Student Paper Competition: SHRP 2 Safety Data Bonanza 2017-2018

To promote use of the SHRP 2 Safety Data and to foster the next generation of leaders in surface transportation

Call for Abstracts

Transportation Research Board (TRB)
Oversight Committee for Use and Oversight of SHRP 2 Safety Data, Phase 1 (FA014)

The Student Paper Competition : SHRP 2 Safety Data Bonanza is looking for innovative ideas for using the SHRP 2 Safety Data. Master’s and doctoral students are asked to propose how they would use the Naturalistic Driving Study data or Roadway Information Database to answer a research question. Entries are encouraged from a wide range of subjects: safety, driver behavior, roadway design, data modeling, health and beyond.

Selected students will be provided a data export to conduct their analysis and develop a research paper. Potential participants must submit an application by Sunday, October 29, 2017. TRB will notify applicants of acceptance by December 1, 2017. Those awardees will be invited to present their research at a special poster session at the Transportation Research Board 98th Annual Meeting the week of January 13 - 17, 2019 in Washington, DC. The selected students will be awarded the opportunity to write a paper for consideration of inclusion in TRB’s Transportation Research Circular. In addition, the top two paper authors will receive TRB Student Affiliate membership for one year.

See full competition rules and guidelines.
Student Paper Competition: SHRP 2 Safety Data Bonanza

The SHRP 2 Safety Data Program and the Transportation Research Board (TRB) Oversight Committee for Use and Oversight of SHRP 2 Safety Data, Phase 1 are sponsoring the second Student Paper Competition: SHRP 2 Safety Data Bonanza. This is a call for abstracts.

The Student Paper Competition solicits innovative ideas for using the SHRP 2 Naturalistic Driving Study (NDS) database and/or Roadway Information Database (RID) - together known as the SHRP 2 Safety Data. The purpose of the competition is to encourage use of the SHRP 2 Safety Data and to foster the next generation of leaders in surface transportation research.

Students are asked to propose how they would use the Safety Data to address a research question. Research topics are not restricted; Topics may be drawn from a wide range of subjects of interest to the driving and road safety research community, such as driver behavior and roadway design, as well as applications that extend beyond road safety such as data modeling, health, planning, and beyond.

The abstract proposals will be reviewed by a panel of TRB committee members. The panel will select up to 8 exemplary paper abstracts for further development. Master’s and doctoral applicants will be evaluated separately.

If selected, in order to conduct their analysis, students will be provided a data export from the NDS or the RID at no cost to the student subject to the competition restrictions* (i.e. InSight only, Dataverse, or RID). Those selected will follow the data request process and work with the NDS and RID data stewards to obtain the data. Students will conduct their analysis, write a paper, and present their results at a special poster session at the TRB 98th Annual Meeting in January 2019 in Washington, DC. Travel expenses and student registration for the Annual Meeting will be covered (one student traveler per entry). In addition, selected participants have the opportunity to submit their paper for consideration of inclusion in a special edition of TRB’s Transportation Research Circular, subject to the TRB review process. In addition the top two paper authors will receive TRB Student Affiliate membership for one year (which affords many benefits including a discount for registration at the TRB Annual Meeting, use of the TRB Library, and a subscription to TR News). Participation in the TRB Annual Meeting and potential publication are an opportunity to become engaged in one of the pre-eminent international forums for frontline transportation leaders, practitioners, and researchers.

The primary author(s) must be a student currently enrolled in a master’s or doctorate program through December 2018. Students must be sponsored by a member of faculty who will be responsible for advising the student’s work and guiding the student especially with respect to human subjects rules. The primary author(s) are permitted to work with contributing authors who are students, faculty or professors.

*The data elements that will be made available to participants are the following: InSight-only data (data available on the InSight website), the reusable datasets in the SHRP2 Naturalistic Driving Study Dataverse, and the RID. Applicants are expected to familiarize themselves with the data available in the databases by reviewing the sample data, summary data, and data dictionaries.
available on the SHRP 2 NDS InSight website (https://insight.shrp2nds.us) and the SHRP 2 RID portal (http://www.ctre.iastate.edu/shrp2-rid).

**Competition Rules & Guidelines**

**Eligibility:**
These awards will be offered only to persons who, as of August 15, 2017, are both (1) citizens or permanent residents of the United States, or have a current student visa, and (2) officially enrolled as a full-time student at an accredited North American institution of higher learning for the academic year in a course leading to a master’s or doctorate degree. Proof of both may be required. Eligibility status must be maintained through December 2018.

The paper/presentation must not have been previously accepted for publication in another journal or presentation at another conference.

**Application Format:**
Students should submit a completed application form along with their abstract and faculty sponsor letter through the online portal: https://catalyst.omnipress.com/#collection/127/submission.

Abstracts should be prepared using the attached Student Abstract Template. 1500 words maximum. Pages with 1-inch margins, single-spaced, and 10-point Arial font.

All submissions must be in English and free of grammatical errors and typos.

**Content:**
Abstracts should include discussions of the following:
- analysis topic or general area
- data variables to be used
- analysis method or methods
- potential applications of results

**Selection Criteria:**
Selection of award winners will be made by experts who are TRB Committee members. Award will be based on an evaluation of the applicants’ abstracts according to the following criteria:
- demonstrated understanding of the Safety Data;
- originality and practicality of proposed methods to analyze the Safety Data, including sample size and data accuracy considerations;
- originality and usefulness of potential applications.

**Faculty Sponsorship:**
Because of the human subjects data in the NDS dataset and IRB implications, student applicants must be sponsored by a university/college faculty member. A brief letter of support from the faculty sponsor should be included in the student’s submission of their abstract stating that they have read the abstract, verifying that the information presented is accurate, and affirming that they will be responsible for overseeing that their sponsored student follows IRB regulations. Faculty should include their full contact information in the letter.

**Application Submission:**
All applications [comprised of the (1) form, (2) abstract, and (3) faculty sponsor letter] should be submitted electronically to the application online portal beginning on August 15, 2017. The window for submission of abstracts closes at 11:59 pm PT on October 29, 2017. Questions may be directed to SHRP2@nas.edu.

**Timeline of the 2017-2018 Competition Cycle**

- Abstracts proposals due: October 29, 2017
- Decision notification of selected students: December 1, 2017
- Abstract revisions due and deadline to start data request: January 15, 2018
- Full papers due for publication review: October 1, 2018
- Comments returned from review: November 1, 2018
- Full paper revision due for final review: December 1, 2018
- Final publication decision and top two papers announced: December 15, 2018
- TRB Annual Meeting poster session: January 13-17, 2019 (exact date to be determined)

**Data Request Guidelines:**

The data elements that can be made available to participants to conduct their analyses are the following: InSight-only data (data available on the InSight website), any of the reusable datasets in the SHRP 2 Naturalistic Driving Study Dataverse, and the Roadway Information Database.

**InSight-only Data:** While all data elements in the Naturalistic Driving Study are documented on the InSight website in the data dictionaries, not all data elements across the entire database can be made available to participants. A portion of the database is available for viewing and queries on the InSight website, and these can be made available to participants for data export. Currently there are more than 5.4 million trip summary records, 4,000 crashes or near crashes, and 32,000 baseline events on InSight — sufficient data to conduct an analysis. Anything more than an InSight data export, such as a customized dataset from the larger NDS dataset, cannot be generated for student analysis at this time.

**SHRP 2 NDS Dataverse:** The Dataverse provides a searchable database of datasets developed for past projects which may be available for re-use. The Dataverse includes descriptions of the 53+ existing datasets and what data elements are included in each. These datasets can be made available to participants for data export and use in their analysis, once the necessary approvals are obtained. Datasets with personally identifying information may not be available; this must be conferred with the Safety Data Program.

**For students that choose to analyze data from the NDS:**

To gain access to individual NDS datasets and dataset records on the InSight website or Dataverse, a user must complete an application for “Qualified Researcher” status by submitting an IRB training certificate. (This training is available online via the InSight website.) Students need to complete this step in order to get access to full range of InSight data and write their abstract.

Selected students will be given the export of non-personally-identifying data from the InSight website or Dataverse only under a Data Use License, which specifies the terms under which the NDS data may be used. The student researcher will need to apply for a Data Use License, which requires proof of Institutional Review Board (IRB) approval or exemption. Please see the “Additional Terms” section for an explanation of the Data Use License and IRB process. Note that the Data Use License and IRB process will not need to be initiated until the student is selected. TRB will assist the students through this process.

**For students that choose to analyze data from the RID:**

Selected students will be given a copy of the Roadway Information Database. The student researcher will be given the RID data under a simple Terms of Service Agreement. No IRB approval
is necessary, as there is no human subjects data in this database. Please see the “Additional Terms” section for an explanation of the Terms of Service Agreement process.

Institutional Review Board (IRB):  
The NDS data accessible through the InSight website are human subjects data without personally identifying information. Students will therefore need to obtain IRB approval or exemption for their project from the student’s institutional IRB. (Note: IRB decision could take up to one month.) Proof of IRB approval or exemption is necessary to complete the application for a Data Use License.

Copyright:  
The Student Author gives TRB the first right to publish their results in the Transportation Research Circular or other TRB publication. The Author retains the ownership of the original work product.

Travel and Annual Meeting Registration:  
For selected participants, travel expenses and student registration for the TRB 98th Annual Meeting in January 2019 will be covered in accordance with TRB policies (i.e. limited to Federal per diem allowance). Only one student traveler per entry.

Additional Terms  
Data Use License Process:  
For selected students that choose to analyze data from the NDS, the following outlines the process to acquire a Data Use License for NDS data:

1. Explore InSight website (https://insight.shrp2nds.us) to become familiar with variables, data dictionaries, and available data. Explore Dataverse (https://insight.shrp2nds.us/dataverse/index) to become familiar with existing datasets.
2. Develop a detailed data specification in collaboration with data steward (Virginia Tech Transportation Institute). Contact: datasharing@vtti.vt.edu
3. Obtain IRB approval/proof of exemption (from researcher’s home institution, collaborating institution, or IRB for hire)
4. Work with data steward to develop and execute a Data Use License
5. Work with data steward to obtain specialized non-identifying dataset.

Terms of Use Agreement Process:  
For selected students that choose to analyze data from the RID, the following outlines the process to acquire a Terms of Use Agreement for RID data:

1. Download the sample RID from the website (http://www.ctre.iastate.edu/shrp2-rid) and become familiar with the available data (GIS basic experience is required): Mobile data (sample download), Existing data from states (data dictionaries on website), Supplemental data
2. Determine roadway attributes needed.
3. Initiate a discussion with data steward (Iowa State University Center for Transportation Research & Education). Contact: smadi@iastate.edu
4. Decide how to proceed: a. Receive a copy of the RID and extract your own data; or b. Work with data steward to get the required data
5. Complete the “Terms of Use Agreement.”