

# Collaborative research: SaTC: Core: Small: Privacy protection of Vehicles location in Spatial Crowdsourcing under realistic adversarial models



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## Challenges:

- How to consider vehicles' mobility features in obfuscation?
- How to protect against inference attacks using vehicles' mobility features?
- How to consider personalized privacy criteria given vehicle's distribution?

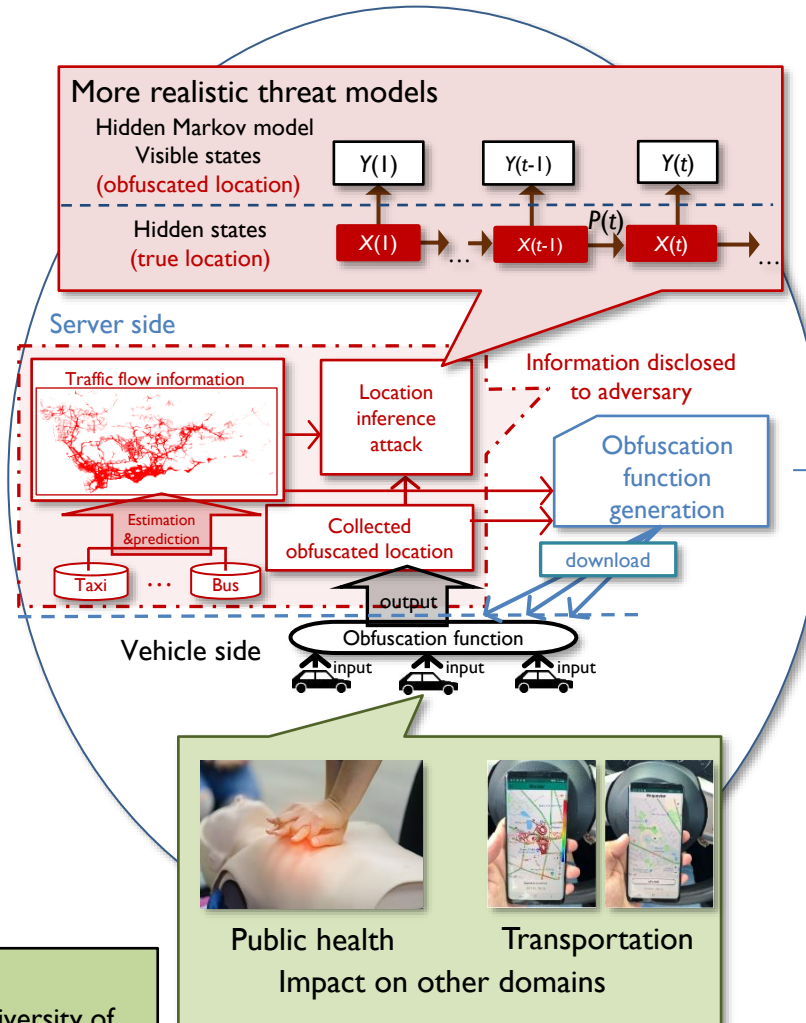
## Solution:

- Graph-based geo-obfuscation
- Hidden Markov model to describe vehicles' mobility
- Trajectory-indistinguishability
- Elastic privacy criteria

CNS2029976 and CNS2029881

Institutes: Penn State University and University of North Texas

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## Scientific Impact:

- New geo-obfuscation based on graph-based mobility model.
- New formal adversarial model accounting for vehicles' mobility features.
- Scalable implementation of geo-obfuscation considering diverse traffic across different regions.

## Broader Impact and Broader Participation:

- Education and Outreach
- Fine-grained geo-obfuscation under different scenarios
- Public transportation
- Public health systems
- Private delivery services