

08:30 – 12:30

Mon, Jun 22, 2026 @ Brule B

IEEE Intelligent Vehicles Symposium 2026

Detroit, Michigan · USA

# Trustworthy & Open Science for Intelligent Vehicles

● Datasets / ● Benchmarks / ● Testbeds

// the field's open work  
a whole spectrum of contributions

// concentrated —  
the field moves forward →

open science

// Run the prism in reverse: the field's scattered open work — **open datasets**, **transparent benchmarks**, **credible testbeds** — concentrates through shared, reproducible practice into one bright line of progress that carries the whole community forward.

**Organizers** Junyi Ji Vanderbilt · Yongqi Dong RWTH Aachen · Cameron Hickert MIT

Danjue Chen NC State · Zuduo Zheng Univ. of Queensland · Nicolas Saunier Polytechnique Montréal · Cathy Wu MIT

[rerite.org/ivs-2026](https://rerite.org/ivs-2026)

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Scan for the live program,  
speakers & materials



**RERITE**

## Organizers

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**Junyi Ji**

Vanderbilt University



**Yongqi Dong**

RWTH Aachen



**Cameron Hickert**

MIT



**Danjue Chen**

NC State University



**Zuduo Zheng**

University of Queensland



**Nicolas Saunier**

Polytechnique Montréal



**Cathy Wu**

MIT

# Program

Each panel talk = 5-min lightning talk  
Remaining time = open discussion

08:30

15 min

## Opening Remarks & Workshop Overview

Cathy Wu · Associate Professor, MIT; Chair, RERITE

08:45

15 min

## State of the Union — Open Science in Transportation

Junyi Ji · Research Engineer, Vanderbilt University

09:00

60 min

### Panel 1 · Benchmarks Moderator — Cathy Wu, MIT

*When we talk about benchmarks for intelligent vehicles, what exactly are we measuring in the first place?*

- One Hour, Decades of Experience: Self-Play RL in PufferDrive
- Dynamic Traffic Simulation Package with Multi-Resolution Modelling
- AutoTune: A Unified Benchmark for Highway Traffic Microsimulation Calibration

Daphne Cornelisse · NYU

Xuesong Zhou · ASU / Cafer Avci · Cornell

Cameron Hickert · MIT

10:15

60 min

### Panel 2 · Datasets & Testbeds Moderator — Junyi Ji, Vanderbilt

*If the AV companies already have all the data, what exactly is left for us to ask to keep the field moving?*

- Controlled Experiment on Lane-changing of Transitional Autonomous Vehicles
- CDA.AI, OPV2V, and V2X-Real Testbeds
- TeraSim-World: Safety-Critical Data Synthesis for End-to-End Driving

Danjue Chen · NC State

Jiaqi Ma · UCLA

Jiawei Wang · UMich / Haowei Sun · SaferDrive AI

11:30

30 min

## Closing Talk

Henry Liu · Director Of Mcity and Bruce D. Greenshields Collegiate Professor of Engineering, University of Michigan

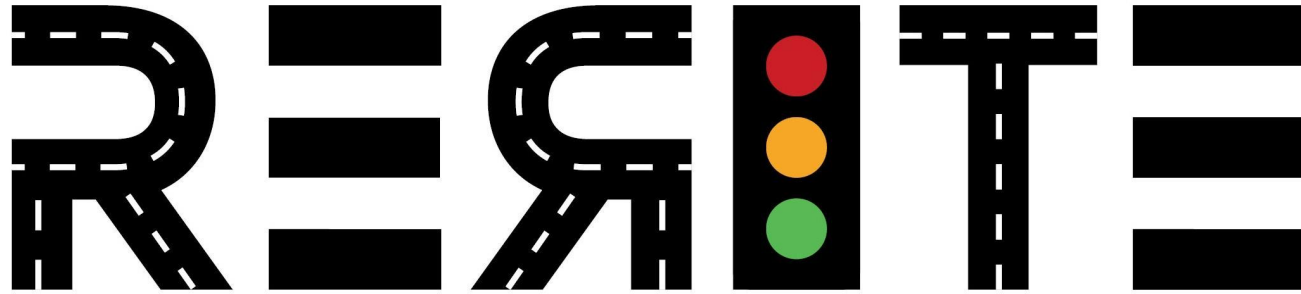
12:00

30 min

## Brainstorming — Open Questions & Fundamental Problems in Transportation

Organizers & all participants · an open-floor discussion to set the next decade's priorities

# REproducible Research In Transportation Engineering (RERITE) Working Group



Cathy Wu  
Associate Professor, MIT  
Chair, RERITE

# Steering Committee

Dr. Cathy Wu

- Chair

*Massachusetts Institute of Technology (MIT)*

Dr. Xuesong (Simon) Zhou

- Vice-Chair
- Major Event Coordinator

*Arizona State University*

Dr. Bidisha Ghosh

- Vice-Chair
- Major Event Coordinator

*Trinity College Dublin*

Dr. Silvia Francesca Varotto

- Communication Officer

*École Nationale des Travaux Publics de l'État,  
LICIT-EC07*

Dr. Bahman Madadi

- Communication Officer

*École Nationale des Travaux Publics de l'État,  
LICIT-EC07*

Zhe Fu

- Junior Researcher Engagement Officer

*University of California, Berkeley*

Dr. Michail Makridis

- Secretary

*ETH Zürich*



# State of reproducibility in transportation research

Out of 10k+ full length articles published in Transportation Research series from 2015-2025...

**5%**

of quantitative papers share a  
**code** repository [1]

**4%**

of papers that use data share  
a **data** repository [1]

Compare: **74.4%** papers share code at NeurIPS (top machine learning conference) [2]

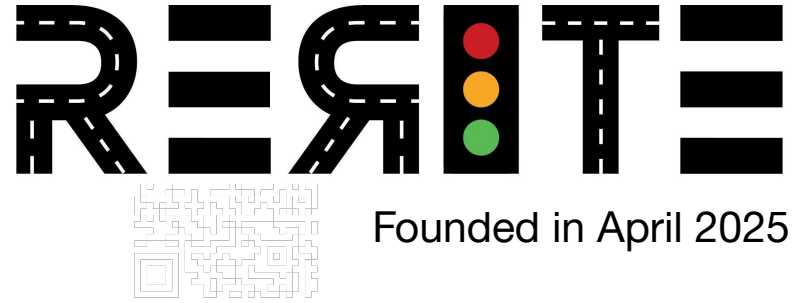
[1] J. Ji, R. Lu, et al., "Exploring Artifacts Availability in Transportation Research Using Large Language Models," International Symposium on Transportation Data & Modelling, 2025.

[2] J. Pineau et al., "Improving Reproducibility in Machine Learning Research (A Report from the NeurIPS 2019 Reproducibility Program)," Journal of Machine Learning Research, 2021.

## Challenge and opportunity

*Advancing reproducibility is possibly the **single most important action** each of us can take to improve the impact of transportation research.*

# REproducible Research In Transportation Engineering (RERITE) Working Group



Founded in April 2025

## Vision

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A transportation community where **open science, reproducible research** and **replicable studies** are the norms, advancing scientific rigour, accelerating innovation and fostering translation into practice.

## Mission

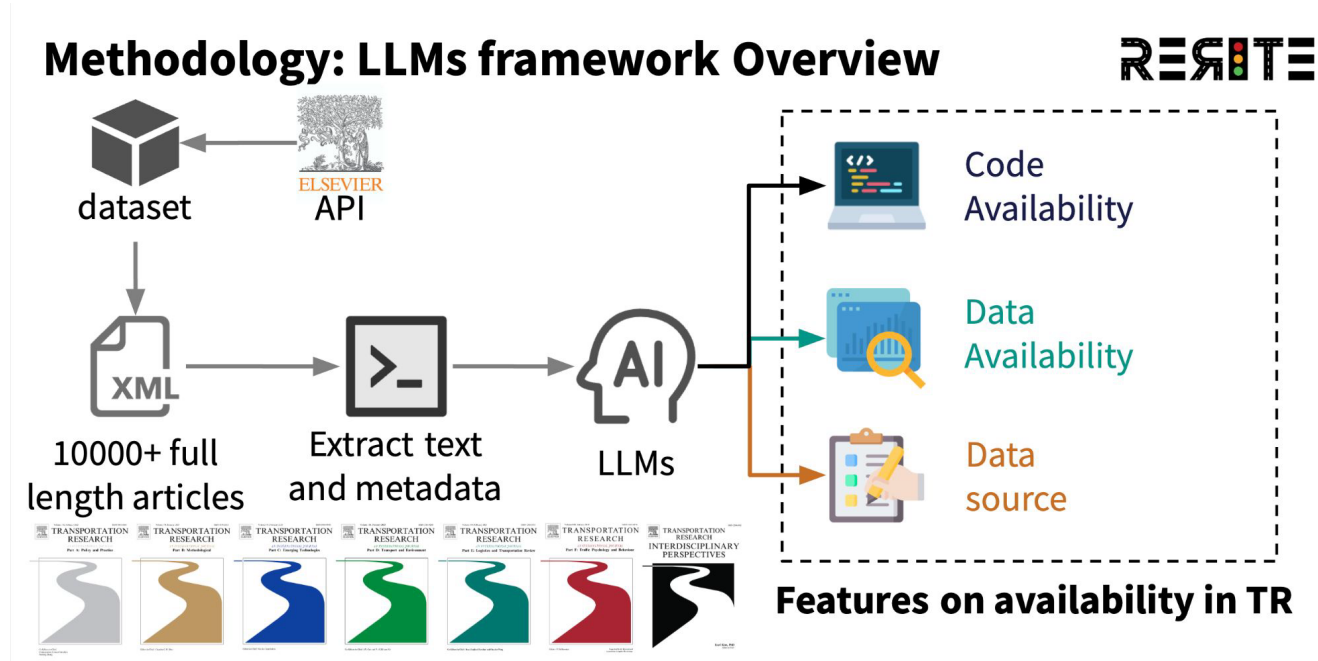
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To advance reproducible research practices in transportation engineering by promoting **open science principles**, developing **best practices**, and fostering **community engagement**.

## RERITE Perspective

***Celebrate reproducibility, while acknowledging that reproducibility is a journey not a destination.***

# Research: Measuring Open Science Practices [1]



<https://www.rerite.org/MOST/>

# Training: Tutorial Materials

RR@ITSC 2024

[Home](#) [Requirements](#) [Future Activities](#)

## Reproducibility in Transportation Research: A Hands-on Tutorial



<https://www.rerite.org/itsc24-rr-tutorial/>

### Session 1: Introduction to Reproducible Research

Speakers: Bidisha Ghosh, Zuduo Zheng; Contributor: Hoa Nguyen

#### Lecture 1: Introduction to reproducible research

Hands-on activity 1: Is your research reproducible?

### Session 2: Documentation of Data and Code for Reproducibility

Speaker: Cathy Wu, TA: Junyi Ji

#### Lecture 2: How to badly document a research project

Or not. From start to finish, create a reproducible ITS code example on Github

Testimonial (ITSC 2024): **"This is the most useful talk I have seen at ITSC."** "This week, I will cancel my group meeting, and ask my students to go through the tutorial."

# Resources: Awesome RERITE

## Traffic Dynamics and Control

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### Vehicle trajectory data

- [pNEUMA](#)
- Songdo dataset
  - [Songdo Traffic Dataset](#)
  - [Songdo Vision Dataset](#)
- [Waymo Open Dataset](#)
- [I-24 MOTION](#)
- [MiTra](#)
  - Dataset released from TU Dresden, Germany and collected in Milan, Italy by drones.
  - MiTra: A Drone-Based Trajectory Data for an All-Traffic-State Inclusive Freeway with Ramps.
- [TGSIM I-294](#)
- [Zen Traffic Data](#)
- [OpenACC](#)
- [microSIM-ACC](#)



<https://www.rerite.org/awesome-rerite>

# RERITE Initiative: Nominate Your Papers for Reproducibility Student Projects

## RERITE Initiative: Nominate Your Papers for Reproducibility Student Projects

### Form description

We invite colleagues to contribute to a new initiative aimed at enhancing transparency and reproducibility in transportation research.

Our goal is to offer Master's students the opportunity to reproduce influential papers in the field, with guidance from the original authors or experts.

If you are interested in supporting this initiative by proposing one or more papers for reproduction, please provide your details below.

### Information requested:

- Your name and email address,
- A link to your paper,
- A few keywords describing the topic,
- The reason why you suggest it,
- The availability of open data and open code,
- The type of information you can provide to facilitate reproduction.

Thank you for your collaboration in advancing reproducible and open research in transportation!



# Rewarding the Hard Work

## Reproducible Research in Transportation

### Edited by:

**Silvia Francesca Varotto**, Ph.D., LICIT-ECO7, ENTPE, Gustave Eiffel University, France

**Christine Buisson**, Ph.D., LICIT-ECO7, Gustave Eiffel University, ENTPE, France

**Zuduo Zheng**, Ph.D., University of Queensland, Australia

**Nicolas Saunier**, Ph.D., Polytechnique Montréal, Canada

**Cathy Wu**, Ph.D., Massachusetts Institute of Technology, United States

Submission Status: Closed | Submission Deadline: 30 September 2025

[European Transport Research Review](#) is calling for submissions to our Collection on "Reproducible Research in Transportation".

<https://link.springer.com/collections/dgachijbgi>

Original Paper | [Open access](#) | Published: 11 April 2025

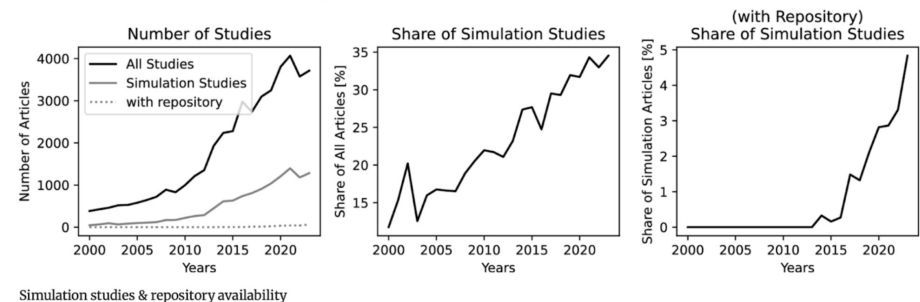
## Revisiting reproducibility in transportation simulation studies

[Kevin Riehl](#) , [Anastasios Kouvelas](#) & [Michail A. Makridis](#)

[European Transport Research Review](#) **17**, Article number: 22 (2025) | [Cite this article](#)

**1865** Accesses | **1** Citations | [Metrics](#)

### From: [Revisiting reproducibility in transportation simulation studies](#)



# Call for Interest: TR Part C / T-ITS Special Issue on Evaluations & Datasets



## Transportation Datasets & Benchmarks Needs and Wish list

In preparation for a Transportation Research: Part C Special Issue on "**Datasets and Benchmarks for Transportation Research**", please let us know your datasets and benchmarks needs and wish list.

You are welcome to fill out the form as many times as you have wishes. Please include as much context as you can; the more context you provide, the more effectively we will be able to scope and target the special issue.

Do not worry about whether someone else will submit the same topic. The more a topic is expressed as a need, the more we will prioritize it!



# Reproducible Research Prize at hEART 2026

Please indicate the **Structured Reproducibility Level (SRL)** of your submission: \*

- ☐ SRL3 Repository includes files and basic documentation (README) describing contents.
- ☐ SRL4 The repository includes files and good, reader-friendly documentation: describes contents, includes installation/execution instructions.
- ☐ SRL5 The repository contains code, data, and models (if applicable) plus extensive, reader-friendly documentation, examples from the original work (setup, figures, dynamic plots), and licensing info.



# Do you want to join the action?

All links and resources can be found at [rerite.org/ivs-2026](https://www.rerite.org/ivs-2026)



Join our mailing list, fill out our involvement survey:

<https://www.rerite.org/getinvolved.html>



Join our LinkedIn group for the latest news:

<https://www.linkedin.com/groups/10084451/>

# Links

- Tutorial Materials: <https://www.rerite.org/itsc24-rr-tutorial/>
- Awesome RERITE: <https://github.com/RRinTransportation/awesome-rerite>
- Call for nominations: Your papers for reproducibility student projects: <https://forms.gle/Yv2i3EoPYoBoPDhr8>
- European Transport Research Review: Reproducible Research in Transportation Participating: <https://link.springer.com/collections/dgachijbgi>
- Call for Interest: TR Part C / T-ITS Special Issue on Evaluations & Datasets: <https://docs.google.com/forms/d/1prVvMwnGHrNPmuouOph2OgTh0ea2pfXL-K3uF3RIRWY/viewform>
- Reproducible Research Prize at hEART 2026: [https://docs.google.com/forms/d/e/1FAIpQLSfdwuXdMT3k8yTh\\_oGjBY0hZsVnxt-GwO4m2Gn3WvnbKnxXPQ/viewform](https://docs.google.com/forms/d/e/1FAIpQLSfdwuXdMT3k8yTh_oGjBY0hZsVnxt-GwO4m2Gn3WvnbKnxXPQ/viewform)