

UTCRS – CALL FOR PROPOSALS FOR FISCAL YEAR 2024 RESEARCH GRANTS

The University Transportation Center for Railway Safety (UTCRS) aims to reduce the number of accidents and equipment failures experienced in rail transportation systems. This will result directly in reduced fatalities and injuries in addition to reduced economic losses to stakeholders. New technology and associated workforce development will lead to improved safety assessments, safety counter measures, decision-making tools, and greater long-term safety gains.

Strategic Research Goals:

The strategic research goals of the UTCRS aim to fundamentally improve railway safety outcomes by the following means:

- 1) Reducing fatalities and injuries at highway-rail grade crossings (HRGCs).
- 2) Reducing failures by developing more effective materials and systems.
- 3) Developing advanced technologies for infrastructure and rolling stock monitoring.
- 4) Developing innovative safety assessments and decision-aiding tools.
- 5) Develop advanced technologies to reduce time and complexity of rolling stock component repairs.

Research Focus Areas:

The UTCRS is issuing a call for proposals for the FY2024 Research Grants in the following general areas of:

Railway Mechanical Systems, including but not limited to:

- Performance characterization and failure mitigation.
- Condition monitoring and assessment techniques.
- New or improved rolling stock components designed for ease of maintenance to reduce expertise, tools, and time needed to repair rolling stock.

Railway Operation Systems

- Autonomous systems for grade crossing safety.
- Autonomous systems to monitor railroad right-of-way.
- Railway operations and maintenance protocols.

Railway Infrastructure Systems

- Advanced technology for infrastructure monitoring and assessment.
- Performance characterization of track components.
- New or improved infrastructure components and designs.
- Lifecycle safety and reliability assessments of railway infrastructure systems.

Eligibility:

Any faculty or principal investigator (PI) eligible staff member from the University of Texas Rio Grande Valley, Texas A&M University, the University of Nebraska Lincoln, the University of South Carolina, or the University of California-Riverside can apply to this competition. Eligible faculty and staff may participate in multiple proposals.

Selection Criteria:

The selection criteria will include:

1. Relevance to UTCRS's strategic research goals and research focus areas.
2. Responsiveness to the expressed research needs of the rail industry including railroads, rail equipment manufacturers, and regulatory agencies.
3. Technical soundness and achievability within the proposed timeframe and budget.
4. Demonstrated expertise of the principal investigator and researchers applicable to the proposed project.
5. Adequate plans for technology transfer.
6. Significant commitment to student involvement; and
7. If applicable, performance on previous US DOT UTC research projects including submission of reports and deliverables on deadline, meeting budget, and substantial accomplishment of project goals. This criterion only applies to previous US DOT UTC research participants.

Review Process:

The UTCRS review process is described below. At each level, the Selection Criteria listed above will be applied. Each level may reject proposals, suggest revisions to content or budget, or recommend consideration by the next level.

- **University Level Review:** Each consortium institution will organize an internal peer review process for proposals originating at that institution. The process will include a role for the Associate Director at that institution. Each institution will recommend a limited number of proposals for consideration by the UTCRS Executive Committee.
- **Executive Committee Review:** The UTCRS Executive Committee will review proposals recommended by each institution. In addition to the Selection Criteria, the committee will review for duplication of effort and opportunities for collaboration. A set of proposals approved by the committee will be forwarded to the UTCRS External Advisory Board.
- **External Advisory Board Review:** The UTCRS External Advisory Board will review the set of proposals recommended by the Executive Committee. Board members may choose to solicit reviews from experts within their organizations. The board may reject, approve, or request revisions on each proposal.
- After the Advisory Board review, the Director will make the final decision to fund *board approved projects only*, consistent with the center budget. If there are remaining funds, the UTCRS may issue a second call for proposals.

Proposal Preparation Guidelines:

Prior to writing a full proposal:

1. Proposers are strongly encouraged to consult with the Associate Director at their institution to discuss project alignment with UTCRS goals, realistic budget, restrictions of use of USDOT funds, and availability of matching funds.
2. Proposers should consider how they can demonstrate responsiveness to the expressed needs of the rail industry. Contacts, consultation, and collaboration with rail industry stakeholders are evidence of responsiveness.

Proposal format:

1. Proposals *must* use the 2024 UTCRS Proposal Template which is posted at the UTCRS website (<https://www.utrgv.edu/railwaysafety>) in the Research section. The template document is 2024_UTCRS_Proposal_Template.docx.
2. The order, title, position, and numbering of the sections should not be changed. If the section does not apply, keep the section and state why it is not applicable.
3. The text within each section should be Arial 11-pt, 1.5 line spacing.
4. Each section has a word or page limit given.

Proposal submission:

1. The final proposal should be converted to PDF format and named using the university of the lead PI, short title, the PI last name, and the year 2024. For example:

UCR_Track_Defect_Detection_Smith_2024.pdf

2. Both the WORD and PDF versions of the proposals should be submitted using the same exact file name.
3. Proposals should be submitted by e-mail to railwaysafety@utrgv.edu no later than the submission deadline. The e-mail subject line should be:

2024 UTCRS Research Proposal Submission

Submission Deadlines:

The submission deadline is 11:59pm (CST) on February 28, 2024. Please allow up to three full months from the submission deadline for the review process to be completed. All award notifications will be made as promptly as possible.