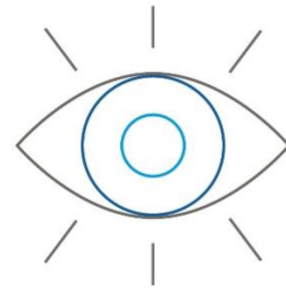


Request for Information (RFI) Visioning Event Co-Host, Virtual



Leveraging Biology to Power Engineering Impact

Visioning Event of the Engineering Research Visioning Alliance (ERVA)
March 9 and 10, 2022

Response requested by: January 24, 2022

Background

The National Science Foundation-supported [Engineering Research Visioning Alliance \(ERVA\)](#) seeks to identify event co-hosts for visioning events in support of its mission. As co-hosts, selected organizations work with ERVA staff and volunteers to create and execute visioning events that convene top researchers from various sectors and other interested parties. During these invitation-only sessions, an interdisciplinary group of experts from the public and private sectors will identify bold and transformative new and less-explored engineering research directions with the goal of catalyzing the community's pursuit of innovative, high-impact research that benefits society.

Theme: Leveraging Biology to Power Engineering Impact



The interface of biology and engineering continues to provide incredibly rich opportunities for impact as well as mutual advancement for both fields. The application of engineering principles of design and analysis to biological systems and biomedical technologies has yielded important advances for healthcare and medicine, manufacturing, agriculture, and other application areas. The field of Bioreplacements, for example, illustrates how understanding of biology can be used to inform the design of engineered components that can then be used to replace or improve biological systems. Human quality of life may be improved through restoration of sensory, motor, or cognitive functions using engineered devices or systems. Increasing interest focuses on development of wearable devices that not only monitor but also modulate human biology for enhanced health.

However, the natural world provides many sources of inspiration for engineering novel systems beyond those used to restore or augment human function. Here we group some of these approaches under the heading: *Leveraging Biology to Power Engineering Impact*.

Three general approaches through which engineering can achieve impact via leveraging knowledge and understanding of natural biological systems are identified as being of interest: Bio-inspired / Bio-informed, Repurposing Biology, and Improving on Biology. [View descriptions of these approaches.](#)

Date/Format

The event will be held virtually over two days on March 9 and 10, 2022, from 11 a.m. – 5 p.m. Eastern.



Co-Host Benefits

Co-hosting a visioning event with ERVA will bolster your organization's reputation as a thought leader in leveraging biology to power engineering and promote your organization as a driver of new ideas and collaboration. Co-hosts recommend sessions, speakers, and content of interest, as well as have the potential to deepen existing partner relationships and develop new ones.

Co-Host Value Added

Co-Hosts add value to ERVA visioning events by bringing intellectual capital at the organizational level, leveraging collaborator networks, and serving as thought partners in event planning and report development.

Co-Host Responsibilities

As a visioning event co-host, your organization will work with ERVA staff (who are responsible for overall event logistics), our [Executive Committee](#), and a Thematic Task Force (an ad hoc team of interdisciplinary domain experts assembled to guide content planning - [example](#)):

- **Facilitators/annotators.** Supply facilitators and annotators to capture discussions at general and breakout sessions.
- **Agenda development.** Provide input on an agenda that will result in actionable recommendations.
- **Participant recruitment.** Identify subject matter experts from relevant sectors (academia, companies, government, and nonprofits).
- **Welcoming remarks.** Deliver the greeting and set the tone to bring visibility to your organization.
- **Report development.** Contribute to drafting a collaborative report that reflects the current research and development environment and identifies nascent research directions ripe for engineering community exploration. This will be an ERVA community report with all participants referenced.
- **Communications dissemination.** Generate interest, including via organization communication channels and press to cover open portions of the event and distribute the report to a broad audience to catalyze action.

ERVA Role

The engineering research community is the target audience for this event. ERVA will work with the co-host and members of the Thematic Task Force to develop a high-impact program and ensure that the event delivers value to the co-host and participants. ERVA will be responsible for overall event guidance, as well as logistics such as the event website, participant invitations, and run-of-show management.

Eligibility

Eligible organizations include:

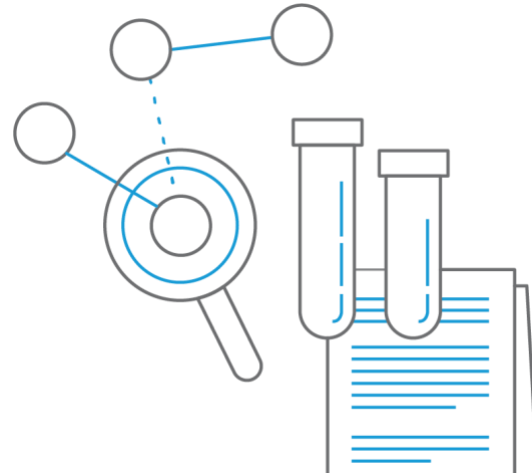
- U.S.-based colleges and universities
- Non-profit organizations such as professional associations/societies
- Companies with an operational presence in the United States
- National labs or other research institutes

ERVA seeks solutions through collaboration across different sectors by creating an environment for the engineering community to speak with one voice while addressing the nation's greatest challenges. Therefore, we encourage submissions that partner multiple organizations across or within sectors (and ERVA may later pair proposers together) to demonstrate ERVA's commitment to convergence, diversity of ideas, and inclusion.

Critical Review Elements

When considering proposals, ERVA will evaluate the proposers' ability to provide the following.

- **Expertise.** Selected organizations will possess in-depth knowledge of the visioning theme.
- **Commitment.** Staff availability during the two-day event, March 9 and 10, 2022.
- **Administrative support.** Designated annotators for each session.
- **Report contributor(s).** Recognized scholarship and demonstrated experience with similar reports.



Decisions regarding Co-Host(s) selection will be ultimately guided by ensuring the success of the visioning event.

Submission Process

In your response, please provide:

- a cover letter signed by the proposed co-host organization(s) indicating desire to co-host and confirming availability for the event on March 9 and 10, 2022 and
- responses to the critical review elements and any additional information that will assist ERVA in making a decision.

ERVA will conduct a proposer conference on January 18, 2022 from 2 p.m. – 3 p.m. Eastern to allow interested parties to ask questions regarding the co-hosting opportunity. RSVP to

info@ervacommunity.org to receive joining information or the recording, if you are unable to join.

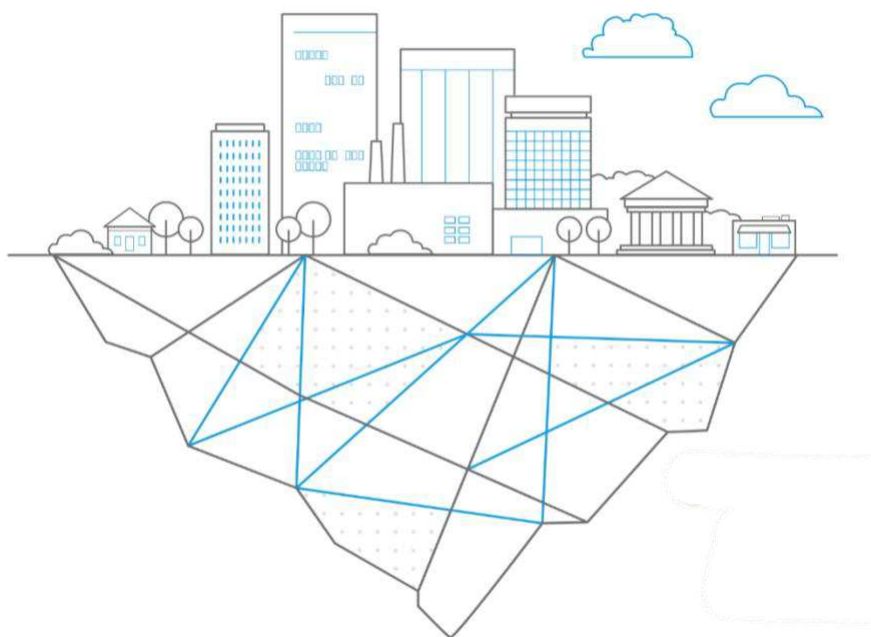
Submitters will be notified of ERVA's decision by January 31, 2022. Applications will be filed for consideration for related virtual and in-person events to be held in 2022 and beyond.

Response Requested By

Please submit responses by January 24, 2022, to receive full consideration. Send complete responses or any questions to info@ervacommunity.org.

About ERVA

[The Engineering Research Visioning Alliance \(ERVA\)](#) is a neutral convener that helps to identify and develop bold and transformative new engineering research directions, directly supporting the nation's ability to compete in a rapidly changing global economy. Funded by the National Science Foundation (NSF) Directorate for Engineering, ERVA is a diverse, inclusive and engaged partnership that enables an array of voices to impact national research priorities. The five-year initiative convenes, catalyzes and empowers the engineering community to identify nascent opportunities and priorities for engineering-led innovative, high-impact, cross-domain, fundamental research that addresses national, global and societal needs.



Good Faith Statement

All information provided by ERVA is offered in good faith. Specific items are subject to change based on business circumstances. ERVA does not guarantee that any item is without error. ERVA will not be held responsible or liable for use of this information or for any claims asserted therefrom.



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