

SCHEDULE AT-A-GLANCE

Monday, April 30, 2018

Time	Topics	
8:00am	LFO Opening Remarks – Status, Evolving Oversight & Other Developments <i>Speaker: Matthew Hawkins</i> Location: Edison ABCD	
8:30am	Lessons for the Future <i>Speaker: Adam Cohen</i> Location: Edison ABCD	
9:30am	Refreshment Break: Ballroom Foyer	
9:45am	Fast Radio Bursts <i>Speaker: Nipuni Palliyaguru</i> Location: Edison ABCD	
10:15am	Impacts of Hurricane Maria on the Arecibo Observatory <i>Speaker: Francisco Cordova</i> Location: Edison ABCD	
10:45am	Break	
11:00am	Woodrow Wilson Bridge Replacement Project: A Mega-Project Success Story <i>Speaker: Jim Ruddell</i> Location: Edison ABCD	Session I: Introduction – Forming, Learning, and Operating in High Functioning Teams: Lessons from the Navy SEALs <i>Speaker: Larry Yatch</i> Location: Edison EFG
12:00pm	Lunch On-Your-Own	
1:30pm	International Science and G7 Group of Senior Officials (GSO) Framework <i>Speaker: Jim Ulvestad & Matthew Hawkins</i> Location: Edison ABCD	Session II: Overview – Forming, Learning, and Operating in High Functioning Teams: Lessons from the Navy SEALs <i>Speaker: Larry Yatch</i> Location: Edison EFG
2:30pm	Break	
2:40pm	Enhancing NSF Design and Construction Processes through Spiral Development <i>Speaker: Tony Beasley</i> Location: Edison ABCD	Session III: Hands On Exercise – Forming, Learning, and Operating in High Functioning Teams: Lessons from the Navy SEALs <i>Facilitator: Larry Yatch</i> Location: Edison EFG
3:40pm	Refreshment Break: Ballroom Foyer	
4:00 – 5:00pm	Core Competency Requirements for Recipients <i>Speaker: Jeff Zivick</i> Location: Edison ABCD	Session III: Continued
5:30 - 6:30pm	Networking Reception: Ballroom Foyer	

Tuesday, May 1, 2018

Time	Topics	
8:00am	Federal Budget Outlook <i>Speaker: Beth Blue</i> Location: Edison ABCD	
8:25am	Announcements: Edison ABCD	
8:30am	NSF Office of Inspector General – Audit Results & Other Topics <i>Speakers: Elizabeth Goebels, Phil Emswiler, Melissa Prunchak & Keith Nackerud</i> Location: Edison ABCD	

Tuesday, May 1, 2018 (continued)

Time	Topics	
9:45am	Refreshment Break: Ballroom Foyer	
10:00am	Knowledge Management Model for Improving Communication Among Facilities and with NSF <i>Facilitator: Rebecca Yasky</i> Location: Edison ABCD	NSF Business Issues I <i>Speaker: Jeff Lupis</i> Location: Edison EFG
11:00am	Break	
11:10am	Society for Science at User Research Facilities (SSURF, formerly NUFO) <i>Facilitator: Rich Leonard</i> Location: Edison ABCD	NSF Proposal & Award Policy Update <i>Speaker: Jean Feldman</i> Location: Edison EFG
11:40am	User Engagement and Support <i>Facilitator: Forrest Masters</i> Location: Edison ABCD	
12:10pm	Lunch On-Your-Own	
1:40pm	Facility Performance Metrics <i>Panelists: Rich Leonard, John LaFemina, Virginia Taberski & Jamie Allan</i> Location: Edison ABCD	NSF Business Issues II <i>Speaker: Jeff Lupis</i> Location: Edison EFG
2:40pm	Refreshment Break: Ballroom Foyer	
3:00 – 4:30pm	Energy Improvements and Alternative Funding Options <i>Panelists: Scott Wolf, Tom Hattery, Richard Oram, Rob Reid & Kevin Porter</i> Location: Edison ABCD	Cyberinfrastructure for Facilities <i>Speakers: Manish Parashar, Bill Miller & Ivan Rodero</i> Location: Edison EFG

Wednesday, May 2, 2018

Time	Topics	
8:00am	Major Facility Innovations and Technology Transfer <i>Facilitators: Tony Beasley, Rich Leonard, Drew Weisenberger & Matthew Hawkins</i> Location: Edison D	Lessons Learned: Application to NHERI Experimental Facilities <i>Speakers: Dan Zehner, Darren McKay, Pedro Lomonaco & Maryam Refan</i> Location: Edison ABC
9:00am	Break	
9:10am	Facilities Condition Assessment <i>Speaker: Robert Reid</i> Location: Edison D	Lessons Learned: Continued
10:10am	Refreshment Break: Ballroom Foyer	
10:30am	Activity-Based Budgeting and Cost Estimating for Operations <i>Speakers: Hannah Hansen & Giselle Hepker</i> Location: Edison D	Idea Exchange Open Forum for Recipients <i>Speaker: Tim Cockerill</i> Location: Edison ABC
11:30am	Cost Estimating for NSF Facility Operations – Reasonable Application of GAO Good Practices <i>Facilitators: Kevin Porter, Rob Hengst, Charlie Zeigler & Tim Kashmer</i> Location: Edison D	
12:10pm	Break	
12:15pm	Workshop Debrief – Open Forum & Actionable Recommendations from Idea Exchange <i>Refreshments will be served.</i> Location: Edison D	

WORKSHOP SESSIONS

Monday, April 30, 2018

LFO Opening Remarks – Status, Evolving Oversight & Other Developments

8:00am

Speaker: Matthew Hawkins

Welcome and update on significant happenings over the past year related to NSF Research Infrastructure.

Lessons for the Future

8:30am

Speaker: Adam Cohen

Experience in projects and facilities is always a balance sheet of successes and failures. My personal experience balance sheet has taught me that the success of a project depends on many factors, some of which can be predicted and planned. The cost, scope, schedule, and planned missions are not the whole story; how you pitch a project, how you ensure continued support, how you execute the management of a project, and how you use the facility all change over time. We are living in times of tremendous budget uncertainty, and there are indications that we will continue to be in a constrained budget environment for some time. Has the era of several “billion dollar” class R&D facilities progressing together ended? Experiences from the past might provide valuable lessons for the future planning and eventual construction and operations of the next generation of facilities.

Fast Radio Bursts

9:45am

Speaker: Nipuni Palliyaguru

This session will discuss fast radio burst observations across several NSF facilities, with particular focus on the observations of FRB 121102 using the Arecibo Observatory.

Impacts of Hurricane Maria on the Arecibo Observatory

10:15am

Speaker: Francisco Cordova

This session will focus on describing the impact hurricane Maria had on the Arecibo Observatory. It will also discuss best practices for hurricane preparation and response to major weather events.

Woodrow Wilson Bridge Replacement Project: A Mega-Project Success Story

11:00am

Speaker: Jim Ruddell

Overview of the successful Washington, DC–area Woodrow Wilson Bridge Replacement Project. Will highlight challenges and lessons learned, including application of scheduling best practices from the GAO Schedule Guide.

Session I: Introduction – Forming, Learning, and Operating in High Functioning Teams: Lessons from the Navy SEALs

11:00am

Speaker: Larry Yatch

How do organizations mistake-proof planning and execution? The Navy SEALs plan for success by identifying possible risks of failure and mitigating the possibilities before they occur. Larry Yatch will provide an introduction to this valuable tool that can be used to reduce risk in anything from your summer vacation trip to large complex projects. Participants will learn how the SEALs use a feedback cycle for systemic planning, after-action assessment, and learning from challenges to empower their teams and maximize performance. Session is a motivational introduction to the afternoon hands-on breakout sessions and the fundamentals for organizational success.

International Science and G7 Group of Senior Officials (GSO) Framework

1:30pm

Speakers: Jim Ulvestad & Matthew Hawkins

This International Topic will introduce the latest Group of Senior Officials (GSO) Global Research Infrastructure “Framework”: its history, purpose, and potential benefits for NSF major facilities. Potential case studies around NSF-funded facilities will be discussed.

Session II: Overview – Forming, Learning, and Operating in High Functioning Teams: Lessons from the Navy SEALs

1:30pm

Speaker: Larry Yatch

Spend an hour going into more detail on the steps in the Navy SEALs Contingency Planning Cycle. (Not required to attend Session III)

Enhancing NSF Design and Construction Processes through Spiral Development

2:40pm

Facilitator: Tony Beasley

Although they may appear onerous, NSF procedures are inherently flexible. A panel of practitioners will take the audience on an exploration of the pros and cons of using a “spiral model” to facilitate successful design and construction of major and mid-scale facilities while working within NSF policies and procedures; including the No Cost Overrun Policy. The discussion will also include appropriate scaling of Design Stage oversight for mid-scale projects (Section 2.7 of the Large Facilities Manual) as well as major acquisitions.

Monday, April 30, 2018

Session III: Hands On Exercise – Forming, Learning, and Operating in High Functioning Teams: Lessons from the Navy SEALs

2:40pm

Facilitator: Larry Yatch

Spend a couple of hours applying the planning phase of the Contingency Planning Cycle to your own real-world problem. Employ a series of easy-to-use worksheets to plan for the worst and guarantee success. Leave the workshop with a great plan ready to set to action. (Not required to attend Session II).

Core Competency Requirements for Recipients

4:00pm

Speaker: Jeff Zivick

The Federal government is paying greater attention to the core competencies that will be required for Federal Program and Project Managers. The Program Management Improvement Accountability Act of 2015 (PMIAA), was signed into law in December 2017. In addition, the 2015

National Academy of Public Administration report on NSF recommended NSF establish minimum project management competencies for its staff and for award recipient staff. In addition, the Project Management Institute is currently revising its Project Manager Competency Development Framework. This talk will highlight some of the important aspects of these initiatives and how they may impact NSF award recipients.

Session III continued: Hands On Exercise – Forming, Learning, and Operating in High Functioning Teams: Lessons from the Navy SEALs

4:00pm

Facilitator: Larry Yatch

Spend a couple of hours applying the planning phase of the Contingency Planning Cycle to your own real-world problem. Employ a series of easy-to-use worksheets to plan for the worst and guarantee success. Leave the workshop with a great plan ready to set to action. (Not required to attend Session II).

NOTES

WORKSHOP SESSIONS

Tuesday, May 1, 2018

Federal Budget Outlook

8:00am

Speaker: Beth Blue

Follow the NSF Budget Division through the federal budget process, and gain insights on the current budget and an outlook for FY 2019 and FY 2020.

NSF Office of Inspector General – Audit Results & Other Topics

8:30am

Speakers: Elizabeth Goebels, Phil Emswiler, Melissa Prunchak & Keith Nackerud

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.

Knowledge Management Model for Improving Communication Among Facilities and with NSF

10:00am

Facilitator: Rebecca Yasky

This session will discuss a proposed model and enhanced tools for sharing best practices and lessons learned. Through group discussion, it will solicit feedback on additional collaborative techniques for knowledge integration such as peer assist network, knowledge map, idea exchange, and webpage resources.

NSF Business Issues I

10:00am

Speaker: Jeff Lupis

A discussion on business related issues including fee, incurred cost and accounting audits, and the Data Collection Tool.

Society for Science at User Research Facilities (SSURF, formerly NUFO)

11:10am

Facilitator: Rich Leonard

Get to know the Society for Science at User Research Facilities and exchange ideas with its leadership on how the society supports the research community.

NSF Proposal & Award Policy Update

11:10am

Speaker: Jean Feldman

An update on NSF policies and procedures related to proposal preparation, award management, oversight, procurement, subawards and contracts. Learn about recent changes to the Proposal and Award Policies and Procedures Guide (PAPPG), new and revised terms and conditions as well as FastLane modernization efforts with Research.gov.

User Engagement and Support

11:40am

Facilitator: Forrest Masters

Join a community-led discussion sharing best ways to recruit, engage, and support users.

Facility Performance Metrics

1:40pm

Panelists: Rich Leonard, John LaFemina, Virginia Taberski & Jamie Allan

Performance metrics are more than a scorecard. Properly implemented, they can inform decisions on how best to keep research infrastructure on the forefront of the scientific endeavor. The session will include discussions on examples of operational performance metrics that can be used to describe facility outputs and outcomes, track operational performance (uptime), track operations and maintenance costs, and support budget requests for facility sustainment and improvement.

NSF Business Issues II

1:40pm

Speaker: Jeff Lupis

A discussion on revised Terms & Conditions and NSF “Branding.”

Energy Improvements and Alternative Funding Options

3:00pm

Panelists: Scott Wolf, Tom Hattery, Richard Oram, Rob Reid & Kevin Porter

Learn how DOE’s successful Federal Energy Management Program can finance energy saving initiatives without up-front capital costs. Benefits to NSF major facilities include up-front funding without additional appropriations, guaranteed cost savings and performance, and freeing up money for science. NSF major facility case studies will be discussed, including examples funded via NSF Research and Related Activity funding for facility Operations and Maintenance versus DOE’s Energy Savings Performance Contracts (ESPCs).

Cyberinfrastructure for Facilities

3:00pm

Speakers: Manish Parashar, Bill Miller & Ivan Roderio

This interactive session will cover (1) findings and reports from the 2017 Workshop on Cyberinfrastructure (CI) for Large Facilities, (2) updates on the NSF Office of Advanced Cyberinfrastructure, and (3) defining expectations/best practices for CI in large facility projects.

Wednesday, May 2, 2018

Major Facility Innovations and Technology Transfer 8:00am

Facilitators: Tony Beasley, Rich Leonard, Drew Weisenberger & Matthew Hawkins

This community-led discussion will identify a path forward to develop good practices for conveying the socio-economic benefit from NSF Research Infrastructure investments on the broader U.S. innovation ecosystem and the economy. This will include follow-up discussion from 2017 Large Facilities Workshop on a tailored, volunteer questionnaire for the academic institutions and non-profits that operate NSF's major facilities. The questionnaire will be based on NSF's Business R&D and Innovation Survey (BRDIS) and other efforts currently underway in Europe. The outcomes will help inform NSF how to develop communications tools like those used successfully by DOE, NASA and other NSF Programs.

Lessons Learned: Application to NHERI Experimental Facilities

8:00am

Speakers: Dan Zehner, Darren McKay, Pedro Lomonaco & Maryam Refan

Attend a Panel Discussion that leads to a Hands On Exercise facilitated by representatives of the Large Facilities community on the formal lessons learned program developed for the Natural Hazards Engineering Research Infrastructure (NHERI).

Facilities Condition Assessment

9:10am

Speaker: Robert Reid

Discussion of quantitative strategic planning tools for infrastructure lifecycle maintenance at National Center for Atmospheric Research.

Idea Exchange Open Forum for Recipients

10:30am

Speaker: Tim Cockerill

This session is intended for award recipients and offers an opportunity for the large facilities to share ideas

amongst themselves. The goal of the session is to provide critical feedback to NSF in the form of reasonable, actionable, documented recommendations. Actionable recommendations will be provided to NSF during the open Workshop Debrief in the afternoon and addressed by NSF after the workshop.

Activity-Based Budgeting and Cost Estimating for Operations

10:30am

Speakers: Hannah Hansen & Giselle Hepker

Using LIGO's case study as an example, follow the process of interpreting and applying guidelines from the NSF Large Facilities Manual and GAO Cost Guide to the development of a cost estimating plan for an operations proposal, including updating from a functional Work Breakdown Structure (WBS) to an activities-based WBS, developing BOE templates, and developing tools for easy reporting.

Cost Estimating for NSF Facility Operations – Reasonable Application of GAO Good Practices

11:30am

Facilitators: Kevin Porter, Rob Hengst, Charlie Zeigler & Tim Kashmer

The GAO Cost Estimating and Assessment Guide includes estimating good practices for the entire facility life cycle (Development through Divestment). Using community input, this session will explore which of the twelve steps (or practices) of a high quality cost estimate are most relevant to the Operations Stage and how NSF can further clarify expectations for proposal submission in Section 4.2 of the LFM.

Workshop Debrief – Open Forum & Actionable Recommendations from Idea Exchange

12:15pm

An informal open forum for workshop attendees to provide direct feedback to NSF-LFO and NSF-CSB and recommendations for future improvements and topics. Actionable recommendations developed during the Idea Exchange Open Forum for Award Recipients will be discussed with NSF. Refreshments will be served.

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