Request for Proposals for Research Projects #1

UH Pacific Southwest Region 9 University Transportation Center

https://www.metrans.org/psr-utc

RFP Issued: June 16, 2017

Proposals Due: July 14, 2017

Principal Investigator:

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Table of Contents

Introduction

The Pacific Southwest Region University Transportation Center (PSR) is the Regional UTC for U.S. Region 9 (California, Arizona, Nevada, Hawaii, and the Pacific Islands). The PSR is led by University of Southern California (USC), and includes the following partners: University of Hawaii (UH), University of California, Los Angeles (UCLA), University of California, Irvine (UCI), Northern Arizona University (NAU), Pima Community College (PCC), California State University, Long Beach (CSULB), and University of California, Davis (UCD). PSR funded research is expected to result in scholarly publications and contribute to generating larger grants from other sources.

Funding for this RFP

This is the first UH PSR RFP, with the first group of grants anticipated to begin in July of 2017.

Any and all awards under this RFP will be determined by the quality and relevance to the research themes of the proposals received. Given the anticipated competition for these funds, prospective applicants should carefully consider their expertise relative to the thematic areas and topics.

The remainder of this RFP describes the eligibility requirements, research themes and topic areas, selection criteria, funding guidelines and restrictions, project requirements, and proposal instructions as well as budget instructions and sample budget sheets for the University of Hawaii. Submission instructions and a cover page are also provided.

Eligibility

Full-time and tenure track and research faculty members eligible to serve as Principal Investigators at the University of Hawaii are eligible to serve as Principal Investigators on UH PSR UTC project awards. Proposals may include multiple investigators. Proposals may also include research faculty and non-tenure track faculty from the university as Co-Principal Investigators.

Research Program Themes and Topic Areas

The geographic focus area of this call for proposals is Hawaii. Future calls may be issued for Guam, CNMI, and American Samoa. Projects should involve research beneficial to Hawaii and other Pacific island settings. Proposals should describe the methods and sources of data. Our research program is organized around four themes:

Theme 1: Coastal hazard impacts to transportation

Topic 1-1: Develop methods for assessing, mitigating and adapting roadway infrastructure to coastal hazards and threats.
This topic explores the development and application of new and innovative approaches to assess, mitigate and adapt to coastal hazards such as erosion, storms, and sea level rise.

Topic 1-2: Review and evaluate different coastal roadway protection strategies such as riprap, revetment, seawalls, and other devices for managing coastal flooding.
This topic involves evaluation of coastal roadway protection devices in terms of capital costs, maintenance, environmental impacts, and risk reduction.

Theme 2: Data integration, fusion, and visualization for transportation system risk

Topic 2-1: Identify and integrate diverse data sources for coastal transportation infrastructure risk assessment and management.
Using data fusion techniques, this topic involves the identification of both transportation and hazards data for conducting and visualizing coastal roadway flooding for risk assessment and management.

Topic 2-2: Integrate UAV, aerial imagery, and GIS data for coastal roadway planning and design.
This topic involves using UAVs (Unmanned Aerial Vehicles) and different sensors to collect and integrate data on coastal roadway conditions to support mitigation and adaptation planning in flood prone areas.

Theme 3: Criticalities and Transportation System Risks

Topic 3-1: Define, identify, and apply criteria to assess criticality of roadway networks in terms of volumes, capacity, connectivity, emergency services and other performance characteristics.
This topic identifies, develops and applies criteria to assess roadway system criticality in terms of key roadway performance indicators.

Topic 3-2: Assessing transportation system vulnerability for evacuation optimization.
This topic identifies, develops, and applies new techniques to assess transportation roadway network risks in terms of bottlenecks, choke points, and roadway closures to optimize evacuation planning and decision making.

Theme 4: Coastal Transportation System Resilience Decision-Support Tools

Topic 4-1: Benefit and cost analysis of mitigation and adaptation strategies for coastal hazard risk and impacts to roadway infrastructure.
This topic identifies, tests, and performs BCA of mitigation and adaptation strategies designed to reduce coastal hazard risks and impacts to roadway infrastructure.

Topic 4-2: Development of a primer for context sensitive design, eco-system services, and green infrastructure design alternatives for transportation infrastructure systems protection, mitigation and adaptation.
This topic involves research and development of a primer on context sensitive design, eco-system services, and green design alternatives for coastal roadway planning.

Selection Criteria for All Proposals

A review committee composed of researchers and practitioners will evaluate proposals. Proposals will be selected based on the evaluations and programmatic priorities. Proposals will compete both across and within topics. UH PSR does not guarantee all topic/theme areas will be funded or that any proposals will be funded.

Reviewers will evaluate proposals based on the following criteria:

a. Demonstrated relevance to the above research program themes
b. Quality and research significance
c. Student involvement
d. Reasonableness of budget and cost effectiveness
e. Qualifications to perform work and likelihood of successful completion
f. Match funding and potential for attracting additional grant funding
g. Prior performance on grants

Proposals that involve collaboration between partner universities, interdisciplinary proposals that cross school boundaries, as well as participation from outside organizations are encouraged.

Proposers are encouraged to communicate with members of the UH PSR Management Team in the development of research proposals. Any projects that involve data collection, access to facilities, or cooperation of a private or public entity must include a letter of participation from the entity in the proposal.

Proposers are encouraged to include undergraduate and/or graduate students in the research project if appropriate.

Match Funding
All proposals must include at minimum a one-to-one match on direct costs. For example, a proposal requesting $10,000 in direct costs, must include a match of non-federal funds equivalent to $10,000.

Project Selection
The UH PSR Review Committee will make final selections, taking into account reviewer evaluations, programmatic priorities, prior project performance, and partner recommendations. Review Committee members are allowed to submit proposals, but are not allowed to be present during deliberations and voting related to their proposals.

Funding Guidelines and Restrictions

Budgets should be conservative and cost-effective. Funding should be directed at new and original work. In some cases, UH PSR will consider continuations of prior projects that have achieved significant results and have a high potential for deployment, scholarly products or large grants. PIs may submit multiple proposals, though it is unlikely that any PI will be awarded more than one grant.

Funds should be spent in a manner that leads to publishable results in refereed journals. Faculty salary (summer and academic year), course or teaching buyouts, and student support are allowed expenses. Funding for students may cover stipends or research assistant salaries and additional costs with student travel for presentation at conferences. Fringe benefits should also be included in the budget. Budgets should only include direct costs. Limited travel for data collection and materials and supplies may be included, provided that they are essential to completing the work. International travel is not permitted.

Proposers are discouraged from budgeting for computers, equipment, support staff, outside consultants, or any salary that goes beyond the academic or summer compensation period. If these items are included in the budget, justification must be provided as to why the work cannot be completed without the expense. In no case shall UH PSR partner university employees be hired on a consulting basis.

UH PSR funded proposals will be managed through the College of Social Sciences, Department of Urban and Regional Planning (DURP). Under these awards, PI's will not have individual contracts or grants from the funding agency (USDOT). A programmatic and an administrative point-of-contact shall be assigned for each award. All communications regarding the award should be addressed to these points-of-contact.

Funding Guidelines:

1. Research project awards have a maximum of **$20,000 (direct costs)**
2. The typical project duration is one year, and budgets should reflect this. No cost extensions are allowed.
3. **Note that conservative and cost-effective budgets are strongly encouraged. UH PSR reserves all right to reduce the budgets of submitted proposals.** Projects should be budgeted to begin on July 28, 2017 and end by July 28, 2018.
4. **UH has received a subaward from the University of Southern California (USC) with a current end date of 11/30/2017. Although we have received assurances that an extension will be approved, all commitments beyond 11/30/2017 is subject to receipt of an approved no-cost extension from USC.**

Project Requirements

All research projects have the following requirements:

1. Semi-annual progress reports conforming to UH PSR guidelines;
2. A Draft Final Report, conforming to UH PSR guidelines, which must be delivered 30 days prior to the completion date of the project. The Draft Final Report is subject to peer

review. The Draft Final Report should include an executive summary, explanation, and documentation of the research project. It should be complete, original, well organized and accurate, and comply with report content and format guidelines.

3. A separate statement listing publications, presentations, and inventions resulting from the research; names of students supported along with their degree status; and a summary from the project results is to be submitted with the Draft Final Report.

4. A brief Biographical Sketch for each of the project's investigators is to be submitted with the Draft Final Report. A template for the biographical sketch will be provided with the notification of the award. At least one presentation of the funded project's research at a thematic conference or seminar organized by UH PSR should be included in the Final Report.

5. A Final Report that complies with the review comments and requirements must be delivered within 30 days after the receipt of the review comments. Draft Final and Final Reports are distributed via the PSR website, and are submitted to PSR sponsors and to various publication databases.

6. A 2 to 4 page Research Brief suitable for a general audience that summarizes the main findings of the research and its contribution to practice or policy is to be submitted with the Final Report.

7. Timely reporting of all information requested for the UH PSR Annual Report.

8. Copies of all papers submitted to journals or conferences that are based on the project's research.

9. Acknowledgement of UH PSR support in all work that results from UH PSR funding, including peer reviewed publications and conference presentations.

10. Conformance to new data management requirements imposed by DOT. These requirements are attached.

11. PI ORCID Number. PIs are directed to obtain and provide this number to the center administrator within 30 days of notification of project selection. Numbers can be obtained at https://orcid.org/register

Proposal Instructions

Research Proposal Instructions

Research should be succinct and clearly written for a mixed technical and non-technical audience. Proposals are limited to no more than 8 pages in sections 3-7. Sample budget and budget justification are included in Appendix B and C. Each proposal must include the following sections:

1. Cover page (use the form provided in Appendix A)
2. Project objectives and project abstract
3. Background and motivation for the topic to be addressed (problem to be addressed, what has been done previously, why it is important, and relevance to selected research areas)
4. Methodology (the methodology by which project objectives will be accomplished)
5. Tasks, Schedule and Deliverables (steps that will be followed in executing the methodology, and when will they be completed)

6. Description of the expected research product and contribution to practice (e.g. peer reviewed publication)
7. Qualifications (the research team's relevant skills and experience that will help ensure success)
8. Budget justification (strong justification should be provided for unusual expenses, e.g., equipment). The extent of student involvement should be clearly stated.
9. Reference list (no limit)
10. Budget (1 page)
11. Letters of participation, and match funding commitment. Letters of participation are required for any project involving data collection from private or public entities, access to private or public facilities, or cooperation of private or public entities.
12. Short bios for all investigators and a list of recent (past 5 years or less) publications and funded research projects (2 page maximum).

Proposals should demonstrate their responsiveness to UH PSR selection criteria in the appropriate sections of the proposal, according to the following guidelines:

Selection Criteria	Most Relevant Section(s)
Relevance to research theme areas	Background/Objective
Quality and research significance	Methodology/Tasks
Student Involvement	Budget Justification
Reasonableness of budget and cost effectiveness	Budget Justification
Qualifications	Qualifications
Match funding and potential for other grant funding	Budget justification, methodology/tasks
Prior performance	Prior performance

Budget Justification

The budget generally is accompanied by a budget narrative that provides a categorical justification for the budget request. Perhaps the single most important ingredient in the budget narrative is the degree to which it presents sufficient detail to enable federal reviewers to understand why certain numbers are presented and whether they truly represent need; this may assure a positive cost analysis on the part of the review committee during their proposal review process.

This particular section also may require explanations of staffing patterns, personnel loading, various benefits, and other personnel support costs, facilities and equipment utilization or acquisition, and the need for supplies and other assets. It also may serve as a place to discuss the experience/track record of a particular institution or department or even individual staff members.

Please see Appendix C for an example budget justification narrative.

Submission Instructions

Email a PDF copy (max 10 MB) of each proposal to **Eric Yamashita** at **ericyama@hawaii.edu** on or before 5:00 pm on **July 14, 2017**. Please title your PDF file as last name, first initial, university, and a number if more than one proposal is being submitted. For example, a first or single submission would be SmithJ_UH.pdf. A second submission would be SmithJ_UH2.pdf.

Note to PIs. Please do not submit more than one proposal per email. If more than one proposal is to be submitted, please send each in separate emails, noting the number of the subsequent proposal in the subject line. Proposals received later than the deadline will not be accepted. It is the responsibility of the PI to deliver the proposal by the deadline and to confirm the receipt.

One copy of the proposal will be retained and must contain all the information on the budget form. A second budget form may omit information that can be used to determine faculty salaries (e.g. months of effort). This budget will be included when the proposal is sent for review. If you submit a proposal with salary information omitted, be sure to provide one electronic copy of each budget. This should be clarified. When and how is the full budget to be submitted?

Please note that all proposals must include a budget; proposals submitted without budgets will be determined to be incomplete and be rejected.

UH PSR will reject proposals that: 1) are received after the deadline, 2) do not conform to the eligibility requirements, 3) are incomplete, or 4) do not conform to thematic requirements.

Further information

For further information, contact:

Eric Yamashita

ericyama@hawaii.edu

Appendices

Appendix A: Sample Cover Page

Title _____

Theme _____

Topic Area _____

Principal Investigator _____

Mailing Address _____

_____

E-Mail _____

Phone _____

Fax _____

Co-Principal Investigator _____

Are you submitting this proposal elsewhere, or are you currently receiving funding in the same area of this research? YES _____ NO _____

If yes, please describe circumstances and funding source

_____
_____
_____
_____

Does this proposal comply with the PSR Data Management Plan?

YES _____ NO _____

Appendix B: Sample Budget Form

PSR UTC PROJECT BUDGET			Project	Match	TOTAL
Personnel					
Salaries	Principal Investigator	Example: Dr. Smith	$11,111.00	$12,422.00	$23,533.00
	Student Assistant		$3,000.00		$3,000.00
Total Salaries			$14,111.00	$12,422.00	$26,533.00
Fringe Benefits	PI/Fringe		$258.00	$6,335.00	$6,593.00
	Student Assistant/Fringe		$20.00		$20.00
Total Fringe Benefits			$278.00	$6,335.00	$6,613.00
Total Personnel			$14,389.00	$18,757.00	$33,146.00
Materials and Supplies					
	Laboratory Supplies		$3,000.00		$3,000.00
Total Materials and Supplies			$3,000.00	$0.00	$3,000.00
Travel					
Airfare			$750.00		$750.00
Per Diem	Lodging		$450.00		$450.00
	M&IE		$138.00		$138.00
Local Transportation			$30.00		$30.00
Total Travel			$1,368.00	$0.00	$1,368.00
Other					
					$0.00
Total Other			$0.00	$0.00	$0.00
TOTAL DIRECT COSTS			$18,757.00	$18,757.00	$37,514.00

Appendix C: Sample Budget Justification

A. Personnel

Key/Senior Personnel For each PI, Co-PI, or Project Director, list name, title, amount of time to be spent on the project and what s/he will accomplish.

Example: Dr. Smith will serve as principal investigator and will commit two summer months of effort to this project. She will primarily be responsible for . . . Total salary requested for Dr. Smith is $11,111, calculated from a base academic salary of $50,000.

Other Personnel
Include Research technicians, lab managers, students—any other personnel being paid out of the grant. List name (if known), title, amount of time to be spent on the project, and what s/he will accomplish.

Example: One undergraduate student will commit 10 hours/week at $10/hour for 30 weeks, and will be responsible for . . . Total requested for Other Personnel is $3,000.

Total Salaries: $14,111.00

B. **Benefits**

Benefits must be calculated for any personnel proposed to be paid from the grant. Benefit rates for faculty, staff, and students are different. UH's rates are available here: http://www.ors.hawaii.edu/index.php/rates/102-quick-links/rates/98-fringe-benefit-rates

Example: Fringe benefits are calculated using current approved institutional rates of 2.32% for faculty overload, 11.89% for graduate assistants and .66% for students. Key/Senior personnel benefits: $11,111 x 2.32% = $257.78 /month. Student benefits: $3,000 x .66% = $20.

Total Benefits: $278.00
Total Personnel: $14,389

C. **Material and Supplies**

Explain the need for material and supplies and your calculations for the costs.

Supplies
Supplies are non-durable goods with an individual value of less than $5,000. List supplies in general categories (i.e., office supplies, lab consumables, etc.).

D. Travel

Explain the need for travel (how it will benefit the project's aims) and your calculations of travel costs. Break down by airfare, hotel, per diem, etc. Allowable hotel and per diem rates are available here: https://www.gsa.gov/portal/content/104877

E. Other Direct Costs (note: "Contractual Services" are listed as separate categories)

F. Total Direct Costs
Total from all categories above

Total Direct Costs: $18,757.00

Appendix D: Semi-Annual Progress Report Form

Prime Award:					
Subaward to:					
Subaward:					
	Start Date		**End Date**		
Cost Share Period Reporting					
				Cost Breakdown for Current Period*	
Source Category	**Cummulative**		**Current**	**Personnel Costs**	**Difference in I/C, Supplies, Travel, Misc. ****
Local Government					
Local/Tribal Technical Assistance Program					
Non-Governmental Organizations (NGO)					
Public Transportation Agencies					
State Department of Transportation					
Univerity					
Private					
Other					
Total					
				* Include indirect cost/F&A assessment when applicable	
				** includes grad student fees/tuition	
I certify that all cost share expenditures reported are for the appropriate purposes					
Certified By:					