

# CRII: CPS: Cognitive Trust in Human-Autonomous Vehicle Interactions

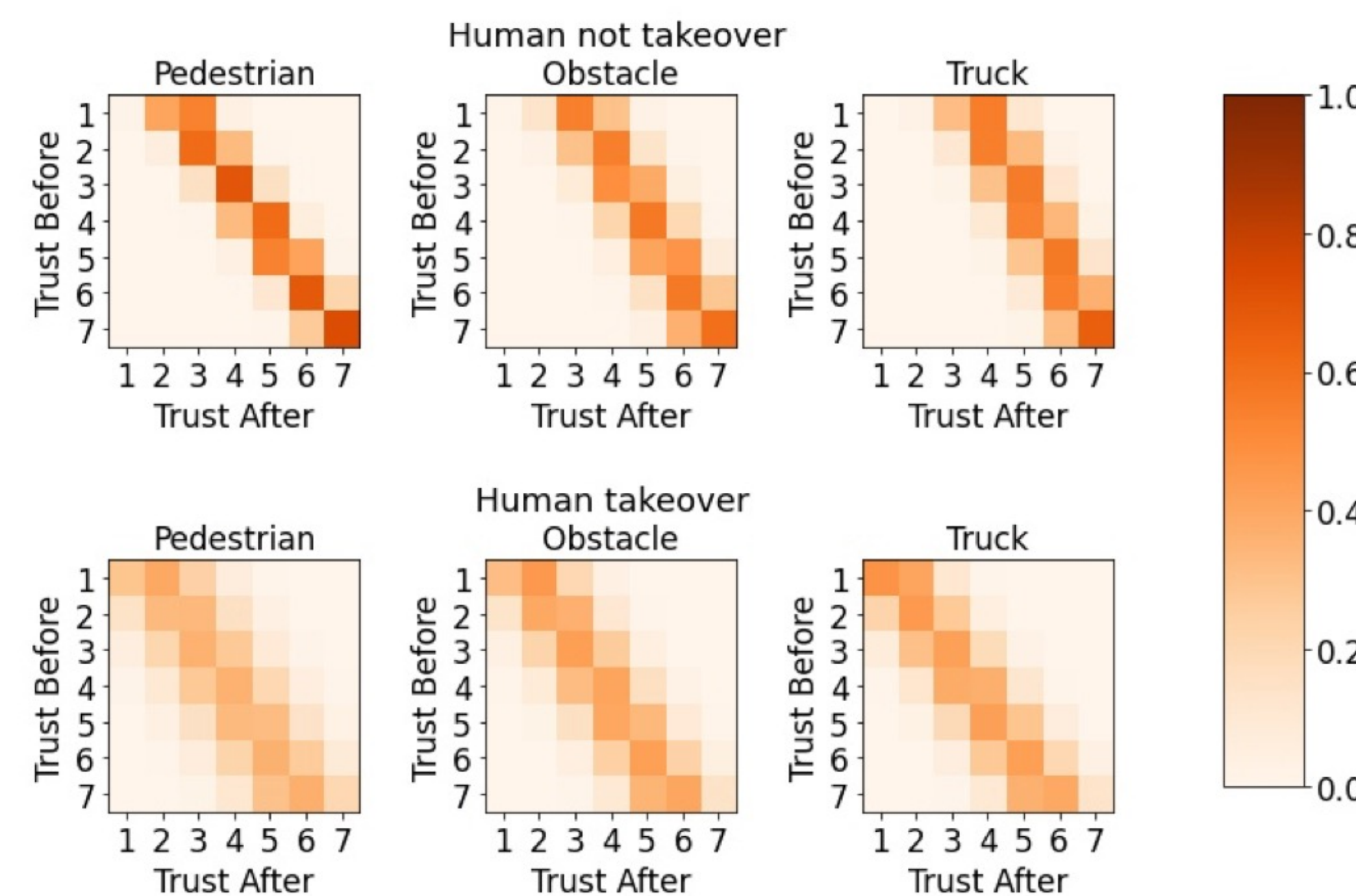
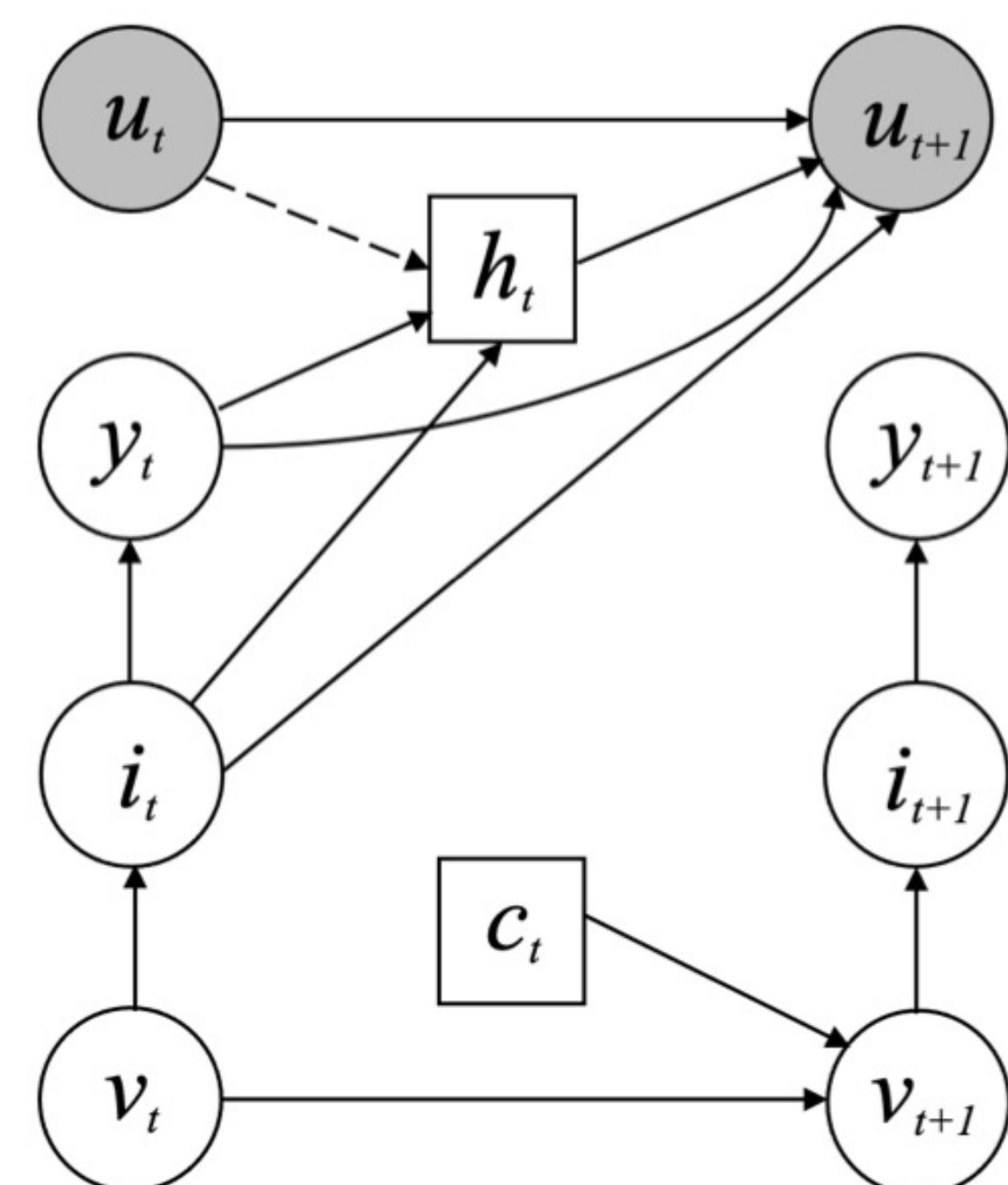
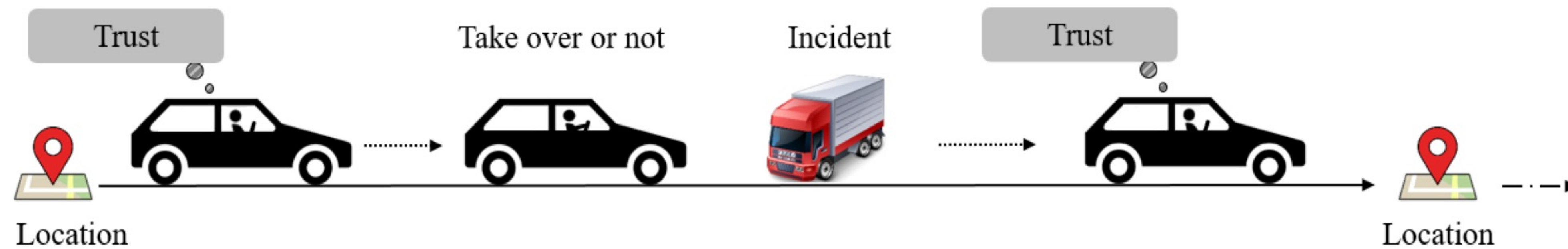
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## Challenge:

- How do we measure and quantify trust, and mathematically model its evolution?
- How do we explain trust-based decisions, and design an autonomous system that establishes human trust?

## Solution:

- Trust-based route planning for automated vehicles [ICCPS'2021]
- Contrastive explanations for MDP planning [IROS'2020]
- Personalized explanations via user feedback [IROS'2021 submission]



## Scientific Impact:

- Develop methods for formally expressing and reasoning about trust in human-CPS interactions

## Broader Impact:

- Potential to increase user trust and acceptance
- Develop new CPS graduate course

