

Special Notice (SN) DARPA-SN-25-09
Quantum Sensing of Neutrinos (QuSeN)
Proposers Day
November 12, 2024

The Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is sponsoring a Proposers Day (virtual) to provide information to potential proposers on the objectives of an anticipated Broad Agency Announcement (BAA) for the Quantum Sensing of Neutrinos (QuSeN) program. The Proposers Day will be held virtually, via live webcast, on **November 12, 2024, from 11:00 a.m. to 5:00 p.m.** (Eastern Time). Advance registration is required for participation in the webcast. Note that all times listed in this announcement and on the registration website are Eastern Time.

The goals of the QuSeN Proposers Day are to: (1) introduce the research community (industry, academia, and government) to the QuSeN program vision and goals; (2) explain the mechanics of a DARPA program and the milestones and metrics of this effort; and (3) encourage and promote teaming arrangements among potential organizations that have the relevant expertise, facilities, and capabilities for executing a research and development program responsive to the QuSeN program goals.

DARPA anticipates releasing the QuSeN BAA in late October or early November 2024. If released, the BAA will be available on <https://sam.gov/> and <http://www.grants.gov/>. Following Proposers Day, DARPA may post the presented materials and the list of Frequently Asked Questions (FAQ) to the DARPA Opportunities page on darpa.mil.

To maximize the pool of innovative proposal concepts, DARPA strongly encourages participation by nontraditional proposers (including small businesses, academic and research institutions, and first-time government contractors) in events such as this and any subsequent solicitation.

PROGRAM OBJECTIVE AND DESCRIPTION

The Quantum Sensing of Neutrinos (QuSeN) program aims to develop neutrino detectors with greatly increased performance for detection of neutrinos from sources such as nuclear reactors and nuclear materials. Detectors will make use of neutrino-matter interactions that produce relatively low-energy nuclear recoils and athermal phonons in absorber materials with high neutron numbers at the (multi)-kilogram scale. Potential approaches to measuring small energy transfers could use emerging concepts from quantum computing devices and quantum sensors. These technologies can potentially measure small energy transfer signals from athermal phonons produced by coherent elastic neutrino-nucleus scattering (CEvNS).

TEAMING

Teaming is optional. DARPA highly encourages any teaming before proposal submission and can help facilitate the formation of teams with the necessary expertise. For teams, we anticipate that there will be one prime performer on each award who will coordinate team members and subcontracts.

Potential proposers may choose to participate in the Proposers Day in either, none, or both of the following options:

1. Attendee List (limited distribution): Participant contact information (name, organization, email address) will be distributed to all other QuSeN Proposers Day attendees. The registration website will ask registrants to indicate whether they approve distribution of their contact information.
2. Proposer Profile List (limited distribution): Interested parties will submit a one-page profile consisting of their contact information (name, organization, email, telephone number, mailing address, and, if applicable, organization website), a brief description of their technical competencies, and, if applicable, their desired expertise from other teams/organizations. All profiles must be emailed to QuSeN@darpa.mil no later than **4:00 p.m. on November 15, 2024**. Following the deadline, the consolidated teaming profiles will be sent via email to the proposers who submitted a valid profile. Specific content, communications, networking, and team formation are the sole responsibility of the participants. Neither DARPA nor the Department of Defense (DoD) endorses the information and organizations contained in the consolidated teaming profile document, nor does DARPA or DoD exercise any responsibility for improper dissemination of the teaming profiles.

LIGHTNING TALKS

Attendees may be afforded the opportunity to give a Lightning Talk (a 5-minute oral presentation) during the webcast outlining their interests and capabilities. The purpose of these presentations is to facilitate teaming discussions among the attendees. Upon registering, attendees may indicate if they would like to give a Lightning Talk. Due to limited availability, DARPA will accept submissions on a first-come, first-served, and space-available basis and does not guarantee that an attendee's requests to brief will be fulfilled. Submitted briefing materials should use the template provided via the registration website and are limited to a single, PDF-format slide, which should be appropriate for public release, as they will be shared with the session via webcast. The slide must be submitted to QuSeN@darpa.mil by **4:00 p.m. on November 5, 2024**. DARPA will contact submitters upon receipt of their slide with additional guidance for the webcast.

SIDEBARS

There will be an opportunity to meet individually with the Program Manager, Thomas Schenkel. Eight-minute, individual, virtual meetings will be held during Proposers Day between about **2:30 p.m. and 5:00 p.m.** Please request an individual/team session via the registration website. Requests must be received no later than the registration dead-line date. Individual meetings will be scheduled on a first-come, first-served, and space-available basis and limited to two (2) people per institution.

REGISTRATION INFORMATION

The QuSeN Proposers Day will be webcast on **November 12, 2024, from 11:00 a.m. to 5:00 p.m.** There is no registration fee for the Proposers Day webcast.

Registration opens: As of publication of this announcement.

Registration website: <https://events.sa-meetings.com/QuSeNProposersDay>

Registration closes: **November 7, 2024, at 4:00 p.m.** or when capacity is reached.

Advance registration via the above website is required to receive access to the webcast and is mandatory for every individual intending to view the webcast alone or as part of a group.

Registrants in excess of the maximum capacity limitations may be added to a waitlist. Individuals who are unable to register because the deadline has passed may request to be added to the waitlist. If slots become available due to cancellations, the slots may be filled on a first- come, first-served basis from the waitlist.

ELIGIBILITY

DARPA hosts Proposers Days to: (1) promote teaming arrangements between researchers; (2) provide potential proposers with information on whether and how they might respond to the government's research and development solicitations; and (3) increase efficiency in proposal preparation and evaluation. Therefore, Proposers Days are only open to registered potential proposers, i.e., the events are closed to the general public and media. For this program, Proposers Day registration is open to potential proposers who are U.S. citizens, U.S. permanent residents, and foreign nationals.

All registrants who are not U.S. citizens must complete and submit either a DARPA Form 60 (U.S. Permanent Resident and Foreign National Visit Request – for industry or academia) or an Official Visit Request (for foreign government personnel only) through their embassy based in Washington, DC, no later than **4:00 p.m. on November 5, 2024**. Form 60 submission instructions are provided on the registration website and in the registration confirmation email. Contact your Embassy staff for assistance in submitting the Official Visit Request.

Q & As

Administrative, technical, and contractual questions about the QuSeN should be emailed to QuSeN@darpa.mil. All questions must be in English and must include the name and email address of a point of contact. Following Proposers Day, DARPA may post an FAQ list on the DARPA/DSO Opportunities website.

CONTACT INFORMATION

Please refer to the QuSeN Proposers Day in all correspondence.

- Technical Point of Contact: Thomas Schenkel, Program Manager, QuSeN@darpa.mil
- Registration Website: <https://events.sa-meetings.com/QuSeNProposersDay>
- DARPA/DSO Opportunities Website: <https://www.darpa.mil/work-with-us/opportunities>

DISCLAIMERS AND IMPORTANT NOTES

Viewing the QuSeN Proposers Day webcast is voluntary and is not required to propose to the anticipated QuSeN BAA. Interested parties to this notice are cautioned that nothing herein obligates the Government to issue a solicitation. The Proposers Day does not constitute a formal solicitation for proposals or abstracts. This announcement is issued solely for information and program planning purposes and is not a Request for Information (RFI). Since this is not an RFI, the Government will not accept submissions against this notice, with the exception of the one-page profile referenced in the Teaming section above and briefing materials associated with Lightning Talks. No classified, International Traffic in Arms Regulations (ITAR) controlled, or proprietary information shall be presented by the Government at Proposers Day. Inclusion of proprietary information during sidebars or Lightning Talks is at the presenter's discretion; however, any submitted Lightning Talk presentation slides should be appropriate for public release. DARPA will not provide reimbursement for costs incurred to participate in this Proposers Day. Recording of the

Proposers Day webcast is not permitted.

For those new to DARPA or national security, DARPA makes available a free, comprehensive resource via DARPAConnect on how to do business with the agency. In addition to DARPA 101 materials, relevant preparatory modules include “Making the Most of a Proposers Day” and “Understanding DARPA Broad Agency Announcements.” Registration and access are free at www.darpaconnect.us.