



ESIP Lab Spring 2018 Request for Proposals

Innovative Projects in Earth Sciences Technology

Deadline for Project Proposals: May 30, 2018

Purpose and Background

Through this Request for Proposals (RFP), the Earth Science Information Partners (ESIP) Lab will provide seed funding for incubator-style projects. Incubator projects run 6-8 months and lie in the realm of good ideas ready to be tried out.

We have identified the following topics as emergent areas of need in the Earth science community, and for this RFP, project proposals that address these areas will be given priority.

- Proof-of-concept for emerging technologies slated for operational use.
- Modernization of Earth science workflows using open source, machine learning and cloud computing.
- Data provenance to advance data-driven decision making.

Although this RFP will give priority to proposals addressing the bulleted topics above, other high-quality proposals will also be given consideration, including:

- Open Geospatial Consortium (OGC) Testbed ideas: github.com/engeospatial/ideas/issues
- Projects expanding Science Gateways Community Institute Bootcamp outcomes

Intent

This RFP seeks innovative ideas for high-risk, high-reward projects and/or seed funding necessary to demonstrate proof of concept before applying for larger grants. Projects could address any aspect of Earth Science cyber-infrastructure that fall within the scope of the priority research topic areas identified above. Knowledge derived from these studies should inform further technology development or science questions. Special consideration will be given to proposals that are not otherwise fundable through traditional sources.

Award Amount

Up to \$30,000 in grants will be awarded. A typical budget for a project supported by this mechanism is expected to be limited to \$7,000. However, larger budgets will be considered with the firm limit that costs may not exceed \$10,000. Multiple projects will be selected for funding. With the goal of making awards to as many of the highest rated proposals as possible, special attention will be given to projects that demonstrate efficiency and economy of resources to pursue the research proposed. Projects must be completed no later than January 2019.

No part of this award can be attributed to indirect costs. ESIP is not able to pay salary directly, rather any 'salary' line-items should be broken down as deliverables, e.g. complete data-ingest pipeline - \$1000.

Eligibility

1. Qualified individuals from ESIP Member institutions and organizations (see full list of member organizations here: <http://esipfed.org/esip-member-list>). 2. A team of individuals with at least one member affiliated with an ESIP Member institutions or organization. If you have eligibility questions, *please* contact lab@esipfed.org.

Civil servants are restricted from receiving ESIP funds. The Principal Investigator has not been funded through the ESIP Lab in the past year.

General Selection Criteria

Proposals for projects reviewed by the ESIP Lab will be judged on several criteria based on scientific and technical merit. An application does not need to be equally strong in all categories to be judged likely to have impact.

1. Overall Impact: Likelihood for the project to lead to significant follow-on funding or initiate a new research direction that will eventually have a powerful influence on the field of Earth science.
2. Significance/Importance: Does the project address an important problem or a critical barrier to progress in the field? If the aims of the project are achieved, how will scientific knowledge and technical capability be improved? The application MUST address clearly what the expected end-product is and how the product will be used for follow-on funding or initiate a new research direction that will benefit the broader Earth science community.
3. Practical Application: Are project outcomes scalable?
4. Approach: Is the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented?
5. Innovation: Does the application challenge and seek to shift current scientific/technological paradigms by utilizing novel approaches?
6. Investigator: Are the PI/co-PIs, collaborators, and other researchers well suited to the project? Is the project collaborative between institutions and/or agencies?
7. Overall Research Plan: Does the proposal demonstrate understanding of the project's goals? Does the proposal identify appropriate research questions to be answered? Does the proposal describe a sound technical approach? Is the project design and methodology feasible?
8. Budget: Does the budget reflect appropriate use of resources to complete the project in a timeline consistent with what has been outlined in the proposal?

How to Apply

Please use the following template: <https://goo.gl/NzMWMs>. Proposal should be fewer than 4 pages total.

Proposals may be submitted up to May 30, 2018 and reviewed thereafter. ESIP will alert awardees by June. 15.

Other

Cloud Servers

If you need a location to host your project for development, testing, and/or user feedback, the Lab can provide cloud server instances for you to use. Include in your proposal a plan for how you will use the cloud server and what it contributes to your project. The cloud instance can remain up for the initial project timeframe, but plans should be made to migrate your project to another environment after the duration of your project in keeping with project life cycle expectations.

Your proposed budget should include estimated costs and duration for running the cloud server instance, what type of cloud resource you need and the plan for user feedback and access of the resource.

Reporting Requirements

Projects chosen for award will be expected to do the following:

- Create a page under the ESIP GitHub organizational (<https://github.com/orgs/ESIPFed>) account that includes a project overview, timeline and goals. Upon project completion the results and any code and/or a snapshot of the

cloud (e.g. Azure or Amazon) instance should also be included in the page. This page will be your final report, so upon project completion is should provide all pertinent information. All project pages and associated code should include a Creative Commons or other permissive license.

- You will be asked to present your project progress on a telecon at its halfway point, and also upon its completion.
- Presentations/Posters at an ESIP meeting within one year of project completion.

Submission

Applications should be submitted electronically as a single PDF to lab@esipfed.org. For questions regarding ESIP Lab incubator awards, please contact Annie Burgess, ESIP Lab Director, by email at annieburgess@esipfed.org or by phone at 585-738-7549.

Earth Science Information Partners (ESIP) is a non-profit, volunteer and community-driven organization that advances the use of Earth science data through meetings and virtual collaborations. ESIP is funded by NASA, NOAA and USGS and supported by 110+ member organizations.