky</i> Auditorium
5:15pm	Transportation to Reception	
5:30 - 7:00pm	Networking Reception <i>NXNW Restaurant & Brewery Stonelake, 10010 N Capital of Texas Hwy, Austin, TX 78759</i>	
Wednesday, April 3, 2019		
Time	Topics	
8:00am	EPO, Branding and Communications – Drill Down Hot Topics Discussion – Part I <i>Anne Kornahrens</i> ROC 1.900	Business System Reviews – Updates and Practices <i>Rob Hengst, Florence Rabanal & Eddie Whitehurst</i> Auditorium
9:30am	Refreshment Break	
9:50am	EPO, Branding and Communications – Drill Down Hot Topics Discussion – Part II <i>Anne Kornahrens</i> ROC 1.900	Independent Cost Estimates for Scientific Facilities – Approaches and Benefits <i>Denise Castro-Bran, Marc Hayhurst, Matthew Marshall & Vera Scheidlinger</i> Auditorium

Wednesday, April 3, 2019 (continued)

Time	Topics	
11:20am	Lunch (Vislab & Machine Room Tour for Group 3)	
12:45pm	Interacting with Congress Grace Cummings Auditorium	
1:45pm	Break	
1:55pm	Interacting with Congress Breakout – Part I Grace Cummings ROC 1.900	Lessons from Large Facilities Development and Operation in Remote Environments George Blaisdell & Christine Lurtz Auditorium
2:55pm	Shaker Truck Tour (Section A)	Refreshment and Networking Break (Section B)
3:25pm	Refreshment and Networking Break (Section A)	Shaker Truck Tour (Section B)
3:55 – 4:55pm	Interacting with Congress Breakout – Part II Grace Cummings ROC 1.900	The Rise of Privacy: A Risk-based Approach to Privacy Oversight, Compliance & Management for Research Facilities Mike Cullen & David Ross Auditorium

Thursday, April 4, 2019

Time	Topics	
8:00am	Branding, Communications and EPO – the Feedback Loop Ranpal Gill, Anne Kornahrens & Tim Spuck ROC 1.900	Defining Science Requirements, Managing Scope, and Ensuring Delivery Tom Gulbransen Auditorium
9:00am	Short Break	
9:10am	User Program Practices Joel Brock, Jose Martens, Eric Palm & Lory Wingate ROC 1.900	Enterprise Risk Management of Large Facility Projects Stephen Unwin Auditorium
10:20am	Refreshment Break	
10:40am	Project Management and Business Core Competencies for Recipient Personnel Jeff Zivick ROC 1.900	Supporting US Participation in the International Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAIC) Expedition Frank Rack Auditorium
11:40am	Lunch (Vislab & Machine Room Tours for Groups 4 & 5)	
1:00pm	Gearing Up for Design and Construction – Discussion with TACC Tim Cockerill & John West ROC 1.900	Ocean Observatories Initiative, Transition to a New Prime Awardee Paul Matthias Auditorium
2:00pm	Refreshment Break	
2:20 – 3:50pm	Workshop Feedback to NSF ROC 1.900	Facility Cyberinfrastructure Ewa Deelman, Bill Miller & Manish Parashar Auditorium

SESSIONS

Tuesday, April 2, 2019

NSF Opening Remarks

8:00am

Teresa Grancorvitz, NSF Chief Financial Officer & Matt Hawkins, Head of the NSF Large Facilities Office

This session will highlight key NSF activities associated with research infrastructure.

Large Facility Spotlight

8:30am

Adam Bolton, Scott McIntosh, Mark McKinnon & Thomas Rimmele

See brief presentations from the NSF supported Federal Funded Research Development Centers (FFRDCs). Each Center will introduce who they are and share an accomplishment, event, and/or challenge that took place in the past year. Following the presentations, workshop participants will have an opportunity to ask questions of the panel of presenters.

Introduction to TACC and NHERI

9:45am

Ellen Rathje & Dan Stanzione

A capabilities overview of TACC and NHERI.

The Role of Education and Public Outreach (EPO) During Construction and Operations

10:50am

Amanda Bauer, William Buckingham & Sharon Cooper

This session will explore models for the construction and operations of EPO at large facilities, including integrating EPO construction and facility construction (e.g. LSST), and other ways to build and support quality EPO programming.

Bridging the Communications Gap for Key Stakeholders – Part I

1:05pm

Amanda Greenwell, Adrian Apodaca, Ranpal Gill, Shari Lifson & John Taber

Join communicators from across NSF and the Large Facilities to discuss topics including the impact of the 2018 NSF branding guidelines and its implementation by recipients. Insights into social media from NSF as well as success stories from facilities will also be shared. Q&A will allow discussion on how all can work together towards more communications successes.

Part I: Branding and Renaming

- NSF Branding and Name Recognition
- (Re)Branding, Addressing Challenges and Lessons Learned
- Challenges and Opportunities in (Re)Naming a Facility

An Update on the LFM (retitled Major Facilities Guide)

1:05pm

Matthew Hawkins, Bill Miller, Joy Pauschke, Kevin Porter, Eddie Whitehurst, Rebecca Yasky & Jeff Zivick

The updated “Large Facilities Manual (LFM)” under the new title “Major Facilities Guide (MFG)” is scheduled to be in effect in Fall 2019. This revision adds a section for guidance on mid-scale research infrastructure projects; updates sections related to NSF policy on research infrastructure, roles and responsibilities for NSF staff, divestment stage, earned value management, cybersecurity, and property management; and clarifies cost estimating requirements including the construction stage total project costs and NSF policy on contingency and reporting requirements. This session will be a brief presentation of the changes and give participants the opportunity to ask questions regarding these changes.

Bridging the Communications Gap for Key Stakeholders – Part II

2:05pm

Cheryl Ann Blain, Jennifer Plozai, Claire Raftery & Sarah Sulick

Part II: Social Media

- Insights on Social Media
- Herding Cats: Ramping up a social media presence with a ten-facility network
- Social Media Insights from a Solar Observatory

Auditors and Best Practices

2:05pm

Elizabeth Goebels

Join the OIG to discuss past audit results, identification of risk trends and emerging issues, audit coordination, and the resolution of past issues. Includes interactive question and answer session.

Education and Public Outreach (EPO) Best Practices and the Diversification Challenge

3:20pm

Donna Charlevoix, Sue Ann Heatherly, Roxanne Hughes, Jim Madsen, Kristin Roberts & Tim Spuck

This session will focus on best practices in STEM education and workforce development, diversity and inclusion, and building collaborations. EPO professionals from across the NSF Large Facilities portfolio will share exemplar programs and practices, and will work to explore future projects and collaborations.

- Inspiring the Next Generation
- STEM Workforce Development: The Umbrella for Education, Outreach and Communications at an NSF Facility

Tuesday, April 2, 2019 (continued)

- Building a Multimessenger Diversity Community of Practice: The IceCube Multimessenger@INCLUDES Initiative
- Broadening Impact through Education and Outreach
- Amplifying EPO through Collaboration: A Story from the NSF Funded Observatories in Chile

*Open Mic Sharathon – *Audience Participation!* Join the discussion with an elevator pitch on your additional programs/projects and best practices.*

Applying the Learning Culture Concept to NSF's Major Facilities Knowledge Management Program

3:20pm

Jose Martens, Virginia Taberski & Rebecca Yasky

This session will be conducted in two parts. The first part will be to develop an understanding of how the NSF Major Facilities Knowledge Management Program functions and the interfaces between NSF and Facilities. As a follow-on to last year's Knowledge Management session, participants in small groups will identify techniques for discovery of best practices and lessons learned within their organization to cultivate the NSF Major Facilities Knowledge Management Program. Each group will share key outcomes of their discussions.

Wednesday, April 3, 2019

EPO, Branding and Communications – Drill Down Hot Topics Discussion – Part I

8:00am

Anne Kornahrens

Participate in a focused discussion and brainstorming session on branding, (re) naming and social media. Will allow for a deep drill into the hot topics that came up on day 1.

Featuring short highlight of "Examining EPO Activities at MPS Facilities," by Anne Kornahrens, AAAS S&T Policy Fellow, serving at NSF in the MPS Office of the Assistant Director.

Business System Reviews – Updates and Practices

8:00am

Rob Hengst, Florence Rabanal & Eddie Whitehurst

This session will provide an overview of the revised Business Systems Guide. Then participants will engage in small group activities to identify experiences and challenges with applying the BSR framework to support the organizational operations, management, and monitoring of Major Facility awards.

EPO, Branding and Communications – Drill Down Hot Topics Discussion – Part II

9:50am

Anne Kornahrens

Take part in a discussion and brainstorming session on STEM, EPO diversification and cross-center collaboration. Will allow for a deep drill into the hot topics that came up on day 1.

Independent Cost Estimates for Scientific Facilities – Approaches and Benefits

9:50am

Denise Castro-Bran, Marc Hayhurst, Matthew Marshall & Vera Scheidlinger

This presentation will discuss the methodology, assumptions, and best practices for performing independent cost estimates (ICEs) for major research facilities either as part of a major upgrade to an existing facility or as part of a new major facility proposal.

Interacting with Congress

12:45pm

Grace Cummings

The plenary session will provide an overview of Congress, its organization and processes, to give attendees a framework to build and maintain support for your programs and an understanding of Congress on par with Congressional Member and staff expectations.

Interacting with Congress Breakout – Part I

1:55pm

Grace Cummings

The first of two one-hour breakout sessions structured as interactive exercises to help attendees prepare for various Congressional interactions, including communicating effectively, recognizing the 3 P's, and utilizing available tools to research different scenarios.

SESSIONS

Wednesday, April 3, 2019 *(continued)*

Lessons from Large Facilities Development and Operation in Remote Environments

1:55pm

George Blaisdell & Christine Lurtz

This session will consist of two parts: During part (1), Christine Lurtz will present on the digital assessment management tools, LiDAR and BIM for design and operations efficiencies. The application of best practice digital tools will be discussed as it pertains to modernizing management of legacy and new infrastructure in McMurdo, Antarctica. In part (2), George Blaisdell will discuss remote infrastructure monitoring and management including use of instrumentation and simple data analysis in creating situational awareness and decision support for infrastructure in McMurdo, Antarctica and Summit, Greenland.

Interacting with Congress Breakout – Part II

3:55pm

Grace Cummings

The second of two one-hour breakout sessions structured as interactive exercises to help attendees prepare for various congressional interactions, including communicating effectively, recognizing the 3 P's, and utilizing available tools to research different scenarios.

The Rise of Privacy: A Risk-based Approach to Privacy Oversight, Compliance & Management for Research Facilities

3:55pm

Mike Cullen & David Ross

A great deal of confusion is swirling around about the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). With GDPR enforcement in full force and CCPA coming soon, many research institutions, universities, and government contractors are struggling with compliance. This discussion will focus on how to evaluate privacy risks and build sustainable privacy programs using real world examples. Specifically participants will: (1) Gain an understanding of the regulation and its impact on research; (2) Learn to quantify the risk to an institution with multiple privacy and compliance requirements; (3) Better understand data subject rights and how they apply in a complex environment; and (4) Understand the need and role of a Data Privacy Officer (DPO) programs using real world examples. Participants will benefit from a basic level understanding of the GDPR.

Thursday, April 4, 2019

Branding, Communications and EPO – the Feedback Loop

8:00am

Ranpal Gill, Anne Kornahrens & Tim Spuck

- Needs that have been uncovered
- Actions that can be taken (What will be done between LFW 2019 and 2020?)
- How will we measure the effectiveness of actions and feed results into further improvement
- Sharing those results at LFW 2020 – the continuous feedback loop...

Defining Science Requirements, Managing Scope, and Ensuring Delivery

8:00am

Tom Gulbransen

To characterize and quantify how our nation's ecosystems are changing, National Ecological Observatory Network's (NEON) leadership established project management methods to communicate and govern Operations across its 81 sites, in 20 regions, performing instrumented and observational sampling, to publish 177 data products. This session highlights project management practices we find to be effective when juggling competing needs of customers, fieldwork, EPO, and cyberinfrastructure.

User Program Practices

9:10am

Joel Brock, Jose Martens, Eric Palm & Lory Wingate

A panel of NSF Major Facilities will provide an overview of their User Programs including their community, services, and challenges. They will discuss performance measurements and how these are aligned with the facility mission and user satisfaction and outreach. Each facility will make a presentation and then the panel will answer questions from workshop participants.

Enterprise Risk Management of Large Facility Projects

9:10am

Stephen Unwin

Large facility projects are exposed to a shifting variety of risks throughout their lifecycles – performance, regulatory, budgetary, research, contracting and political, among others. Key pre-requisites to the effective management of such risks is understanding them and characterizing them. This characterization can be qualitative and it can be quantitative, but what it must always be in order to meet the needs of all stakeholders, including the project management team, is systematic, transparent and defensible. Once the risks are understood and actionable, handling actions can then be developed to reduce the probabilities or the impacts of scenarios driving these risks. This presentation

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highlights critical elements of the process for implementing a comprehensive enterprise risk management program, and lessons learned over years of experience in large project risk management.

Project Management and Business Core Competencies for Recipient Personnel

10:40am

Jeff Zivick

This session will discuss future NSF expectations for Recipient organizations to identify Key Personnel who have the qualifications to fulfill a set of core competencies considered necessary for successfully managing an NSF major facility award. Based on input received from the 2018 Large Facilities Workshop, the team approach will be used for meeting the suite of competencies and qualifications and may include a combination of experience, education, training, or certifications. Competencies will also depend on the life-cycle stage of the project (Design, Construction or Operations).

The draft set of core competencies has been developed based on industry best practices and those for agency staff as required by the Program Management Improvement and Accountability Act (PMIAA). As part of this session, attendees will be encouraged to provide feedback to NSF on drafting of this new section in the Major Facilities Guide (MFG).

Supporting US Participation in the International Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAIC) Expedition

10:40am

Frank Rack

Starting in September 2019, the international Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAIC) initiative, will begin year-long observations in the high Arctic supported by the German icebreaker Polarstern, which will serve as a central observatory embedded within an extensive, distributed network of deployed sensors and instruments that will drift together across the Arctic Ocean, and when combined with additional airborne and satellite observations and modeling will be used to better understand the evolving Arctic climate system, and the role it plays in a changing global climate. This

talk will describe the international framework and processes for planning the logistics of the project, developing scientific observing teams, organizing scientific contributions, coordinating the use of resources, and ensuring MOSAIC's legacy of data and products, with a focus on the participants and projects supported by the National Science Foundation and other US federal agencies.

Gearing Up for Design and Construction – Discussion with TACC

1:00pm

Tim Cockerill & John West

A Leadership Class Computing Facility is expected to soon enter the Design Stage. The session will include a brief introduction to the Texas Advanced Computing Center (TACC) project and an engaging community discussion on how to build a project team and identify project management resources. Others will be encouraged to share best practices and challenges from their experiences.

Ocean Observatories Initiative, Transition to a New Prime Awardee

1:00pm

Paul Matthias

In late 2018, the Ocean Observatories Initiative Prime Awardee transitioned from the Consortium for Ocean Leadership to the Woods Hole Oceanographic Institution. Lessons learned from the collaborative transition are related to the selection and creation of a Program Management Organization (PMO), knowledge and responsibility transfer methodologies, and subaward management tools and techniques.

Facility Cyberinfrastructure

2:20pm

Ewa Deelman, Bill Miller & Manish Parashar

This session will highlight important recent initiatives in the area of cyberinfrastructure for facilities. Ewa Deelman from USC will present on an NSF-funded pilot project to plan a Center of Excellence in Cyberinfrastructure focused on assisting major facilities. Other updates will be provided on new CI resources and community activities including planning for a follow-on NSF Facility CI Workshop.