PEER Request for Proposal (RFP): Solicitation TSRP-PEER 22-02

Introduction

The Pacific Earthquake Engineering Research (PEER) is a multi-campus center that has continuing funding from the State of California related to the seismic performance of transportation and related systems. This funding supports the Transportation Systems Research Program (TSRP), the purpose of which is to lessen the impacts of earthquakes and other natural hazards on the transportation systems of California, including highways and bridges, port facilities, high-speed rail, airports, and other related systems.

Funding from the TSRP supports transportation-related research that uses and extends PEER's performance-based engineering (PBE) methodologies, and integrates fundamental knowledge, enabling technologies and systems. The program also aims to integrate seismological, geotechnical, structural, hydrodynamic, and socio-economical aspects of earthquake engineering, and involve theoretical, computational, experimental, and field investigations. The program encourages vigorous interactions between practitioners and researchers.

The PEER TSRP is coordinated by PEER Research Committee (PEER-RC). Proposals will be reviewed by external reviewers, who will be determined by this committee, among experts who have not submitted proposals to this solicitation and have no conflict of interest.

Requested Proposals

The PEER-RC is soliciting **proposals focusing on testbeds that will guide the PEER TSRP research in the coming years.** Funding will be provided to selected proposals for a duration of up to one year to plan, organize and coordinate the elements of their testbed (main theme, sub-themes, thrust areas, potential contributors, etc.). The testbed planning developed by each funded PI will be presented in the PEER Researcher's forum, the PEER Annual meeting, and similar events for PEER community to provide feedback to the PI's team. Based on the input of the broader PEER community, PEER Research Committee, and the PEER Headquarters, one or two testbeds will be considered as the main theme of RFPs in the coming years. Each testbed planning proposal is limited to a maximum budget of **$20,000**.

All testbed proposals must meet the following requirements:
1. Be led by investigators from the PEER core institutions[1]. *PEER Business and Industry Partners* (*BIPs*) interested in this solicitation are strongly encouraged to collaborate with the researchers at PEER's core institutions and submit a joint proposal.
2. Each investigator is limited to be the PI or the co-PI on **one** proposal only.
3. Proposed testbeds should facilitate collaboration between different research groups to reach a common goal of reducing the impacts of natural hazards on transportation networks and/or components.
4. Proposed testbeds should target the solution of real-world problems with multiple challenges that cannot be solved by individual PIs with specific domain expertise, and should increase PEER's impact on the city, state, and federal levels in solving these problems.

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[1]PEER core institutions are UC Berkeley, Caltech, OSU, Stanford, UC Davis, UCI, UCLA, UCSD, UNR, USC, and UW.

5. Testbed proposals may focus on large strategic thrusts in new areas spanning over a long term, or on tactical thrusts related to unsolved problems in known areas with shorter term goals.
6. Proposed testbeds should benefit from a diverse range of expertise and experience.
7. PIs may organize and benefit from workshops for the planning of their testbeds.

Investigators must commit to:
1. Working as part of the overall TSRP team, sharing information, data, models, outcomes, and ideas needed for other projects;
2. Attending at least two meetings per each year of funding: the PEER Annual Meeting and the PEER Researchers' Workshop (usually held in summer);
3. Submitting a brief scope of the proposed workshop as an announcement at the beginning of the project for distribution to the PEER community; and
4. Writing a PEER report documenting the outcomes of the workshop.

Testbed planning proposals will be evaluated based on the primary criteria of technical merit and broader impact. Further, proposals with matching funding will be viewed favorably. In addition to the above considerations, projects will be selected to result in a diversity of specialization. These testbed planning proposals are limited to a budget of **$20,000**. All proposed testbed planning workshops will be subject to final approval by the PEER Director.

A list of the current and past TSRP projects is posted on the PEER website at:
https://peer.berkeley.edu/research/transportation-systems/projects.

Proposal Submission Instructions

Format
Submit proposals online at https://peer.berkeley.edu/research/transportation-systems/request-proposals. Proposals should be submitted using the form found in the above site. Uploaded attachment may be a Word document or PDF (.doc or .docx or .pdf) and shall include the following:
▪ a three-page project description,
▪ a two-page biographical sketch of the PI(s),
▪ a one-page summary of results & impact from past PEER projects (applicable only for PIs with completed or continuing PEER projects with from TSRP or PEER-Bridge funding), and
▪ a one-page draft budget.

Filename of the attachment should follow the format:
    "<Last name>_Testbed_RFP2022_<optional title less than 50 characters>"

For example,
    "Lastname_Testbed_RFP2022_Hybrid simulation.pdf" or
    "Lastname_Testbed_RFP2022.docx"

Budget
All proposed work should be completed within a period less than or equal to **one year**. Budgets should be limited to:
1. maximum of quarter of a month of summer support (or its equivalent) for the PI,

2. one graduate student researcher or postdoctoral fellow,
3. event venue & meal expenses, in case of an in-person workshop included for testbed planning,
4. speakers' travel support, in case of in-person workshop,
5. travel to two PEER coordination meetings by the PI, and
6. other reasonable expenses, as approved by the PEER-HQ.

It is expected that proposing institutions will waive indirect costs, as is the practice for the University of California institutions. Final budgets with campus Sponsored Project Office (SPO) approval can be prepared after the initial selection of successful proposals, and any negotiated agreement on the scope and budget.

To meet the needs of the TSRP program, PEER-HQ may approach proposers to negotiate possible revisions to the scope and budget to better fit the program goals.

Important Dates
The **key dates** for responding to Solicitation PEER 22-01 are:
31 January 2023: submitting questions to peer_center@berkeley.edu
28 February 2023: proposal submission deadline
31 March 2023: completion of the review process of all proposals
01 August 2023: project start date