

**Los Alamos National Laboratory
Information Science and Technology
Institute (ISTI)
FY2021 Call for Proposals**

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Institutional Program Development

November 2020

LA-UR-22-20008

ISTI Information Science
& Technology Institute

1 Introduction

The Information Science and Technology Institute (ISTI) at Los Alamos National Laboratory (LANL) is one of the Science Institutes in the Lab's National Science Education Center (NSEC). It covers three science disciplines:

- Computer and Computational Science
- Computing Platforms (including Quantum and Novel Computing)
- Data Science and Artificial Intelligence

1.1 ISTI Strategy

As one of the six strategic centers organized under the NSEC, ISTI is chartered to foster high quality research efforts, specialized recruiting, and strategy development within its assigned scientific discipline areas. The main purpose of strategic centers is to:

1. Focus, Laboratory-wide, on strategically important areas of science, engineering, or technology that span areas of expertise beyond that residing in any single management structure,
2. Provide external visibility and collaboration in strategic areas of need that require a single Laboratory voice,
3. Provide education of present and future scientists and engineers that are required to maintain LANL competency,
4. Help with recruitment or retention of technical talent.

A key part of fulfilling ISTI's role is offering this call for proposals that supports institutional program development opportunities for postdocs and staff.

2 Strategic Focus Area

The ISTI strategic focus areas for this call include all focus areas that are part of the ISTI scientific disciplines including: 1) Computer and Computational Science, 2) Computing Platforms (including Quantum and Novel Computing) and 3) Data Science and Artificial Intelligence.

3 Program Elements

The current program element offered in this call is:

Program Element	Selection Period per year	Submissions Due	Document section that describes the program and how to apply
Institutional Program Development (IPD)	2	December 18 and April 15	ISTI IPD 3.1

The proposal description below lists the typical maximum budget and the anticipated number of awards that can be made. Proposals requesting less than the maximum budget will have a competitive advantage. Each proposal will clearly identify a single principal investigator (PI) who is responsible for the proposed project. Co-principal investigators and co-investigators are allowed but responsibility for the proposal rests with the PI. These proposals are funded through indirect funding. Therefore, no research work should be performed with these funds.

At each selection date, proposals will be divided into three categories:

1. Fund Now – these will go forward immediately.
2. Defer – these will remain to be considered again at the next selection date together with any new proposals received.
3. Do not fund – proposal is denied and can only be submitted again after a significant re-write.

3.1 Institutional Program Development

ISTI Institutional Program Development	
Description	
<p>ISTI solicits proposals to support activities such as:</p> <ul style="list-style-type: none"> ● Proposal writing, white paper idea development, literature searches, small equipment purchases, and collaborative visits. ● Training and classes in relevant ISTI areas. This could be for both internal or external classes, online or in person for interested staff, postdocs, and students at the Laboratory. ● Technology assessment proposals including activities performed to evaluate and assess the applicability of capabilities and existing technologies for institutional or multi-program use. <ul style="list-style-type: none"> ● Examples include: 1) Analysis of practicality of a new technology, 2) Assessing capabilities of existing technology, including reuse in new applications or at extended scales, 3) Demonstrations where the cost and benefits of a technology are being validated for a specific use case. No research can be undertaken in these projects as the objective is to demonstrate performance for existing technologies, not to develop new technologies. 	
Funding guidance	Funding maximums are \$20K for a 2-month study and \$40K for a 4-month study.
Project length	2 or 4 months
Who can apply?	LANL Technical Staff Members, LANL Postdocs
Submission Guidelines	To submit, send your proposal via email to: istisupport@lanl.gov . Please indicate "ISTI Institutional Program Development" in the subject line.
Anticipated number of awards	2-4, depending on available funding
Requirements	
<p>The work needs to support one of the ISTI scientific disciplines. The IPD element is funded out of the ISTI indirect portfolio and cannot be used to support technical research work. ISTI will organize an ISTI workshop for presentations from all funded project PIs. A short report and presentation will be sent to ISTI before the workshop. In addition, the PI will provide ISTI with project metrics as requested.</p>	

Cover Sheet

A cover sheet that includes the ISTI program element name, the PI's name, the PI's group, any additional project personnel, the title of the project, the ISTI area supported, a 100-word project abstract, the amount requested, and the project length.

Proposal format

Use the following formatting suggestions for the main body; please limit to two total pages of text and figures plus one-page biographical sketches:

- Statement of problem to be addressed;
- Approach: Statement of work including expected outcomes;
- Relevance: Significance and timeliness;
- Which targeted funding opportunity does this work support;
- Short budget justification. PEM sheets not required.

4 Proposal Process

4.1 Review Criteria

All new proposals undergo peer review. There is one review panel for all ISTI program elements consisting of LANL IS&T experts which is augmented by external review members of subject matter experts primarily from academia when needed.

For Institutional Program Development proposals, we use the criteria as listed in Table 1 below, using a 1-5 scale for ranking.

1 to 5 Scale	Overall	Application / Impact on Mission	Approach
5	Excellent with at most minor strategic weaknesses, deserves highest priority for support.	Potential for high impact on mission, targets an important opportunity.	Clear and well-designed demonstration approach.
3	Very good proposal with important objectives.	Potential impact clear but limited.	Approach may be somewhat unclear or of incompatible scope.
1	Lacking in one or more critical aspects. Approach not feasible or impact lacking, rendering the proposal uninteresting.		

Table 1: ISTI Institutional Program Element review criteria

For the proposals solicited through this call In particular, reviewers are asked to judge proposals on these additional points specific to ISTI:

- The proposal must show mission relevance and relevance to ISTI goals.
- ISTI programs are intended to be innovative and risk tolerant. Proposals clearly need to address a new and innovative aspect, and while high risk is tolerated, the proposal needs to clearly outline these risks.
- ISTI programs support NSEC’s goals of growing university interactions, educating present and future scientists and engineers, and to help with recruitment or retention of technical talent.

In preparing proposals, PIs should be aware of these factors that contribute to successful proposals:

- Proposals that are genuinely new, innovative, and not incremental.
- Willingness for risk – even the answer “now we know we can’t do it this way” is a successful outcome.
- Great university interaction as evidenced by significant student interaction with LANL employees and significant PI interactions with the university personnel.
- Good use of unique LANL facilities.

4.1.1 Conflict of Interest

ISTI is committed to a fair review process and will adopt guidelines similar to those used in the Laboratory’s LDRD proposal review process. In addition:

1. The ISTI Director and Focus leads are not allowed to submit or be PI of ISTI proposals.
2. ISTI Advisory Committee Members may not be external reviewers if their institution is a university partner on any of the ISTI proposals.
3. LANL reviewers may not be PIs or Co-PIs on proposals they review.

4.1.2 Written Proposal Feedback

All ISTI proposals will receive short written email feedback within a few weeks of review. Unsuccessful PIs are encouraged to discuss their proposal with ISTI management and their line management to develop strategies that can lead to a successful future ISTI submission.

4.2 Budget Caveats

ISTI will make every effort to honor the budget requests in the original proposal. However, ISTI is dependent on budget resources that at most are known for the current fiscal year only. Thus, ISTI project funding will always be subject to available funding to the Institute.

New or renewal proposal awards will always be subject to some uncertainty on the available funding. This can lead to awards with a reduced budget, or in the worst-case, award cancellation. ISTI will inform awardees of the final proposal budget as soon as the next year’s budget is known, typically within a few weeks of the start of the fiscal year.

ISTI assumes that the proposal cost is accurate and when a project is approved for funding. ISTI expects the out-year budgets to be as originally proposed and approved. Requests for changes in funding must be well justified and will be considered on a case-by-case basis.

4.3 Miscellanea

4.3.1 Authority to start work

Because all ISTI funding is dispersed at LANL, any work by a LANL PI or postdoc can only start once a valid program code has been established for the project. University student visits cannot commence before that time.

4.3.2 Policy regarding prejudice and bias

There is no prejudice based on race, gender, or nationality, for PI's, postdocs, and students.

4.3.3 Further information

ISTI website: ISTI.lanl.gov

ISTI general email: istisupport@lanl.gov (preferred)

To submit, send your proposal via email to istisupport@lanl.gov.

James Ahrens, ISTI Director, ahrens@lanl.gov, 505-667-5797