

NHERI Council Monthly Meeting No. 2 in Y-4
1 August 2019, 2:00 – 3:00 PM EDT

NHERI Council Summer 2019 Monthly Meetings

June 13, 2019

July 11, 2019

August 1, 2019

Zoom Meeting Details:

<https://DesignSafe-ci.zoom.us/j/680709031>

One tap mobile: +16699006833,,680709031# US (San Jose); +16465588656,,680709031# US (New York)

Dial by your location: +1 669 900 6833 US (San Jose); +1 646 558 8656 US (New York)

Meeting ID: 680 709 031; Find your local number: <https://zoom.us/j/680709031>

Attending:

- Florida International University: Arindam Chowdhury (EF Dir.) WOW
- Lehigh University: Jim Ricles (EF Dir.) ATLSS
- Oregon State University:
- Purdue University: Julio Ramirez (NCO Dir., Council Secretary) and Dan Zehner (NCO Sch./Op. Coord.)
- University of California, Berkeley: Greg Deierlein (Co-Dirs.) and Matt Schoettler (Assoc. Dir. – Ops) SimCenter
- University of California, Davis: Ross Boulanger (EF Dir) CGM
- University of California, San Diego: Joel Conte (EF Dir) LHPOST
- University of Colorado Boulder: Lori Peek (Dir.) CONVERGE
- University of Florida: Forrest Masters (EF Dir.; Council Chair) and Jennifer Bridge (EF Dep. Dir.) Powell Lab
- University of Texas at Austin:
- University of Texas at Austin: Bradley Cox (EF Co-PI) and Farnyu Menq (Operations Manager) Mobile Lab
- University of Washington: Joe Wartman (EF Dir.) RAPID
- National Science Foundation: Joy Paushke (Prog. Dir, NHERI)

Minutes

1. Attendance, Review and Approval of Minutes (previously distributed by e-mail) for Meeting No. 1 (7/11, 2019) in Y-4 (Masters) – Approved Minutes are posted at: <https://www.designsafe-ci.org/facilities/nco/governance/nheri-council/>

Modified Minutes (Version 2) mailed to the Council on July 29 were approved as distributed.

Forrest thank Ross Boulanger for his leadership and service as the past chair.

2. Continuing Business
 - a. NCO- (Julio Ramirez)
 - i. NHERI Special Collection in Frontiers in Built Environment (FBE)- timeline for paper submission, Editorial Board, financial details (Julio Ramirez)
[Julio reported on the outcome of further discussion with FBE.](#)

The first item was the timeline for the paper. FBE proposed a submission deadline for all contributions to the NHERI Collection of January 2020. These would allow for the review of the papers and a publication date of July 2020 for the NHERI Collection (E-Book). There were no objections expressed by the Council. Julio will report to FBE.

Next, possible Conflict of Interest (COI) in the Topic Editorial Board proposed was discussed. FBE suggested, for compliance with the COI that the Topic Editorial Board (individuals handling the editorial work on the manuscripts submitted for the NHERI E-book- 4 to 6 members), that I serve as the lead Topic Editor, so that I am able to coordinate the

submissions and have full access to FBE management platform for the collection. I will not be involved in handling the review process of the manuscripts, but through the management platform, I will be able to see all submitted manuscripts and their progress in review. A manuscript submitted by the NCO would be reviewed by an External Editor from FBE.

The last item was the handling of the financial side. Each contribution to FBE is normally charged \$1900 for a Type A article (NHERI articles- see the information on Type A articles here: <https://www.frontiersin.org/journals/built-environment-article-types>) FBE will waive 70%, NCO will pick up 15% of each article, and components will be invoiced by FBE for 15% for their contribution.

Action Item: Julio will poll the Council for nominations to the Topic Editorial Board, and for the name and contact information of the representative that should receive the invoice from FBE for the 15% fee.

ii. NHERI-Wide Metrics Update (Dan Zehner)

Dan reported on his activities with the facilities to gather information on utilization in order to identify the metric(s) to measure it. He will report at the next meeting of the Council on this topic. Joy asked to see a draft when ready before the next meeting.

iii. NHERI Video Update (Dan Zehner)

The latest version can be found at: <https://youtu.be/KbdMDJZluC8>
Ready and available at the link.

iv. NHERI Booth Plans for Year 4: identify conferences/meetings (Dan Zehner)

Dan reported that the booth is ready to travel. Invited the Council to identify future conferences/meetings where they would like to see the booth deployed. Two were suggested: The National Conference on Earthquake Engineering in March 2020, and the upcoming Tornado Conference at the University of Illinois.

Action Item: Dan will follow up with Forrest to get more details about the conference in Illinois. Council to make suggestions of possible future meetings. Dan asked that when suggesting a conference please try to identify costs and guidelines for displaying the booth.

b. CONVERGE (Lori Peek)

- i. Excellent attendance and feedback from the NHERI session at the 44th annual Natural Hazards Workshop.
- ii. Outstanding poster presentations from the NSF-REU NHERI Undergraduates at the Researchers Meeting in Colorado! Thank you to NSF, Karina, Julio, and all of the mentors at the various facilities. The students did a GREAT job! Here are some photos from the poster session!
https://www.facebook.com/lori.peek/media_set?set=a.10217659335569428&type=3
- iii. DesignSafe + CONVERGE + RAPID - beginning launch of new social science and interdisciplinary data model for publishing data on DesignSafe! 82 (!) researchers were interviewed by the DesignSafe team at the Natural Hazards Workshop. They provided feedback on the data model that our NHERI facilities co-developed. The social science community is very excited to have this opportunity to begin publishing our datasets and data collection protocols, so thank you so much for all the support. (onwards!)
- iv. CONVERGE Training Module on Socially Vulnerable Populations is now live!
<https://converge-training.colorado.edu/> If you have suggestions for faculty who are

teaching courses in engineering that might use this (e.g., "engineering for humanity" sorts of courses) I would love to be connected to them. Thank you again for allows the NSF undergraduates to complete the module!

Additional discussion on a possible meeting of NHERI researchers followed about possible venues and partnerships for such meeting. NSF indicated that it would entertain a request for funding to hold such meeting.

Action Item: This topic will be continued on the next Agenda for the next meeting

c. Opportunity sourcing for prospective PIs (Forrest Masters)

Forrest shared the information on NSF funding opportunities attached to these Minutes. Discussion followed on the best strategies to share and curate the information. For instance, shared in the various NHERI newsletters, place it in Google Docs to update, advertise on the NHERI Calendar. The Council thanked Forrest for the work in putting the information together.

Action Item: Forrest will talk with Julio to plan a strategy and report back to the Council.

3. New Business

a. NSF Items (Joy Pauschke)

Item tabled until the next meeting.

b. Proposed future meeting dates (5 September, 3 October, 7 November, 5 December) and time (2-3 PM ET). Please respond to Julio Ramirez's 7/25/19 email if you have not already
Approved. See Item 4.

c. Launch of WE-UQ – Wind Engineering with Uncertainty Quantification

Greg reported on the latest release of the SimCenter. The WE-UQ Application is an open-source software that provides researchers a tool to assess the performance of a building to wind loading. The application is focused on quantifying the uncertainties in the predicted response, given that the properties of the building and the wind loads are not known exactly, and given that the simulation software and the user make simplifying assumptions in the numerical modeling of the structure. In the application, the user is required to characterize the uncertainties in the input. The application will, after utilizing the selected sampling method, provide information that characterizes the uncertainties in the response measures. More information can be found at:

<https://simcenter.designsafe-ci.org/research-tools/we-uq/>

4. Next Meeting- **The Council agreed to hold the meetings during the fall semester in accordance with the schedule in Item 3b.**

Action Item: Julio will send the Zoom meeting details and calendar invite for the recurring meetings.

5. Adjourn

Motion to adjourn was made at 3:00 PM and accepted.

NSF Opportunities Update | 1 August 2019

Opportunity sourcing for natural hazards research, with emphasis on cross-directorate programs

Solicitation	Status / notes
Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII)	Full proposals due 14 August. Considered to be the “mini-CAREER.” Funds faculty outside of CS depts
Computational and Data-Enabled Science and Engineering (CDS&E)	Full proposals due September forward (division specific). “identify and capitalize on opportunities for major scientific and engineering breakthroughs through new computational and data analysis approaches.” One CBET example: “2) Innovative modeling methodologies for turbulent flows and for flows of complex fluids and suspensions.” From CMMI: “design of innovative materials and building technologies, infrastructure resilience and sustainability and tools and systems for decision-making, robotics and controls”
Computer and Information Science and Engineering (CISE): Core Programs	CISE’s annual call for proposals, which are tiered into “\$500K small,” “\$1.2M medium”, and “\$7M frontier” grants. Smalls are the best target to “break into” this funding. Due 31 October. Familiarize yourself with the divisions before reaching out. Some are theory/algorithm based, others are more application focused (e.g., human computer interaction in CHS)
Critical Aspects of Sustainability (CAS)	Heavy on chemistry and materials (led by MPS CHE and DMR) but also involving ENG CBET/CMMI. “Improve the efficiency with which natural resources are used to meet human needs for products and services ... meeting the goals of protecting and enhancing human health and the environment.” Full proposals accepted anytime in ENG. MPS proposals due in the mid to late fall
Cyber-Physical Systems (CPS)	Cross-directorate program supporting “\$500K small,” “\$1.2M medium”, and “\$7M frontier” grants. S/M were due in April. Frontiers are due by 16 Sept. “smart CPS drive innovation and competition in a range of application domains including ... building design, civil infrastructure, ... transportation.”
Emerging Frontiers in Research and Innovation (EFRI)	Assists ENG in determining topical calls for the following year, e.g., “Chromatin and Epigenetic Engineering” was one of two topics selected for FY19. LOIs due in November
Expeditions in Computing	A CISE crowing jewel program to: “define the future of computing and information.” 1-2 \$10M awards to teams that crosscut CS with domain experts in other fields (e.g. SynBio, visual cortex)
Leading Engineering for America's Prosperity, Health, and Infrastructure (LEAP HI)	CMMI program. LOI due 15 July 2020. “challenges the engineering research community to take a leadership role in addressing demanding, urgent, and consequential challenges for advancing America’s prosperity, health and infrastructure.”
Mid-scale Research Infrastructure-1	Currently closed for new submissions. Previous LOI due date = February 2019. 3 to 10 awards with total ceiling = \$60M
Mid-scale research infrastructure-2	Currently closed for new submissions. Previous LOI due date = February 2019. 4 to 6 awards with total ceiling = \$150M
Research Experiences for Teachers (RET) in Engineering and Computer Science	Full proposals due 18 Sept. “supports active long-term collaborative partnerships between K-12 Science, Technology, Engineering, Computer and Information Science, and Mathematics (STEM) in-service and pre-service teachers, full-time community college faculty, and university faculty and students to enhance the scientific disciplinary knowledge and capacity of the STEM teachers and/or community college faculty through

	participation in authentic summer research experiences with engineering and computer science faculty .”
Smart and Connected Communities (S&CC)	LOI due 6 Aug. Offers planning and research grants. “Shifts in ... built and natural environments ... impact overall community culture, needs, and opportunities. A fundamental understanding of the complex, dynamic interactions between technology and society is essential for unlocking the potential benefits of smart and connected communities.” “New technologies and practices to improve decision making under uncertainty, including to evaluate and mitigate risks, associated with highly complex systems (spanning technologies, infrastructures, and the community) over the short-, medium-, and long-term”

Others not covered (some may have sunset):

- Accelerating Research through International Network-to-Network Collaborations (AccelNet). LOI due 31 Oct
- ADVANCE: Organizational Change for Gender Equity in STEM Academic Professions (ADVANCE). LOI due 1 November
- Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP)
- Critical-Zone Collaborative Network. Full proposals due 2 December
- EPSCoR opportunities
- Engineering Research Centers (ERC)
- Major Research Instrumentation Program: (MRI). Full proposals due 21 January (limited submission)
- National Science Foundation Research Traineeship (NRT) Program. LOI due 25 November (limited submission)
- Navigating the New Arctic (NNA)
- NSF Convergence Accelerator
- Partnerships for International Research and Education (PIRE)
- Research Coordination Networks
- US-Japan Big Data and Disaster Research (BDD)